SECURITIES AND EXCHANGE COMMISSION

FORM 10-Q

Quarterly report pursuant to sections 13 or 15(d)

Filing Date: **2019-05-14** | Period of Report: **2019-03-31**
SEC Accession No. 0001564590-19-019118

(HTML Version on secdatabase.com)

FILER

EMMAUS LIFE SCIENCES, INC.

CIK:**1420031**| IRS No.: **412254389** | State of Incorp.:**DE** | Fiscal Year End: **1231**
Type: **10-Q** | Act: **34** | File No.: **000-53072** | Film No.: **19822544**
SIC: **6770** Blank checks

Mailing Address
21250 HAWTHORNE BLVD.
SUITE 800
TORRANCE CA 90503

Business Address
21250 HAWTHORNE BLVD.
SUITE 800
TORRANCE CA 90503
310-214-0065

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-Q

☒ **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the Quarterly Period Ended March 31, 2019

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from to

Commission File No.: 000-53072

EMMAUS LIFE SCIENCES, INC.

(Exact name of Registrant as specified in its charter)

Delaware	**41-2254389**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
21250 Hawthorne Boulevard, Suite 800, Torrance, California	**90503**
(Address of principal executive offices)	(Zip code)

(310) 214-0065

(Registrant's telephone number, including area code)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, smaller reporting company, or an emerging growth company. See the definition of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ☐ Accelerated filer ☐ Non-accelerated filer ☐ Smaller reporting company ☒
Emerging growth company ☒

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☒

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Not applicable.		

The registrant had 36,051,394 shares of common stock, par value $0.001 per share, outstanding as of May 10, 2019.

EMMAUS LIFE SCIENCES, INC.
FORM 10-Q
For the Quarterly Period Ended March 31, 2019
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Item 1. Financial Statements

EMMAUS LIFE SCIENCES, INC.
CONSOLIDATED BALANCE SHEET
(In thousands, except share and per share amounts)

	As of	
	March 31, 2019 (unaudited)	December 31, 2018
ASSETS		
CURRENT ASSETS		
Cash and cash equivalents ($13,071 and $13,175 attributable to the VIE)	$ 15,310	$ 17,080
Accounts receivable, net	1,760	1,351
Inventories, net	5,795	4,705
Investment in marketable securities	42,873	49,343
Marketable securities, pledged to creditor	251	238
Prepaid expenses and other current assets ($271 and $273 attributable to the VIE)	818	743
Total current assets	66,807	73,460
PROPERTY AND EQUIPMENT, NET	153	152
OTHER ASSETS		
Long-term investment at cost	527	538
Intangibles, net	50	54
Right of use assets	2,838	—
Deposits and other assets	360	352
Total other assets	3,775	944
Total assets	$ 70,735	$ 74,556
LIABILITIES AND STOCKHOLDERS' DEFICIT		
CURRENT LIABILITIES		
Accounts payable and accrued expenses	$ 11,068	$ 9,122
Deferred rent	—	19
Operating lease liabilities	682	—
Other current liabilities	5,217	5,181
Notes payable, net	7,000	6,394
Notes payable to related parties, net	470	468
Convertible notes payable, net	15,157	11,253
Convertible notes payable to related parties, net	13,896	5,089
Total current liabilities	53,490	37,526
LONG-TERM LIABILITIES		
Deferred rent	—	268
Operating lease liabilities	2,478	—
Other long-term liabilities	35,637	36,222
Warrant derivative liabilities	1,447	1,399
Notes payable, net	1,922	1,021
Convertible notes payable, net	389	5,485
Convertible notes payable to related parties, net	—	8,529
Total long-term liabilities	41,873	52,924
Total liabilities	95,363	90,450
STOCKHOLDERS' DEFICIT		
Preferred stock — par value $0.001 per share, 20,000,000 shares authorized, none issued and outstanding	—	—
Common stock — par value $0.001 per share, 100,000,000 shares authorized, 35,947,804 shares and 35,558,305 shares issued and outstanding at March 31, 2019 and December 31, 2018, respectively	36	36
Additional paid-in capital	146,344	140,904
Accumulated other comprehensive income (loss)	(62)	(69)
Accumulated deficit	(170,864)	(156,668)
Total stockholders' deficit	(24,546)	(15,797)
Noncontrolling interests	(82)	(97)
Total liabilities & stockholders' deficit	$ 70,735	$ 74,556

The accompanying notes are an integral part of these consolidated financial statements.

EMMAUS LIFE SCIENCES, INC.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
(In thousands, except share and per share amounts) (Unaudited)

	Three months ended March 31,	
	2019	**2018**
CONSOLIDATED STATEMENTS OF INCOME (LOSS)		
REVENUES, NET	$ 5,307	$ 781
COST OF GOODS SOLD	200	134
GROSS PROFIT	5,107	647
OPERATING EXPENSES		
Research and development	513	411
Selling	1,485	870
General and administrative	3,681	3,807
Total operating expenses	5,679	5,088
LOSS FROM OPERATIONS	(572)	(4,441)
OTHER INCOME (EXPENSE)		
Loss on debt extinguishment	—	(3,245)
Change in fair value of warrant derivative liabilities	(48)	840
Change in fair value of embedded conversion option	—	466
Net gains (losses) on equity investment in marketable securities	(6,457)	5,535
Interest and other income (loss)	(111)	46
Interest expense	(6,965)	(5,298)
Total other income (expenses)	(13,581)	(1,656)
LOSS BEFORE INCOME TAXES	(14,153)	(6,097)
INCOME TAXES	—	—
NET LOSS INCLUDING NONCONTROLLING INTERESTS	(14,153)	(6,097)
Net (income) loss attributable to noncontrolling interests	(14)	—
NET LOSS ATTRIBUTABLE TO THE COMPANY	(14,167)	(6,097)
COMPONENTS OF OTHER COMPREHENSIVE INCOME (LOSS)		
Foreign currency translation adjustments	8	14
Other comprehensive income (loss)	8	14
COMPREHENSIVE INCOME (LOSS)	(14,145)	(6,083)
Amounts attributable to noncontrolling interests:		
Net (income) loss attributable to noncontrolling interest	(14)	—
Foreign currency translation adjustments	(1)	—
Comprehensive (income) loss attributable to noncontrolling interest	(15)	—
COMPREHENSIVE INCOME (LOSS) ATTRIBUTABLE TO THE COMPANY	$ (14,160)	$ (6,083)
NET LOSS PER COMMON SHARE	$ (0.40)	$ (0.17)
WEIGHTED AVERAGE COMMON SHARES OUTSTANDING	35,684,038	34,891,450

The accompanying notes are an integral part of these consolidated financial statements.

EMMAUS LIFE SCIENCES, INC.
CONSOLIDATED STATEMENT OF CHANGES IN STOCKHOLDERS' EQUITY
FOR THE THREE MONTHS ENDED MARCH 31, 2019 and 2018
(In thousands, except share and per share amounts) (Unaudited)

	Common stock – par value $0.001 per share, 100,000,000 shares authorized								
	Shares	Common Stock	Additional Paid-In Capital	Accumulated Other Comprehensive Income (Loss)	Treasury Stock, at cost	Accumulated Deficit	Total Emmaus Stockholders' Equity / (Deficit)	Non-controlling Interests	Total Equity / (Deficit)
Balance at January 1, 2018	34,885,506	$ 35	$ 113,112	$ 41,276	$ —	$ (140,132)	$ 14,291	$ —	$ 14,291
Cumulative effect adjustment on adoption of ASU 2016-01	—	—	—	(41,362)	—	41,362	—	—	—
Beneficial conversion feature relating to convertible and promissory notes payable	—	—	3,638	—	—	—	3,638	—	3,638
Stock issued for cash	25,000	—	275	—	—	—	275		275
Repurchase of common stock	—	—	—	—	(1,314)	—	(1,314)		(1,314)
Share-based compensation	—	—	710	—	—	—	710	—	710
Foreign currency translation effect	—	—	—	14	—	—	14	—	14
Net income (loss)	—	—	—	—	—	(6,097)	(6,097)	—	(6,097)
Balance at March 31, 2018	34,910,506	$ 35	$ 117,735	$ (72)	$ (1,314)	$ (104,867)	$ 11,517	$ —	$ 11,517
Balance at January 1, 2019	35,558,305	$ 36	$ 140,904	$ (69)	$ —	$ (156,668)	$ (15,797)	$ (97)	$ (15,894)
Cumulative effect adjustment on adoption of ASC 842	—	—	—	—	—	(29)	(29)	—	(29)
Beneficial conversion feature relating to convertible and promissory notes payable	—	—	2,039	—	—	—	2,039	—	2,039
Exercise of warrants	500	—	5	—	—	—	5	—	5
Stock issued for cash	307,500	—	2,530	—	—	—	2,530		2,530
Conversion of notes payable to common stock	81,332	—	329	—	—	—	329	—	329
Share-based compensation	—	—	536	—	—	—	536	—	536
Exercise of common stock options	167	—	1	—	—	—	1	—	1
Foreign currency translation effect	—	—	—	7	—	—	7	1	8
Net income (loss)	—	—	—	—	—	(14,167)	(14,167)	14	(14,153)

Balance, March 31, 2019	35,947,804	$ 36	$146,344	$ (62)	$ —	$ (170,864)	$ (24,546)	$ (82)	$(24,628)

The accompanying notes are an integral part of these consolidated financial statements.

EMMAUS LIFE SCIENCES, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands) (Unaudited)

	Three months ended March 31,	
	2019	2018
CASH FLOWS FROM OPERATING ACTIVITIES		
Net loss	$ (14,153)	$ (6,097)
Adjustments to reconcile net loss to net cash flows from operating activities		
Depreciation and amortization	17	13
Cost of scrapped inventory written off	—	8
Amortization of discount of convertible notes	5,641	4,192
Foreign exchange adjustments on convertible notes and notes payable	(19)	135
Net losses (gains) on equity investment in marketable securities	6,457	(5,535)
Loss on debt settlement	—	3,245
Share-based compensation	536	710
Change in fair value of warrant derivative liabilities	48	(840)
Change in fair value of embedded conversion option	—	(466)
Net changes in operating assets and liabilities		
Accounts receivable	(409)	(658)
Inventories	(1,091)	(388)
Prepaid expenses and other current assets	(83)	94
Other non-current assets	(2,813)	(84)
Accounts payable and accrued expenses	2,339	(539)
Deferred revenue	500	596
Deferred rent	(287)	(41)
Other current liabilities	36	40
Other long-term liabilities	1,997	5,000
Net cash flows used in operating activities	(1,284)	(615)
CASH FLOWS FROM INVESTING ACTIVITIES		
Purchases of property and equipment	(16)	(15)
Purchase of marketable securities and investment at cost	—	(469)
Net cash flows used in investing activities	(16)	(484)
CASH FLOWS FROM FINANCING ACTIVITIES		
Repurchase of common stock and warrants	—	(7,500)
Proceeds from convertible notes payable issued, net of issuance cost and discount	—	14,395
Payments of notes payable	—	(3,500)
Payments of convertible notes	(3,048)	(20,000)
Proceeds from exercise of warrants	5	—
Proceeds from issuance of common stock	2,530	275
Proceeds from conversion of notes payable to common stock	21	—
Net cash flows used in financing activities	(492)	(16,330)
Effect of exchange rate changes on cash	22	(14)
Net decrease in cash, cash equivalents and restricted cash	(1,770)	(17,443)
Cash and cash equivalents, beginning of period	17,080	22,556
Cash and cash equivalents, end of period	$ 15,310	$ 5,113
SUPPLEMENTAL DISCLOSURES OF CASH FLOW ACTIVITIES		
Interest paid	$ 385	$ 371
Conversion of notes payable to common stock	$ 308	$ —

The accompanying notes are an integral part of these consolidated financial statements.

EMMAUS LIFE SCIENCES, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
March 31, 2019
(Unaudited)

NOTE 1 — BASIS OF PRESENTATION

The accompanying unaudited consolidated interim financial statements of Emmaus Life Sciences, Inc. and subsidiaries (collectively, the "Company" or "Emmaus") have been prepared in accordance with accounting principles generally accepted in the United States of America ("GAAP") on the basis that the Company will continue as a going concern. The consolidated financial statements include the accounts of the Company and its consolidated subsidiaries. All significant intercompany transactions have been eliminated. The Company's unaudited consolidated interim financial statements contain adjustments, including normal recurring accruals necessary to present fairly the Company's consolidated financial position, results of operations, and cash flows. Due to the uncertainty of the Company's ability to meet its current operating and capital expenses, there is substantial doubt about the Company's ability to continue as a going concern, as the continuation and expansion of its business is dependent upon obtaining further financing, market acceptance of Endari™, and achieving a profitable level of revenues. The consolidated interim financial statements do not include any adjustments that might result from the outcome of these uncertainties. The consolidated interim financial statements should be read in conjunction with the Company's Annual Report on Form 10-K for the year ended December 31, 2018, filed with the Securities and Exchange Commission ("SEC") on March 21, 2019 (the "Annual Report"). Interim results for the periods presented herein are not necessarily indicative of the results that may be expected for the fiscal year ending December 31, 2019.

The preparation of the consolidated financial statements requires the use of management estimates. Actual results could differ materially from those estimates.

NOTE 2 — SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Refer to the Annual Report for a summary of significant accounting policies. There have been no material changes to the Company's significant accounting policies during the three months ended March 31, 2019 except for leases, which are discussed below. Below are disclosures of certain interim balances, transactions, and significant assumptions used in computing fair value as of and for the three months ended March 31, 2019 and comparative amounts from the prior fiscal periods:

Revenues – Effective January 1, 2018, the Company adopted Accounting Standard codification ("ASC") Topic 606, *Revenue from Contracts with Customers* using the modified retrospective transition methods. The adoption of ASC 606 did not have a material impact on the measurement or on the recognition of revenue of contracts for which all revenue had not been recognized as of January 1, 2018, therefore no cumulative adjustment has been made to the opening balance of accumulated deficit at the beginning of 2018. The comparative information has not been restated and continues to be reported under the accounting standards in effect for the periods presented.

Since January 2018, the Company has generated revenues through the sale of Endari as a treatment for sickle cell disease ("SCD"). The Company also generates revenues to a much lesser extent from the sale of AminoPure®, a nutritional supplement.

Revenues from Endari product sales are recognized upon delivery and transfer of control of products to the Company's distributors and specialty pharmacy customers. Distributors resell the products to other specialty pharmacy providers, health care providers, hospitals, patients and clinics. In addition to distribution agreements with distributors, the Company enters into contractual arrangements with specialty pharmacy providers, in-office dispensing providers, group purchasing organizations, and government entities that provide for government-mandated or privately-negotiated rebates, chargebacks and discounts with respect to the purchase of our products. These various discounts, rebates, and charge-backs are referred to as "variable consideration." Revenues from product sales are recorded net of variable consideration.

Prior to recognizing revenues, the Company's management forecasts and estimates variable consideration. Amounts of variable consideration are included in the transaction price to the extent that it is probable that a significant reversal in the amount of cumulative revenues recognized will not occur when the uncertainty associated with the variable consideration is subsequently resolved.

Provisions for returns and other variable consideration adjustments are provided for in the period in which the related revenues are recorded. Actual amounts of consideration ultimately received may differ from our estimates. If actual results in the future vary from our estimates, we will adjust these estimates, which would affect net product revenue and earnings in the period such variances become known. The following are our significant categories of sales discounts and allowances:

Sales Discounts: The Company provides its customers contractual prompt payment discounts and from time to time offers additional one-time discounts that are recorded as a reduction of revenues in the period the revenues are recognized.

Product Returns: The Company offers its distributors a right to return product purchased directly from the Company based principally upon (i) overstocks, (ii) inactive product or non-moving product due to market conditions, and (iii) expired products. Product return allowances are estimated and recorded at the time of sale.

Government Rebates: The Company is subject to discount obligations under state Medicaid programs and the Medicare prescription drug coverage gap program. The Company's management estimates Medicaid and Medicare prescription drug coverage gap rebates based upon a range of possible outcomes that are probability-weighted for the estimated payor mix. These reserves are recorded in the same period the related revenues are recognized, resulting in a reduction of product revenues and the establishment of a current liability that is included as accounts payable and accrued expenses in our balance sheet. The liability for these rebates consists primarily of estimates of claims expected to be received in future periods related to the recognized revenues.

Chargebacks and Discounts: Chargebacks for fees and discounts represent the estimated obligations resulting from contractual commitments to sell products to certain specialty pharmacy providers, in-office dispensing providers, group purchasing organizations, and government entities at prices lower than the list prices charged to distributors. The distributors charge the Company for the difference between what they pay for the products and the Company's contracted selling price to these specialty pharmacy providers, in-office dispensing providers, group purchasing organizations, and government entities. These reserves are established in the same period that the related revenues are recognized, resulting in a reduction of revenues. Chargeback amounts are generally determined at the time of resale of products by the distributors.

Leases — As described below under "Recent accounting pronouncements," we adopted ASU 2016-02 – Leases (Topic 842) ("ASU 2016-02") as of January 1, 2019. Pursuant to ASU 2016-02, all of our leases outstanding on January 1, 2019 continued to be classified as operating leases. With the adoption of ASU 2016-02, we recorded an operating lease right-of-use asset and an operating lease liability on our balance sheet. Right-of-use lease assets represent our right to use the underlying asset during the lease term and the lease obligation represents our commitment to make lease payments arising from the lease. Right-of-use lease assets and obligations were recognized based on the present value of remaining lease payments over the lease term. As the Company's leases do not provide an implicit rate, we have used an estimated incremental borrowing rate based on the information available at our adoption date in determining the present value of lease payments. Operating lease expense is recognized on a straight-line basis over the lease term. Variable lease costs such as common area costs and other operating costs are expensed as incurred. For all lease agreements we combine lease and non-lease components. No right-of-use asset and related lease liability are recorded for leases with an initial term of 12 months or less.

Prior to our adoption of ASU 2016-02, when our lease agreements contained tenant improvement allowances and rent escalation clauses, we recorded a deferred rent asset or liability equal to the difference between the rent expense and the future minimum lease payments due. The lease expense related to operating leases was recognized on a straight-line basis in the statements of operations over the term of each lease. In cases where the lessor granted us leasehold improvement allowances, we capitalized the improvements as incurred and recognized it over the shorter of the lease term or the expected useful life of the improvements.

Inventories — Substantially all of the raw material purchased during the three months ended March 31, 2019 and for the year ended December 31, 2018 were from one vendor. The below table presents inventory by category (in thousands):

Inventories by category	**March 31, 2019**	**December 31, 2018**
Raw materials and components	$ 647	$ 171
Work-in-process	1,584	2,471
Finished goods	3,564	2,063
Total	$ 5,795	$ 4,705

Marketable securities— The Company's marketable securities consist of the following securities; (a) 39,250 shares of capital stock of CellSeed, Inc. ("CellSeed") acquired in January 2009 at ¥680 JPY per share ($7.69 USD); (b) 6,643,559 shares of capital stock of Telcon, Inc. (“Telcon”) which were acquired in July 2017 for ₩36,001,446,221 KRW (equivalent to $31.8 million USD) at ₩5,419 KRW per share.

As of March 31, 2019 and December 31, 2018, the closing prices per CellSeed share on the Tokyo Stock Exchange were ¥710 ($6.40 USD) and ¥668 JPY ($6.07 USD), respectively, and the closing prices per Telcon share on the Korean Securities Dealers Automated Quotations ("KOSDAQ") were ₩7,350 ($6.45 USD) and ₩8,280 KRW ($7.43 USD), respectively.

As of March 31, 2019, and December 31, 2018, 39,250 shares of CellSeed common stock were pledged to secure a $300,000 convertible note of the Company issued to Mitsubishi UFJ Capital III Limited Partnership that is due on demand and were classified as marketable securities, pledged to creditor in our balance sheet.

Prepaid expenses and other current assets — Prepaid expenses and other current assets consisted of the following at March 31, 2019 and December 31, 2018 (in thousands):

	March 31, 2019	December 31, 2018
Prepaid insurance	$ 80	$ 82
Other prepaid expenses and current assets	738	661
	$ 818	$ 743

Other long-term liabilities—Other long-term liabilities consisted of the following at March 31, 2019 and December 31, 2018 (in thousands):

	March 31, 2019	December 31, 2018
Trade discount	$ 25,137	$ 26,222
Unearned revenue	10,500	10,000
Other long-term liabilities	—	—
Total other long-term liabilities	$ 35,637	$ 36,222

The Company entered into an API Supply Agreement (the "API Agreement") with Telcon pursuant to which Telcon advanced to the Company approximately ₩36.0 billion KRW (approximately $31.8 million USD), accounted for as a trade discount, in consideration for the right to supply 25% of the Company's requirements for bulk containers of pharmaceutical grade L-glutamine ("PGLG"). Refer Note 10 for additional details.

Fair value measurements — The following table presents the change in fair value of warrant derivative liabilities on a recurring basis using Level 3 inputs during the year ended December 31, 2018 (in thousands):

Warrant Derivative Liabilities—Stock Purchase Warrants	Year Ended December 31, 2018
Balance, beginning of period	$ 26,377
Repurchased	(6,186)
Change in fair value included in the statement of comprehensive income (loss)	(20,191)
Balance, end of period	$ —

The following table presents the change in fair value of warrants issued to GPB Debt Holdings II, LLC as described in Note 8 as of March 31, 2019 and December 31, 2018 (in thousands):

	For the Three Months Ended March 31, 2019		Year Ended December 31, 2018	
Warrant Derivative Liabilities—GPB	Warrants	Embedded Conversion Option	Warrants	Embedded Conversion Option
Balance, beginning of period	$ 1,399	$ —	$ 1,882	$ 1,289
Fair value at issuance date	—	—	—	—
Change in fair value included in the statement of comprehensive income (loss)	48	—	(483)	(466)
Extinguished upon debt repayment	—	—	—	(823)
Balance, end of period	$ 1,447	$ —	$ 1,399	$ —

The value of warrant derivative liabilities and the change in fair value of the warrant derivative liabilities were determined using a Binomial Monte-Carlo Cliquet (aka "Ratchet") Option Pricing Model. The model is similar to traditional Black-Scholes-type option pricing models, except that the exercise price resets at certain dates in the future.

The value as of the dates set forth in the table above, was based on upon following assumptions:

	March 31, 2019	December 31, 2018
Stock price	$ 10.30	$ 9.10
Risk-free interest rate	2.22%	2.48%
Expected volatility (peer group)	70.00%	70.00%
Expected life (in years)	3.75	4.00
Expected dividend yield	—	—
Number outstanding	240,764	240,764
Balance, end of period:		
Warrant derivative liabilities (long-term) (in thousands)	$ 1,447	$ 1,399

Debt and related party debt — The following table presents the effective interest rates on loans originated and refinanced in the respective periods that either had a beneficial conversion feature or an attached warrant:

Type of Loan	Term of Loan	Stated Annual Interest	Original Loan Principal Amount	Conversion Rate	Beneficial Conversion Discount Amount	Warrants Issued with Notes	Exercise Price	Warrant FMV Discount Amount	Effective Interest Rate Including Discounts
2017 convertible notes payable	Due on demand - 2 years	10%	$ 5,795	$3.50-$10.00	$ 1,545	$ —	N/A	N/A	25% - 110%
2018 convertible notes payable	Due on demand - 2 years	10%	24,135	$3.50-$10.00	10,266	—	—	—	10%-110%
2019 convertible notes payable	Due on demand - 1 year	10%	2,039	$3.50-$4.50	2,039	—	—	—	110%
2018 notes payable	18 months	10%	12,200	N/A	—	1,220,000	$ 11.30	9,687	89%
			$ 44,169		$ 13,850	$ 1,220,000		$ 9,687	

Related party notes are reflected as a separate line items in the Company's consolidated balance sheets.

Net loss per share — As of March 31, 2019 and 2018, respectively, the Company had outstanding potentially dilutive securities exercisable for or convertible into 16,317,940 and 17,122,176 shares of Company common stock. No potentially dilutive securities were included in the calculation of diluted net loss per share since their effect would be anti-dilutive for all periods presented.

Recent accounting pronouncements—In January 2016, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2016-01, *Recognition and Measurement of Financial Assets and Financial Liabilities*. The ASU amendments applicable to the Company (1) supersede the guidance to classify equity securities, except equity method securities, with readily determinable fair values into trading or available-for-sale categories and require equity securities to be measured at fair value with changes in the fair value recognized through net income, (2) allow equity investments that do not have readily determinable fair values to be remeasured at fair value either upon the occurrence of an observable price change or upon identification of an impairment, (3) require assessment for impairment of equity investments without readily determinable fair values qualitatively at each reporting period, (4) eliminate the requirement to disclose the methods and significant assumptions used in calculating the fair value of financial instruments required to be disclosed for financial instruments measured at amortized cost on the balance sheet, (5) require public business entities to use the exit price notion when measuring the fair value of financial instruments for disclosure purposes, (6) require separate presentation of financial assets and financial liabilities by measurement category and form of financial asset (that is, securities or loans and receivables) on the balance sheet or the accompanying notes to the financial statements, (7) clarify that an entity should evaluate the need for a valuation allowance on a deferred tax asset related to available-for-sale securities in combination with the entity's other deferred tax assets. This ASU was effective beginning January 1, 2018. Since then, the Company has recognized any changes in the fair value of certain equity investments in net income as prescribed by the new standard rather than in other comprehensive income. The Company recognized a cumulative effect adjustment to increase the opening balance of retained earnings as of January 1, 2018 by $41.4 million, net of $12.3 million income tax benefit. Refer to Note 5 for additional disclosures required by this ASU.

In February 2016, the FASB issued ASU No. 2016-02, *Leases*. The amendments in this Update require a lessee to recognize in the statement of financial position a liability to make lease payments (the lease liability) and a right-of-use asset representing its right to use the underlying asset for the lease term for all leases with terms greater than twelve months. For leases less than twelve months, an entity is permitted to make an accounting policy election by class of underlying asset not to recognize lease assets and lease liabilities. If a lessee makes this election, it should recognize lease expense for such leases generally on a straight-line basis over the lease term. The amendments in this Update are effective for the Company for fiscal years beginning after December 15, 2018, including interim periods within those years, with early adoption permitted. Additionally, in July 2018, the FASB issued ASU No. 2018-11, Leases (Topic 842): *Targeted Improvements* and ASU No. 2018-10 Codification Improvements to Topic 842, Leases with certain targeted changes and improvements to previously issued lease accounting standard. The Company recognized operating lease liabilities of approximately $3.2 million and a right-of-use asset of approximately $2.9 million, derecognized deferred rent of approximately $286,000 and recognized the cumulative effect adjustment to increase the opening balance of accumulated deficit as of January 1, 2019 by approximately $29,000. We did not restate any financial information prior to January 1, 2019. Refer to Note 9 for additional disclosures required by this ASU.

In April 2016, the FASB issued ASU 2016-10, *Revenue from Contracts with Customers (Topic 606): Identifying Performance Obligations and Licensing* ("ASU 2016-10"). The amendments in ASU 2016-10 clarify identification of performance obligations and licensing implementation. The amendments do not change the core principle of the guidance in Topic 606. The effective date and transition requirements for the amendments are the same as the effective date and transition requirements in Topic 606: For public companies, this Update is effective for annual periods, including interim periods within those annual periods, beginning after December 15, 2017. The Company adopted the new revenue standard as of January 1, 2018 using the modified retrospective transition method. The adoption of ASU 2016-10 did not have a material impact on the Company's consolidated financial statements; however, adoption did result in significant changes to the Company's financial statement notes.

In July 2017, the FASB issued ASU No. 2017-11, *Earnings Per Share (Topic 260) Distinguishing Liabilities from Equity (Topic 480) Derivatives and Hedging (Topic 815): I. Accounting for Certain Financial Instruments with Down Round Features, II. Replacement of the Indefinite Deferral for Mandatorily Redeemable Financial Instruments of Certain Nonpublic Entities and Certain Mandatorily Redeemable Noncontrolling Interests with a Scope Exception ("ASU 2017-11").* The amendments in this guidance intended to reduce the complexity associated with the issuer's accounting for certain financial instruments with characteristics of liabilities and equity. Specifically, the Board determined that a down round feature (as defined) would no longer cause a freestanding equity-linked financial instrument (or an embedded conversion option) to be accounted for as a derivative liability at fair value with changes in fair value recognized in current earnings. In addition, the Board re-characterized the indefinite deferral of certain provisions of Topic 480 to a scope exception. The re-characterization has no accounting effect. Down round features will no longer cause freestanding equity-linked financial instruments and embedded conversion options to be considered "not indexed to an entity's own stock." ASU 2017-11 is effective for public business entities for fiscal year beginning after December 15, 2018. All others have an additional year. Early adoption is permitted for all entities, including in an interim period. Entities may use the retrospective or modified retrospective transition method. The Company early adopted this ASU without a material impact on previously recorded balances on its consolidated financial statements.

In February 2018, the FASB issued ASU No. 2018-02, Income Statement – Reporting Comprehensive Income (Topic 220): *Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income* ("ASU 2018-02"). ASU 2018-02 allows a reclassification from accumulated other comprehensive income to retained earnings for stranded tax effects resulting from the Tax Cuts and Jobs Act. Consequently, the amendments eliminate the stranded tax effects resulting from the Tax Cuts and Jobs Act and will improve the usefulness of information reported to financial statement users. However, because the amendments only relate to the reclassification of the income tax effects of the Tax Cuts and Jobs Act, the underlying guidance that requires that the effect of a change in tax laws or rates be included in income from continuing operations is not affected. ASU 2018-02 also requires certain disclosures about stranded tax effects. ASU 2018-02 is effective for all entities for fiscal years beginning after December 15, 2018, and interim periods within those fiscal years, with early adoption permitted. ASU 2018-02 should be applied either in the period of adoption or retrospectively to each period (or periods) in which the effect of the change in the U.S. federal corporate income tax rate in the Tax Cuts and Jobs Act is recognized. The adoption of ASU 2018-02 does not have a material impact on the Company's consolidated financial statements.

In February 2018, the FASB issued ASU No. 2018-03, Technical Corrections and Improvements to Financial Instruments—Overall (Subtopic 825-10): *Recognition and Measurement of Financial Assets and Financial Liabilities* ("ASU 2018-03"). The amendments in ASU 2018-03 (1) clarify that an entity measuring an equity security using the measurement alternative may change its measurement approach to a fair value method in accordance with Topic 820, *Fair Value Measurement*, through an irrevocable election that would apply to that security and all identical or similar investments of the same issuer, (2) clarify that the adjustments made under the measurement alternative are intended to reflect the fair value of the security as of the date that the observable transaction for a similar security took place, (3) clarify that remeasuring the entire value of forward contracts and purchased options is required when observable transactions occur on the underlying equity securities, (4) clarify that when the fair value option is elected for a financial liability, the guidance in paragraph 825-10- 45-5 should be applied, regardless of whether the fair value option was elected under either Subtopic 815-15, *Derivatives and Hedging— Embedded Derivatives*, or 825- 10, *Financial Instruments—Overall*, (5) clarify that for financial liabilities for which the fair value option is elected, the amount of change in fair value that relates to the instrument specific credit risk should first be measured in the currency of denomination when presented separately from the total change in fair value of the financial liability, and then both components of the change in the fair value of the liability should be remeasured into the functional currency of the reporting entity using end-of-period spot rates, (6) clarify that the prospective transition approach for equity securities without a readily determinable fair value in the amendments in ASU 2016-01 is meant only for instances in which the measurement alternative is applied. For public business entities, ASU 2018-03 is effective for fiscal years beginning after December

15, 2017, and interim periods within those fiscal years beginning after June 15, 2018. Public business entities with fiscal years beginning between December 15, 2017, and June 15, 2018, are not required to adopt these amendments until the interim period beginning after June 15, 2018, and public business entities with fiscal years beginning between June 15, 2018, and December 15, 2018, are not required to adopt these amendments before adopting the amendments in ASU 2016-01. The impact of the adoption of the amendments in ASU 2018-03 depends on the amount of equity securities and financial instruments subject to the amendments in this Update held by the Company at the time of adoption. The adoption of ASU 2018-03 did not have a material impact on the Company's consolidated financial statements.

In June 2018, the FASB issued ASU No. 2018-07, Compensation – Stock Compensation (Topic 718): *Improvements to Nonemployee Share-Based Payment Accounting* ("ASU 2018-07"), which supersedes ASC 505-05 and expands the scope of ASC 718 to include all share-based payment arranges related to the acquisition of goods and services from both nonemployees and employee. As a result, most of the guidance in ASC 718 associated with employee share-based payments, including most of its requirements related to classification and measurement, applies to nonemployee share-based payment arrangements. ASC 2018-07 is effective for all entities for fiscal year beginning after December 15, 2018, and interim periods within those fiscal year, with early adoption permitting but no earlier than the date on which an entity adopts ASC 606. The adoption of ASU 20218-07 did not have a material impact on the Company's consolidated financial statements.

In August 2018, the FASB issued ASU No. 2018-13, Fair Value Measurement (Topic 820): *Disclosure Framework – Changes to the Disclosure Requirements for Fair Value Measurement* ("ASU 2018-13"), which changes the fair value measurement disclosure requirements of ASC 820. The amendments in ASU 22018-13 remove some disclosures, modify others, and add some new disclosure requirements. The amendments in this ASU are effective for all entities for fiscal years, and interim period within those fiscal years, beginning after December 15, 2019 with early adoption permitted. The Company is currently assessing the impact the adoption of ASU 2018-13 will have on its consolidated financial statements and accompanying footnote disclosures.

In October 2018, the FASB issued ASU 2018-17, Consolidation (Topic 810) *Targeted Improvements to Related Party guidance for Variable Interest Entities ("ASU 2018-17")*, which amends two aspects of the related-party guidance in ASC 810. Specifically, ASU2018-17 (1) adds an elective private-company scope exception to the variable interest entity guidance for entities under common control and (2) removes a sentence in ASC 810-10-55-37D regarding the evaluation of fees paid to decision makers to conform with the amendments in ASU 2016-17, *Interest Held Through Related Parties That Are Under Common Control.* The amendments in ASU 2018-17 are effective for fiscal years beginning after December 15, 2019, and interim periods within those fiscal years. The Company does not expect the adoption of ASU 2018-17 to have a material impact on its consolidated financial statements.

NOTE 3 — REVENUES

Revenues disaggregated by category were as follows (in thousands):

	Three months ended	
	March 31, 2019	March 31, 2018
Endari	$ 5,787	$ 720
Other	105	102
Gross sales	5,892	822
Less: discounts and allowances		
Endari	(585)	(30)
Other	—	(11)
Total	$ 5,307	$ 781

The following table summarizes the revenue allowance and accrual activities for the three months ended March 31, 2019 (in thousands):

	Trade Discounts, Allowances and Chargebacks	Government Rebates and Other Incentives	Returns	Total
Balance as of December 31, 2018	$ 303	$ 1,880	$ 181	$ 2,363
Provision related to sales in the current year	293	729	54	1,076
Adjustments related prior period sales	—	(600)	—	(600)

Credit and payments made	(316)	(568)	—	(884)
Balance as of March 31, 2019	$ 279	$ 1,441	$ 235	$ 1,955

The following table summarizes revenues attributable to each of our customers who accounted for 10% or more of our total revenues (as a percentage of total revenues):

	Three months ended	
	March 31, 2019	March 31, 2018
AmerisourceBergen Specialty Group	60%	88%
McKesson Plasma and Biologics LLC	17%	—

NOTE 4 — PROPERTY AND EQUIPMENT

Property and equipment consisted of the following (in thousands):

	March 31, 2019	December 31, 2018
Equipment	$ 306	$ 306
Leasehold improvements	71	70
Furniture and fixtures	79	79
Total property and equipment	456	455
Less: accumulated depreciation	(317)	(303)
Total depreciable assets	139	152
Construction-in-progress	14	—
Property and equipment, net	$ 153	$ 152

During the three months ended March 31, 2019 and 2018, depreciation expense was approximately $14,000 and $13,000, respectively.

NOTE 5 — INVESTMENTS

Equity Securities—Effective January 1, 2018, the Company adopted ASU 2016-01 which requires the Company to measure all equity investments that do not result in consolidation and are not accounted for under the equity method at fair value and recognize in earnings any changes in such fair value. The Company uses quoted market prices to determine the fair value of equity securities with readily determinable fair values. For equity securities without readily determinable fair values, the Company has elected the measurement alternative under which the Company measures these investments at cost minus impairment, if any, plus or minus changes resulting from observable price changes in orderly transactions for the identical or a similar investment of the same issuer. Management assesses each of these investments on an individual basis. Additionally, on a quarterly basis, management is required to make a qualitative assessment of whether the investment is impaired; however, the Company is not required to determine the fair value of these investments unless impairment indicators existed. When impairment indicators exist, the Company generally uses discounted cash flow analyses to determine the fair value. For the three months ended March 31, 2019 and the year ended December 31, 2018, the Company did not recognize any fair value adjustments for equity securities without readily determinable fair values. The Company recognized a cumulative effect adjustment of $41.4 million, net of $12.3 million income tax benefit, to increase the opening balance of retained earnings with an offset to accumulated other comprehensive income as of January 1, 2018, in connection with the adoption of ASU 2016-01.

At March 31, 2019 and December 31, 2018, the carrying values of equity securities were included in the following line items in our consolidated balance sheets (in thousands):

	March 31, 2019		December 31, 2018	
	Fair Value with Changes Recognized in Income	Measurement Alternative - No Readily Determinable Fair Value	Fair Value with Changes Recognized in Income	Measurement Alternative - No Readily Determinable Fair Value
Marketable securities	$ 43,124	$ —	$ 49,581	$ —
Long-term investment at cost	—	527	—	538
Total equity securities	$ 43,124	$ 527	$ 49,581	$ 538

Net realized losses on available-for-sales on marketable securities still held at March 31, 2019 was approximately $ 6.5 million and net realized gain on available-for sales on marketable securities still held at March 31, 2018 was approximately $ 5.5 million.

NOTE 6 — ACCOUNTS PAYABLE AND ACCRUED EXPENSES

At March 31, 2019 and December 31, 2018, accounts payable and accrued expenses consisted of the following (in thousands):

	March 31, 2019	December 31, 2018
Accounts payable:		
Clinical and regulatory expenses	$ 356	$ 83
Professional fee	1,961	2,157
Selling expenses	421	382
Manufacturing costs	1,756	—
Other vendors	692	980
Total accounts payable	5,186	3,602
Accrued interest payable, related parties	1,217	842
Accrued interest payable	2,306	2,138
Accrued expenses:		
Payroll expenses	796	713
Accrued rebates	1,441	1,744
Other accrued expenses	122	83
Total accrued expenses	2,359	2,540
Total accounts payable and accrued expenses	$ 11,068	$ 9,122

NOTE 7 — NOTES PAYABLE

Notes payable consisted of the following at March 31, 2019 and December 31, 2018 (in thousands):

Year Issued	Interest Rate Range	Term of Notes	Conversion Price	Principal Outstanding March 31, 2019	Discount Amount March 31, 2019	Carrying Amount March 31, 2019	Shares Underlying Notes March 31, 2019	Principal Outstanding December 31, 2018	Discount Amount December 31, 2018	Carrying Amount December 31, 2018	Shares Underlying Notes December 31, 2018
Notes payable											
2013	10%	Due on demand	—	$ 902	$ —	$ 902	—	$ 909	$ —	$ 909	—
2015	10%	Due on demand	—	10	—	10	—	10	—	10	—
2016	10% - 11%	Due on demand	—	843	—	843	—	843	—	843	—
2017	5% - 11%	Due on demand	—	1,951	—	1,951	—	2,575	—	2,575	—
2018	10% - 11%	Due on demand- 18 months	—	12,311	7,847	4,464	—	12,311	9,233	3,078	—
2019	11%	Due on demand	—	752	—	752	—	—	—	—	—
				$ 16,769	**$ 7,847**	**$ 8,922**	**—**	**$ 16,648**	**$ 9,233**	**$ 7,415**	**—**
		Current		$ 14,569	$ 7,569	$ 7,000	—	$ 12,449	$ 6,054	$ 6,394	—
		Non-current		$ 2,200	$ 278	$ 1,922	—	$ 4,200	$ 3,179	$ 1,021	—
Notes payable - related party											
2016	10%	Due on demand	—	270	—	270	—	270	—	270	—
2017	10%	Due on demand	—	27	—	27	—	39	—	39	—
2018	11%	Due on demand	—	159	—	159	—	159	—	159	—
2019	10%	Due on demand	—	14	—	14	—	—	—	—	—
				$ 470	**$ —**	**$ 470**	**—**	**$ 468**	**$ —**	**$ 468**	**—**
		Current		$ 470	$ —	$ 470	—	$ 468	$ —	$ 468	—
		Non-current		$ —	$ —	$ —	—	$ —	$ —	$ —	—
Convertible notes payable											
2011	10%	5 years	$3.05	$ 300	$ —	$ 300	98	$ 300	$ —	$ 300	98
2014	10%	Due on demand - 2 years	$3.05 - $3.60	522	—	522	186	519	—	519	184
2016	10%	Due on demand - 2 years	$3.60 - $4.50	62	—	62	17	61	—	61	17
2017	10% - 13.5%	Due on demand - 3 years	$3.50 - $10.31	1,895	108	1,787	618	2,820	349	2,471	899
2018	6% - 10%	Due on demand - 2 years	$3.50 - $10.00	15,311	2,671	12,640	3,076	19,556	6,169	13,387	3,664
2019	10%	Due on demand - 1 year	$3.50 - $4.50	2,039	1,804	235	570	—	—	—	—
				$ 20,129	**$ 4,583**	**$ 15,546**	**4,565**	**$ 23,256**	**$ 6,518**	**$ 16,738**	**4,862**
		Current		$ 19,421	$ 4,264	$ 15,157	4,402	$ 16,604	$ 5,351	$ 11,253	3,981
		Non-current		$ 708	$ 319	$ 389	163	$ 6,652	$ 1,167	$ 5,485	881
Convertible notes payable - related party											
2012	10%	Due on demand	$ 3.30	$ 200	$ —	$ 200	76	$ 200	$ —	$ 200	74
2015	10%	2 years	$ 4.50	200	—	200	59	200	—	200	58
2017	10%	2 years	$ 10.00	5,000	218	4,782	545	5,000	311	4,689	533
2018	10%	2 years	$ 10.00	9,400	686	8,714	995	9,400	871	8,529	972
				$ 14,800	**$ 904**	**$ 13,896**	**1,675**	**$ 14,800**	**$ 1,182**	**$ 13,618**	**1,637**
		Current		$ 14,800	$ 904	$ 13,896	1,675	$ 5,400	$ 311	$ 5,089	665
		Non-current		$ —	$ —	$ —	—	$ 9,400	$ 871	$ 8,529	972
		Total		**$ 52,168**	**$ 13,334**	**$ 38,834**	**6,240**	**$ 55,172**	**$ 16,933**	**$ 38,239**	**6,499**

The weighted-average stated interest rates of notes payable were 10% as of each of March 31, 2019 and December 31, 2018. weighted average effective interest rates of notes payable as of March 31, 2019 and December 31, 2018 were 48% and 35% respectively, after giving effect to discounts relating to beneficial conversion features and the fair value of warrants issued in connection with these notes. The notes payable and convertible notes payable contain no restrictive financial covenants or acceleration clauses associated with a material adverse change event. The holders of the convertible notes have the option to convert their notes into Company common stock at conversion prices ranging $3.05 to $10.00 per share during the terms of the notes. Certain notes with a $4.50 or a $10.00 stated conversion price in the second year of their two-year term are subject to automatic conversion into shares of Company common stock at a conversion price equal to 80% of the initial public offering price at the time of a qualified public offering. All notes due on demand are treated as current liabilities.

During the three months ended March 31, 2019, the Company proposed to the holders of its outstanding convertible promissory notes to amend the terms thereof to provide for an automatic conversion into shares of Company common stock at their respective conversion prices immediately prior to the effective time of the proposed merger transaction with MYnd Analytics, Inc. As such, the conversion shares would be deemed outstanding immediately prior to the merger and would be converted into shares of MYnd Analytics, Inc. common stock as a result of the merger in the same manner as other outstanding shares of Company common stock based the merger “exchange ratio.” As of March 31, 2019, the holders of an aggregate of $4.8 million, or 14%, in principal amount of the outstanding convertible notes, had agreed to the amendment. See Note 12 for information regarding the amendment of additional convertible notes subsequent to March 31, 2019.

Contractual principal payments due on notes payable are as follows:

Year Ending		
2019 (nine months)	$	31,703
2020		20,465
Total	$	52,168

The Company estimated the total fair value of any beneficial conversion feature and accompanying warrants in allocating the note proceeds. The proceeds allocated to the beneficial conversion feature were determined by taking the estimated fair value of shares issuable under the convertible notes less the fair value of the number of shares that would be issued if the conversion rate equaled the fair value of Company common stock as of the date of issuance (see Note 2). The fair value of the warrants issued in conjunction with notes was determined using the Binominal Monte-Carlo Cliquet Option Pricing Model with the following inputs for the year ended December 31, 2018.

	Year ended December 31, 2018	
Stock price	$	11.10
Exercise price	$	11.30
Term		5 years
Risk-free interest rate		3.05%
Expected dividend yield		—
Expected volatility		70.0%

With respect to the notes that included both a beneficial conversion feature and a warrant, the proceeds were allocated to the beneficial conversion feature and the warrant based on their respective pro rata fair values.

The Company did not issue any notes with warrants notes in the three months ended March 31, 2019.

NOTE 8 — STOCKHOLDERS’ DEFICIT

Private placement — On September 11, 2013, the Company issued an aggregate of 3,020,501 units at a price of $2.50 per unit (the “Private Placement”). Each unit consisted of one share of common stock and one common stock warrant for the purchase of an additional share of common stock. The aggregate purchase price for the units was approximately $7.6 million. In addition, 300,000 warrants for the purchase of a share of common stock were issued to a broker under the same terms as the Private Placement transaction (the “Broker Warrants”).

The warrants issued in the Private Placement and the Broker Warrants entitle the holders thereof to purchase, at any time on or prior to September 11, 2018, shares of common stock of the Company at an exercise price of $3.50 per share. The warrants contain non-standard anti-dilution protection and, consequently, are being accounted for as liabilities, were originally recorded at fair value, and are adjusted to fair market value each reporting period. Because the shares of common stock underlying the Private Placement warrants and Broker Warrants were not effectively registered for resale by September 11, 2014, the warrant holders have an option to exercise the warrants using a cashless exercise feature. The shares have not been registered for resale as of September 30, 2018. The availability to warrant holders of the cashless exercise feature as of September 11, 2014 caused the then-outstanding 2,225,036 Private Placement warrants and Broker Warrants with fair value of approximately $7.1 million to be reclassified from liability classified warrants to warrant derivative liabilities and to continue to be remeasured at fair value each reporting period. On June 10, 2014, certain warrant holders exercised 1,095,465 warrants issued in the Private Placement for the exercise price of $3.50 per share, resulting in the Company receiving aggregate exercise proceeds of $3.8 million and issuing 1,095,465 shares of common stock. Prior to exercise, these Private Placement warrants were accounted for at fair value as liability classified warrants. As of June 10, 2014, immediately prior to exercise, the carrying value of these Private Placement warrants was reduced to their fair value of $1.8 million, representing their intrinsic value, with this adjusted carrying value of $1.8 million being transferred to additional paid-in capital. Also on June 10, 2014, based on an offer made to holders of Private Placement warrants in connection with such exercises, the Company issued an aggregate of 1,095,465 replacement warrants to holders exercising Private Placement warrants, which replacement warrants have terms that are generally the same as the exercised warrants, including an expiration date of September 11, 2018 and an exercise price of $3.50 per share.

The replacement warrants are treated for accounting purposes as liability classified warrants, and their issuance gave rise to a $3.5 million warrant exercise inducement expense based on their fair value as of issuance as determined using a Binomial Monte-Carlo Cliquet (aka Ratchet) Option Pricing Model. Because the shares of common stock underlying the replacement warrants were not effectively registered for resale by June 10, 2015, the warrant holders have an option to exercise the warrants using a cashless exercise feature. The availability to warrant holders of the cashless exercise feature as of June 10, 2015 caused the then-outstanding 1,095,465 replacement warrants with fair value of approximately $2.5 million to be reclassified from liability classified warrants to warrant derivative liabilities and to continue to be remeasured at fair value each reporting period.

As of September 11, 2018, all of the Private Placement warrants, replacement warrants and Broker Warrants had been exercised primarily on a cashless basis or had expired.

Purchase Agreement with GPB—On December 29, 2017, the Company entered into the Purchase Agreement with GPB Debt Holdings II, LLC ("GPB"), pursuant to which the Company issued to GPB a $13 million principal amount senior secured convertible promissory note (the "GPB Note") for an aggregate purchase price of approximately $12.5 million, which reflected a 4.0% original issue discount.

In connection with the issuance of the GPB Note, the Company also issued to GPB a warrant (the "GPB Warrant to purchase up to 240,674 of Company common stock at an exercise price of $10.80 per company share, with customary adjustments for stock splits, stock dividends and other recapitalization events and anti-dilution provisions set forth in the GPB Warrant. If the Company effects a public listing of common stock for trading on any securities market or exchange, whether through a direct listing application or merger transaction, at a price per share less than the exercise price, the exercise price will be adjusted on a one-time basis to a 10% premium to the dilutive issuance price and the number of shares issuable under the GPB Warrant will be increased on a full ratchet basis. The GPB Warrant became exercisable six months after issuance and has a term of five years after the initial exercise date.

In connection with the Purchase Agreement, the Company entered into a Registration Rights Agreement (the "Registration Rights Agreement") pursuant to which the Company has agreed to file a registration statement with SEC relating to the offer and sale by GPB of the common stock underlying the GPB Warrant within one hundred eighty (180) days of closing of a public listing of the Company's Common Stock for trading on any national securities exchange (excluding any over-the-counter market), whether through a direct listing application or merger transaction. The Company is required to have the registration statement become effective on the earlier of (A) the date that is two-hundred and forty (240) days following the later to occur of (i) the date of closing of the public listing or (ii) or in the event the registration statement receives a "full review" by the Commission, the date that is 300 days following the date of closing of the public listing, or (B) the date which is within three (3) business days after the date on which the Commission informs the Company (i) that the Commission will not review the registration statement or (ii) that the Company may request the acceleration of the effectiveness of the registration statement. If the Company does not timely effect such registration, it will be required to pay GPB certain late payments specified in the Registration Rights Agreement.

In February 2018, the Company prepaid the GPB Note in full. Upon such prepayment, the Purchase Agreement and the Company's obligations under the transaction documents entered into pursuant to the Purchase Agreement terminated except for the GPB Warrant and the Registration Rights Agreement.

In October 2018, the Company sold and issued $12.2 million principal amount of debentures and warrants to purchase an aggregate of up to 1,220,000 share of the Company common stock pursuant to a securities purchase agreement dated as of September 18, 2018 among the Company and limited number of accredited investors. The net proceeds of the sale of the debentures and warrants were used to fund the Company's loan to EJ Holdings, Inc., a variable interest entity ("VIE")reflected in the Company's consolidated financial statements.

The debentures bear interest at the rate of 10% per annum, payable monthly commencing November 1, 2018, and will mature on April 21, 2020. The Company will be obliged to redeem $1 million principal amount debentures monthly, commencing in May 2019, which was amended to commence in June 2019 pursuant to securities amendment agreement dated as of March 5, 2019, and to redeem the debentures in full upon a "subsequent financing" of at least $20 million, subject to certain exceptions, or in the "event of default" (as defined). The Company's obligations under the debentures are secured by a security interest in substantially all of our assets, except for certain pledged marketable securities and are guaranteed by the U.S. subsidiaries, Emmaus Medical, Inc. and Newfield Nutrition Corporation.

The common stock purchase warrants are exercisable for five years beginning April 22, 2019 at an initial exercise price of $11.30 per share, which will be subject to reduction if we become a listed company or our common stock becomes listed or quoted on a trading market based upon the public offering price or "VWAP" of the Company common stock. The exercise price also will be subject to adjustment in certain other customary circumstances.

T.R. Winston & Company, LLC acted as placement agent in connection with the sales of the debentures and warrants pursuant to an amended and restated fee agreement with us dated October 1, 2018. In accordance with the fee agreement, the Company paid T.R. Winston a cash fee equal to 5% of the gross proceeds received from the purchasers granted T.R. Winston warrants to purchase up to 120,000 shares of the Company common stock on the same terms as the common stock purchase warrants sold to the purchasers and reimbursed T.R. Winston for certain legal fees and expenses.

Effective as of March 5, 2019, the Company entered into a securities amendment agreement with the debenture holders related warrants which provides that the securities purchase agreement among the Company and the holders of the debentures and warrants is to be amended in certain respects, and the debentures and warrants are to be amended in certain respects and restated in their entirety, immediately prior to and subject to the completion of our proposed merger transaction with MYnd Analytics, Inc. described in our Current Report on Form 8-K filed with the Securities and Exchange Commission on January 7, 2019.

Pursuant to the terms of the securities amendment agreement, (i) the debenture holders waived their right to the monthly redemption of $1,000,000 principal amount of the debentures that was due May 1, 2019 and their right to accelerate the repayment of the debentures in connection with the proposed merger transaction and (iii) the provision of the debentures requiring their mandatory redemption in connection with any "subsequent financing" was eliminated. If the merger does not occur, the securities amendment agreement will have no effect, except as described in this paragraph.

If issued in conjunction with the proposed merger transaction, the amended and restated debentures will provide that the monthly redemption of $1,000,000 principal amount thereof will commence in November 2019 and that they will mature on October 21, 2020, six months later than the current maturity date of the debentures. Unlike the debentures, the amended and restated debentures will be convertible at the option of each holder into shares of Company common stock at a conversion price of $10 a share, subject to adjustment for stock splits and other customary events. The amended and restated warrants will be exercisable for up to an aggregate of up to 1,460,000 shares of our common stock, or 240,000 more shares than are currently purchasable under the warrants, at an initial exercise price of $10.00 per share, or $1.30 less than the current exercise price of the warrants. The exercise price of the Warrants will be subject to reduction in connection with a "going public event," which we expect to occur in conjunction with the proposed merger, based upon the public offering price if the Company completes a bona fide public offering or the "VWAP" (i.e., volume-weighted average trading price) of MYnd Analytics, Inc. (which will change its name to Emmaus Life Sciences, Inc. in conjunction with the merger) common stock at the time of the merger. The exercise price of the amended and restated warrants also will be subject to reduction pursuant to a "full-ratchet" exercise-price antidilution adjustment in the event of a sale or issuance of common stock or common stock equivalents within 60 days following the merger at an effective price per share below the exercise price of the amended and restated warrants. The exercise price also will be subject to adjustment for stock splits and other customary events. The amended and restated debentures and amended and restated warrants will be assumed by the ongoing company following the proposed merger and become convertible and exercisable for the number of shares of common stock of the ongoing company and at a conversion price and exercise price based upon the "exchange ratio" in the merger.

The original securities purchase agreement entitles the holders of the warrants to registration rights with respect to the shares issuable upon exercise of the warrants. The securities amendment agreement extends the same rights to the shares issuable upon conversion of the amended and restated debentures, as well.

A summary of outstanding warrants as of March 31, 2019 and December 31, 2018 is presented below:

	Three Months Ended March 31, 2019	Year Ended December 31, 2018
Warrants outstanding, beginning of period	3,436,431	5,265,432
Granted	—	1,542,000
Exercised	(500)	(2,385,317)
Cancelled, forfeited and expired	—	(985,684)
Warrants outstanding, end of period	3,435,931	3,436,431

A summary of outstanding warrants by year issued and exercise price as of March 31, 2019 is presented below:

Year issued and Exercise Price			Outstanding: Number of Warrants Issued	Outstanding: Weighted Average Remaining Contractual Life (Years)	Outstanding: Weighted Average Exercise Price		Exercisable: Total	Exercisable: Weighted Average Exercise Price	
At December 31, 2014									
	$	3.50	50,000	0.08	$	3.50	50,000	$	3.50
		2014 Total	50,000				50,000		
At December 31, 2015									
	$	4.90	110,417	0.93	$	4.90	110,417	$	4.90
		2015 Total	110,417				110,417		
At December 31, 2016									
	$	4.50	118,750	2.25	$	4.50	118,750	$	4.50
	$	4.70	75,000	2.09	$	4.70	75,000	$	4.70
	$	5.00	1,300,000	2.11	$	5.00	1,300,000	$	5.00
		2016 Total	1,493,750				1,493,750		
At December 31, 2017									
	$	10.80	240,764	4.25	$	10.80	240,764	$	10.80
		2017 Total	240,764				240,764		
At December 31, 2018									
	$	11.30	1,541,000	4.54	$	11.30	1,541,000	$	11.30
		2018 Total	1,541,000				1,541,000		
At March 31, 2019		Total	3,435,931				3,435,931		

Stock options—During the year ended December 31, 2018, the Company's Board of Directors granted its officers, directors and employees stock options to purchase up to 357,000 shares of Company's common stock. The options will vest and become exercisable with respect to the underlying shares as follows: as to one-third (1/3) of the share on the first anniversary of the grant date, and as to the remaining two-thirds (2/3) of the shares in twenty-four (24) approximately equal monthly installments over a period of two years thereafter.

Summaries of outstanding stock options as of March 31, 2019 and December 31, 2018 are presented below.

	March 31, 2019: Number of Options	March 31, 2019: Weighted-Average Exercise Price		December 31, 2018: Number of Options	December 31, 2018: Weighted-Average Exercise Price	
Options outstanding, beginning of period	6,642,200	$	4.40	6,775,200	$	4.12
Granted or deemed issued	—	$	—	357,000	$	11.28
Exercised	(200)	$	5.00	(170,000)	$	4.59
Cancelled, forfeited and expired	—	$	—	(320,000)	$	6.06
Options outstanding, end of period	6,642,000	$	4.40	6,642,200	$	4.40

Options exercisable, end of period	6,153,778	$	4.01	5,958,783	$	3.87
Options available for future grant	2,358,000			2,357,800		

During the three months ended March 31, 2019 and 2018, the Company recognized approximately $0.5 million and $0.7 million, respectively, of share-based compensation expense arising from stock options. As of March 31, 2019, there was approximately $2.1 million of total unrecognized compensation expense related to unvested share-based compensation arrangements granted under the Company's 2011 Stock Incentive Plan. That expense is expected to be recognized over the weighted-average remaining period of 2.2 years.

Registration rights— See Note 8 regarding registration rights relating to shares of Company common stock underlying warrant issued to GPB on December 29, 2017.

Korean Private Placement — On September 12, 2016, the Company entered into Letter of Agreement with KPM and Hanil, both Korean-based public companies whose shares are listed on KOSDAQ, a trading board of Korea Exchange in South Korea. In the Letter of Agreement, the parties agreed that KPM and Hanil would purchase $17.0 million and $3.0 million, respectively, of shares of the Company's common stock at a price of $4.50 per share. In exchange, the Company agreed to invest $13.0 million and $1.0 million in future capital increases by KPM and Hanil, respectively, at prices based upon the trading prices of KPM and Hanil shares on KOSDAQ. In connection with the Letter of Agreement, KPM and Hanil entered into the Company's standard form subscription agreement with respect to their purchase of shares which contains customary representations and warranties of the parties.

On September 29, 2016, KPM and Hanil purchased from the Company 3,777,778 shares and 666,667 shares, respectively, of common stock at a price of $4.50 a share for $17 million and $3 million, respectively, or a total of $20.0 million. The Company recognized $720,000 as a reduction to its additional paid-in-capital for fees and commissions paid by the Company in connection with the transaction.

The Company invested $13.0 million and $1.0 million in capital increases by KPM and Hanil, respectively, at $15.32 and $3.68, respectively, per capital share.

NOTE 9 — LEASES

Operating leases — The Company leases its office space under operating leases with unrelated entities.

We lease 13,734 square feet of office space for our headquarters in Torrance, California, at a base rental of $48,087 per month. In December 2018, we have entered into an amended lease to expand our headquarter by an additional 7,559 square feet commencing June 1, 2019. The base monthly rent for this additional space of $27,590 will be payable commencing January 1, 2020. The amended lease will expire on May 31, 2026. We also lease an additional 1,600 square feet office space in Torrance, California, at a base rent of $2,240 per month and 2,986 square feet office space in New York, New York, at a base rent of $5,500, which leases will expire on January 31, 2020 and December 30, 2019, respectively.

In addition, we lease 1,322 square feet of office space in Tokyo, Japan, which the lease will expire on September 30, 2020.

Rent expense during the three months ended March 31, 2019 and 2018 amounted to approximately $201,000 and $124,000, respectively.

Future minimum lease payments under the agreements were as follows as of March 31, 2019 (in thousands):

	Amount
2019 (nine months)	547
2020	980
2021	975
2022	1,003
2023 and thereafter	3,665
Total lease payments	7,170
Less: Interest	4,010
Present value of lease liabilities	3,160

The weighted average remaining lease term is 6.9 years and the weighted average discount rate is 13.8%.

NOTE 10 — COMMITMENTS AND CONTINGENCIES

Management Control Acquisition Agreement — On June 12, 2017, the Company entered into a Management Control Acquisition Agreement (the "MCAA") with Telcon Holdings, Inc., a Korean corporation, and Telcon Inc., a Korean-based public company whose shares are listed on KOSDAQ, a trading board of Korea Exchange in South Korea. In accordance with the MCAA, the Company invested the ₩36.0 billion KRW (approximately $31.8 million USD) proceeds from the advance payment by Telcon Inc. under the API Supply Agreement discussed below to purchase 6,643,559 shares of Telcon Inc's common shares at a purchase price of ₩5,419 KRW (approximately $4.79 USD) per share.

The MCAA was amended in certain respect and supplemented by an Agreement, dated as of September 29, 2017 (the "September 2017 Agreement"), among the parties. Pursuant to the Agreement, among other things, Telcon Inc. purchased 4,444,445 shares of Company common stock from KPM and Hanil at a price of $6.60 per share.

On July 2, 2018, the Company entered into an Additional Agreement with Evercore Investment Holdings Co., Ltd. (formerly Telcon Holdings Co., Ltd.) ("Evercore") and Telcon RF Pharmaceutical Inc. (formerly Telcon Inc.). In the Additional Agreement, the Company agreed to use the proceeds from any sales of the Company's KPM shares to repurchase shares of Company common stock from Telcon RF Pharmaceutical, Inc at a price of $7.60 a share, subject to certain exceptions, and Telcon RF Pharmaceutical Inc. granted the Company the right to repurchase all or a portion of Telcon RF Pharmaceutical Inc.'s shares of Company common stock at a price of $7.60 a share until October 31, 2018 and at a price to be agreed upon after October 31, 2018. In the Additional Agreement, Telcon RF Pharmaceutical Inc. also granted the Company a right of first refusal until June 30, 2019 to purchase any of the Company shares that Telcon RF Pharmaceutical Inc. may wish to sell.

Raw Material Supply Agreement — On June 12, 2017, the Company entered into an API Supply Agreement with Telcon RF Pharmaceutical Inc pursuant to which it advanced to the Company approximately ₩36.0 billion KRW (approximately $31.8 million USD) in consideration of the right to supply 25% of the Company's requirements for bulk containers of PGLG for a term to fifteen (15) years. The amount advanced to the Company was recorded as a deferred Trade Discount. On July 12, 2017, the parties entered into a Raw Material Supply Agreement which superseded the API Supply Agreement. The Raw Material Supply Agreement is effective for a term of five (5) years with ten (10) one-year renewal periods. The Raw Material Supply Agreement will automatically renew unless terminated by either party in writing. The Raw Material Supply Agreement provides that the Company will purchase from Telcon RF Pharmaceutical Inc. 940,000 kilograms of PGLG at $50 USD per kilogram, or a total of $47.0 million. The PGLG purchased from Telcon is included in inventory at net realizable value (i.e., approximately $189 per kilogram as of March 31, 2019) with the excess purchase price being recorded as a charge against the deferred Trade Discount.

NOTE 11 — RELATED PARTY TRANSACTIONS

The following table sets forth information relating to our loans from related persons outstanding or at any time during the three months ended March 31, 2019 (in thousands):

Class	Lender	Interest Rate	Date of Loan	Term of Loan	Principal Amount Outstanding at March 31, 2019	Highest Principal Outstanding	Amount of Principal Repaid or Converted into Stock	Amount of Interest Paid	Conversion Rate	Shares Underlying Notes March 31, 2019
Current, Promissory note payable to related parties:										
	Lan T. Tran (2)	10%	4/29/2016	Due on Demand	20	20	—	—	—	—
	Hope Hospice (1)	10%	6/3/2016	Due on Demand	250	250	—	—	—	—
	Lan T. Tran (2)	10%	2/9/2017	Due on Demand	—	12	—	—	—	—
	Yutaka Niihara (2)(3)	10%	9/14/2017	Due on Demand	27	904	—	—	—	—
	Lan T. Tran (2)	10%	2/10/2018	Due on Demand	159	159	—	—	—	—
	Lan T. Tran (2)	10%	2/9/2019	Due on Demand	14	14	—	—	—	—
				Subtotal	**$ 470**	**$ 1,359**	**$ —**	**$ —**		**—**
Current, Convertible notes payable to related parties:										
	Yasushi Nagasaki (2)	10%	6/29/2012	Due on Demand	$ 200	$ 200	$ —	$ —	$ 3.30	76
	Yutaka & Soomi Niihara (2)(3)	10%	11/16/2015	2 years	200	200	—	—	$ 4.50	59
	Wei Peu Zen (3)	10%	11/6/2017	2 years	5,000	5,000	—	250	$ 10.00	545
	Profit Preview International Group, Ltd. (4)	10%	2/1/2018	2 years	4,037	4,037	—	202	$ 10.00	430
	Profit Preview International Group, Ltd. (4)	10%	3/21/2018	2 years	5,363	5,363	—	268	$ 10.00	565
				Subtotal	**$ 14,800**	**$ 14,800**	**$ —**	**$ —**		**1,675**
				Total	**$ 15,270**	**$ 16,159**	**$ —**	**$ —**		**1,675**

(1) Dr. Niihara, a Director and Chief Executive Officer of the Company, is also the Chief Executive Officer of Hope Hospice.
(2) Officer.
(3) Director.
(4) Mr. Zen, a Director of the Company, is the sole owner of Profit Preview International Group, Ltd.

The following table sets forth information relating to our loans from related persons outstanding at any time during the year ended December 31, 2018:

Class	Lender	Interest Rate	Date of Loan	Term of Loan	Principal Amount Outstanding at December 31, 2018	Highest Principal Outstanding	Amount of Principal Repaid or Converted into Stock	Amount of Interest Paid	Conversion Rate	Shares Underlying Notes December 31, 2018
Current, Promissory note payable to related parties:										
	Masaharu & Emiko Osato (3)	11%	12/29/2015	Due on Demand	$ —	$ 300	$ 300	$ 76	—	—
	Lan T. Tran (2)	11%	2/10/2016	Due on Demand	—	131	131	29	—	—
	Masaharu & Emiko Osato (3)	11%	2/25/2016	Due on Demand	—	400	400	94	—	—
	Lan T. Tran (2)	10%	4/29/2016	Due on Demand	20	20	—	—	—	—
	Hope Hospice (1)	10%	6/3/2016	Due on Demand	250	250	—	—	—	—
	Lan T. Tran (2)	10%	2/9/2017	Due on Demand	12	12	—	—	—	—
	Yutaka Niihara (2)(3)	10%	9/14/2017	Due on Demand	27	904	877	95	—	—
	Lan T. Tran (2)	11%	2/10/2018	Due on Demand	159	159	—	—	—	—
				Subtotal	**$ 468**	**$ 2,176**	**$ 1,708**	**$ 294**		**—**
Current, Convertible notes payable to related parties:										
	Yasushi Nagasaki (2)	10%	6/29/2012	Due on Demand	200	200	—	—	$ 3.30	74
	Yutaka & Soomi Niihara (2)(3)	10%	11/16/2015	2 years	200	200	—	—	$ 4.50	58
	Wei Peu Zen (3)	10%	11/6/2017	2 years	5,000	5,000	—	250	$ 10.00	533
				Subtotal	**$ 5,400**	**$ 5,400**	**$ —**	**$ 250**		**665**
Non Current, Convertible notes payable to related parties:										
	Profit Preview International Group, Ltd. (4)	10%	2/1/2018	2 years	4,037	4,037	—	202	$ 10.00	420
	Profit Preview International Group, Ltd. (4)	10%	3/21/2018	2 years	5,363	5,363	—	268	$ 10.00	552
				Subtotal	**$ 9,400**	**$ 9,400**	**$ —**	**$ 470**		**972**
				Total	**$ 15,268**	**$ 16,976**	**$ 1,708**	**$ 1,014**		**1,637**

(1) Dr. Niihara, a Director and Chief Executive Officer of the Company, is also the Chief Executive Officer of Hope Hospice.
(2) Officer
(3) Director
(4) Mr. Zen, a Director of the Company, is the sole owner of Profit Preview International Group, Ltd.

NOTE 12 — SUBSEQUENT EVENTS

As discussed in Note 7, as of March 31, 2019 the Company had entered into amendments with the holders of an aggregate of $4.8 million, or 14%, in principal amount of the Company's outstanding convertible notes which provide that the notes will be converted automatically into shares of Company common stock at their respective conversion prices immediately prior to the effective time of the proposed merger transaction with MYnd Analytics, Inc. As such, the conversion shares would be deemed outstanding immediately prior to the merger and would be converted into shares of MYnd Analytics, Inc. common stock as a result of the merger in the same manner as other outstanding shares of Company common stock based the merger "exchange ratio." As of May 14, 2019, the holders of a total of an additional $4.2 million, or 12%, in principal amount of the outstanding convertible notes had also agreed to the amendment. The Company intends to continue discussions regarding the same or similar amendments with the holders of the remaining outstanding convertible notes. There is no assurance that the Company will be able to do so on the same terms, or at all.

Subsequent to March 31, 2019, the Company issued the following:

	Amounts	Number of Shares Issued
Common shares	$ 711,550	103,590

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

With respect to the following discussion, the terms, "we," "us," "our," "Emmaus" or the "Company" refer to Emmaus Life Sciences, Inc., and its direct and indirect wholly-owned subsidiaries.

Forward-Looking Statements

This Management's Discussion and Analysis of Financial Condition and Results of Operations should be read in conjunction with the audited consolidated financial statements and the related notes included in the Company's Annual Report on Form 10-K for the year ended December 31, 2018 filed with the Securities and Exchange Commission ("SEC") on March 21, 2019 (the "Annual Report").

This Quarterly Report contains forward-looking statements that involve substantial risks and uncertainties. All statements other than historical facts contained in this report, including statements regarding our future financial position, capital expenditures, cash flows, business strategy and plans and objectives of management for future operations are forward-looking statements. The words "anticipate," "believe," "expect," "plan," "intend," "seek," "estimate," "project," "could," "may" and similar expressions are intended to identify forward-looking statements. These statements include, among others, information regarding future operations, future capital expenditures, and future net cash flow. Such statements reflect our management's current views with respect to future events and financial performance and involve risks and uncertainties, including, without limitation, our ability to raise additional capital to fund our operations, market acceptance of Endari, our reliance on third-party manufacturers for our drug products, our dependence on licenses for certain of our products, exposure to product liability and defect claims, obtaining, and, or, maintaining the U.S. Food and Drug Administration ("FDA") and other regulatory authorization to market Endari or our product candidates, development of a public trading market for our securities, and various other matters, many of which are beyond our control.

Should one or more of these risks or uncertainties occur, or should underlying assumptions prove to be incorrect, actual results may vary materially and adversely from those anticipated, believed, estimated or otherwise indicated. Consequently, all of the forward-looking statements made in this Form 10-Q are qualified by these cautionary statements. We undertake no duty to amend or update these statements beyond what is required by SEC reporting requirements.

Company Overview

We are a commercial-stage biopharmaceutical company engaged in the discovery, development, marketing and sale of innovative treatments and therapies, primarily for rare and orphan diseases. On July 7, 2017, the U.S. Food and Drug Administration, or FDA, approved Emmaus' lead product, Endari™ (L-glutamine oral powder), to reduce the severe complications of sickle cell disease, or SCD, in adult and pediatric patients five years of age and older, and in January 2018, we began marketing and selling Endari™ in the U.S. Endari™ has received Orphan Drug designation from the FDA and Orphan Medical designation from the European Commission, or EC, which designations afford marketing exclusivity for Endari™ for a seven-year period in the U.S. and ten-year period in the E.U., respectively, following marketing approval.

Until we began marketing and selling Endari™ in the U.S. in early 2018, we had minimal revenues and relied upon funding from sales of equity securities and debt financings and loans, including loans from related parties. As of March 31, 2019, our accumulated deficit was $170.9 million and we had cash and cash equivalents of $15.3 million, of which $13.1 million was attributable to EJ Holdings Inc., a Japanese company which we consolidate as a variable interest entity ("VIE"). Until we can generate sufficient Endari™ sales revenues, our future cash requirements are expected to be financed through public or private equity offerings, debt financings or corporate collaboration and licensing arrangements. Because of the numerous risks and uncertainties associated with pharmaceutical development, we are unable to predict if or when we will become profitable through the sales of Endari.

Emmaus Medical, LLC was organized on December 20, 2000. In October 2003, Emmaus Medical, LLC undertook a merger reorganization with Emmaus Medical, Inc., which was originally incorporated in September 2003.

Pursuant to an Agreement and Plan of Merger dated April 21, 2011, which we refer to as the Merger Agreement, by and among us, AFH Merger Sub, Inc., our wholly-owned subsidiary, which we refer to as AFH Merger Sub, AFH Advisory and Emmaus Medical, Emmaus Medical merged with and into AFH Merger Sub on May 3, 2011 with Emmaus Medical continuing as the surviving entity, which we refer to as the Merger. Upon the closing of the Merger, we changed our name from "AFH Acquisition IV, Inc." to "Emmaus Holdings, Inc." On September 14, 2011, we changed our name to "Emmaus Life Sciences, Inc."

Our future capital requirements are substantial and may increase beyond our current expectations depending on many factors, including, but not limited to: our success in commercializing Endari in the U.S. or elsewhere; the duration and results of the clinical trials for our other product candidates; unexpected delays or developments when seeking regulatory approvals; the time and

cost in preparing, filing, prosecuting, maintaining and enforcing patent claims; current and future unexpected developments encountered in implementing our business development and commercialization strategies; the outcome of any future litigation; and further arrangements, if any, with collaborators.

Financial Overview

Revenues

Since January 2018, we have generated revenues through the sale of Endari as a treatment for SCD. We also generate revenues to a much lesser extent from AminoPure, a nutritional supplement.

Revenues from Endari product sales are recognized upon delivery and transfer of control of products to the Company's distributors and specialty pharmacy providers customers. Distributors resell the products to other specialty pharmacy providers, health care providers, hospitals, patients and clinics. In addition to distribution agreements with distributors, we enter into contractual arrangements with specialty pharmacy providers, in-office dispensing providers, group purchasing organizations, and government entities that provide for government-mandated and/or privately-negotiated rebates, chargebacks and discounts with respect to the purchase of our products. These various discounts, rebates, and charge-backs are referred to as "variable consideration." Revenues from product sales are recorded net of variable consideration.

Prior to recognizing revenues, we forecast and estimate variable consideration. Amounts of variable consideration are included in the transaction price to the extent that it is probable that a significant reversal in the amount of cumulative revenues recognized will not occur when the uncertainty associated with the variable consideration is subsequently resolved.

Provisions for returns and other variable consideration adjustments are provided for in the period in which the related revenues are recorded. Actual amounts of variable consideration ultimately received may differ from our estimates. If actual results in the future vary from our estimates, we will adjust these estimates, which would affect net product revenue and earnings in the period such variances become known. The following are our significant categories of sales discounts and allowances:

Sales Discounts: We provide our customers contractual prompt payment discounts and from time to time offers additional one-time discounts that are recorded as a reduction of revenues in the period the revenues are recognized.

Product Returns: We offer our distributors a right to return product purchased directly from us based principally upon (i) overstocks, (ii) inactive products or non-moving product due to market conditions, and (iii) expired products. Product return allowances are estimated and recorded at the time of sale.

Government Rebates: We are subject to discount obligations under state Medicaid programs and the Medicare prescription drug coverage gap program. We estimate Medicaid and Medicare prescription drug coverage gap rebates based upon a range of possible outcomes that are probability-weighted for the estimated payor mix. These reserves are recorded in the same period the related revenues are recognized, resulting in a reduction of product revenues and the establishment of a current liability that is included as an accrued liability in our balance sheet. Our liability for these rebates consists primarily of estimates of claims expected to be received in future periods related to recognized revenues.

Chargebacks and Discounts: Chargebacks for fees and discounts represent the estimated obligations resulting from contractual commitments to sell products to certain specialty pharmacy providers, in-office dispensing providers, group purchasing organizations, and government entities at prices lower than the list prices charged to distributors. The distributors charge us for the difference between what they pay for the products and our contracted selling price to these specialty pharmacy providers, in-office dispensing providers, group purchasing organizations, and government entities. These reserves are established in the same period that the related revenues are recognized, resulting in a reduction of revenues. Chargeback amounts are generally determined at the time of resale of products by our distributors.

Cost of Goods Sold

Cost of goods sold includes the raw materials, packaging, shipping and distribution costs of Endari and AminoPure.

Research and Development Expenses

Research and development costs consist of expenditures for new products and technologies, which primarily involve fees paid to contract research organizations ("CRO") that conduct clinical trials of our product candidates, payroll-related expenses, study site payments, consultant fees, and activities related to regulatory filings, manufacturing development costs and other related supplies. The costs of later-stage clinical studies, such as Phase 2 and 3 trials, are generally higher than those of earlier stages of development, such as preclinical studies and Phase 1 trials. This is primarily due to the increased size, expanded scope, patient related healthcare and regulatory compliance costs, and generally longer duration of later-stage clinical studies.

The most significant clinical trial expenditures in prior years have been related to the CRO costs and the payments to study sites in our Endari clinical trials. The contract with the CRO is based on time and material expended, whereas the study site agreements are based on per patient costs as well as other pass-through costs, including, but not limited to, start-up costs and institutional review board fees. The financial terms of these agreements are subject to negotiation and vary from contract to contract and may result in uneven payment flows. Payments under some of these contracts depend on factors such as the successful enrollment of patients and the completion of clinical trial milestones.

Future research and development expenses will depend on any new product candidates or technologies that we may introduce into our research and development pipeline. In addition, we cannot forecast with any degree of certainty which product candidates may be subject to future collaborations, when such arrangements will be secured, if at all, and to what degree, if any, such arrangements would affect our development plans and capital requirements.

Due to the inherently unpredictable nature of the process for developing drugs, biologics and cell-based therapies and the interpretation of the regulatory requirements, we are unable to estimate with any degree of certainty the amount of costs which will be incurred in obtaining regulatory approvals of Endari outside of the U.S. and the continued development of our other preclinical and clinical programs. Clinical development timelines, the probability of success and development costs can differ materially from expectations and can vary widely. These and other risks and uncertainties relating to product development are described in the Annual Report under the headings "Risk Factors—Risks Related to Development of our Product Candidates," "Risk Factors—Risks Related to our Reliance on Third Parties," and "Risk Factors—Risks Related to Regulatory Approval of our Product Candidates and Other Legal Compliance Matters."

General and Administrative Expenses

General and administrative expenses consist principally of salaries and related costs, including share-based compensation, for personnel in executive, finance, business development, information technology, marketing and legal functions. Other general and administrative expenses include facility costs, patent filing costs and professional fees and expenses for legal, consulting, auditing and tax services. Inflation has not had a material impact on our general and administrative expenses over the past two years. We expect general and administrative expenses to continue to increase as we add additional personnel to support the business and operations of the Company.

Selling Expenses

Selling expenses consist principally of salaries and related costs for personnel involved in the launch, promotion and marketing of our products. Other selling cost include advertising, commissions, third party consulting costs, the cost of contracted sales personnel and travel. We expect selling expenses, as well as general and administrative expenses to increase as we add additional sales and administrative personnel to support the commercialization of Endari.

Inventories

Inventories consist of raw material, finished goods and work-in-process and are valued on a first-in, first-out basis and at the lower of cost or market value. Substantially all of the raw material purchased during the three months ended March 31, 2019 and 2018 were from one vendor.

Results of Operations

Three months ended March 31, 2019 and 2018

Net Income (Loss). Net loss attributable to us for the three months ended March 31, 2019 increased by $8.1 million, or 133%, to $14.2 million from $6.1 million for the three months ended March 31, 2018. The increase in net loss attributable to us is primarily a result of $11.9 million increase in other expenses and $0.6 million increase in operating expenses partially offset by $4.5 million increase in net revenues as discussed below. Our loss from operations was $0.6 million for the three months ended March 31, 2019 as compared to loss of $4.4 million for the three months ended March 31, 2018. As of March 31, 2019, we had an accumulated deficit of approximately $170.9 million. Losses will continue as we transition from developmental stage to our next phase as a commercial organization. We anticipate that our loss from operations will decline and that we will realize income from operations as we increase revenues for sales of Endari.

Revenues, Net. Gross revenue increased by $5.1 million or 617% to $5.9 million for three months ended March 31, 2019 from $0.8 million for the three months ended March 31, 2018, and net revenues increased by $4.5 million, or 579%, to $5.3 million for three months ended March 31, 2019 from $0.8 million for the three months ended March 31, 2018. Substantially all of these revenues were from sales of Endari, and revenues from sales of AminoPure were immaterial. We expect Endari revenues to continue to increase as we expand our commercialization efforts in the United States and abroad.

Cost of Goods Sold. Cost of goods sold increased by $0.1 million, or 49%, to $0.2 million for the three months ended March 31, 2019 from $0.1 million for the three months ended March 31, 2018. Cost of goods sold includes costs for raw material, packaging, testing, shipping and costs related to scrapped inventory. Substantially all of the raw material purchased during the three months ended March 31, 2019 and 2018 were from one vendor. Cost of goods sold increased due to the increase in Endari sales during the first quarter of 2019.

Research and Development Expenses. Research and development expenses increased by $0.1 million, or 25%, to $0.5 million for the three months ended March 31, 2019 from $0.4 million for the three months ended March 31, 2018. This increase was primarily due to an increase in expenses related to our sponsored oral mucosa epithelia study and diverticulosis study. We expect our research and development costs to increase in the remainder of 2019 as these studies progress.

Selling Expenses. Selling expenses increased by $0.6 million, or 71%, to $1.5 million for the three months ended March 31, 2019 from $0.9 million for the three months ended March 31, 2018. Selling expenses consist primarily of distribution fees, sales force fees, promotion, travel, marketing and branding expenses for Endari and to a much lesser extent costs of distribution, promotion, travel, tradeshows and exhibits related to AminoPure. The increase in selling expenses was primarily related to increased contract sales force fees for Endari. We anticipate that our selling expenses will increase during the remainder of 2019 as we expand Endari marketing and sales activities.

General and Administrative Expenses. General and administrative expenses decreased slightly by $0.1 million, or 3%, to $3.7 million for the three months ended March 31, 2019 from $3.8 million for the three months ended March 31, 2018. General and administrative expenses include share-based compensation expenses, professional fees, office rent and payroll expenses. We expect general and administrative expenses to continue to increase as we add additional personnel to support the commercialization of Endari and our other business operations.

Other Income (Expense). Total other expense increased by $11.9 million, or 720% , to $13.6 million for the three months ended March 31, 2019, compared to $1.7 million in other expense for the three months ended March 31, 2018. The increase was primarily due to an increase of $12.0 million in a change in the net gain (loss) on equity investment in marketable securities and $1.7 million in interest expenses. Other expense for the three months ended March 31, 2018 included a loss on debt extinguishment of $3.2 million, while there was no corresponding other expenses recognized during the three months ended March 31, 2019.

Operating Expenses Overall. We anticipate that our operating expenses will increase for, among others, the following reasons:

- We intend to reinforce our sales and marketing team to commercialize Endari in the U.S. and to enter into one or more strategic partnerships to market Endari in the EU and other territories, subject to marketing approvals.;
- We anticipate increases in payroll and employee expenses associated with an increase in personnel, higher consulting, legal, accounting and investor relations costs, and increases in insurance premiums; and
- We expect increases in research and development activities as we undertake development of our product candidates continues.

Liquidity and Capital Resources

Based on our losses to date, anticipated future revenues and operating expenses, debt repayment obligations and cash and cash equivalents of $15.3 million of which $13.1 million was attributable to a VIE, as of March 31, 2019, we do not have sufficient operating capital for our business without raising additional capital. We had an accumulated deficit of $170.9 million at March 31, 2019. We anticipate that we will continue to incur net losses for the foreseeable future as we incur expenses for the commercialization of Endari, research costs for our pilot study of our L-glutamine product in the treatment of diverticulosis and corneal cell sheets using

Cultured Autologous Oral Mucosal Epithelial Cell Sheet technology and the expansion of corporate infrastructure, including costs associated with being a public reporting company. We have previously relied on private equity offerings, debt financings and loans, including loans from related parties. As part of this effort, we have received various loans from officers, stockholders and other investors as discussed below. As of March 31, 2019, we had outstanding notes payable in an aggregate principal amount of $52.1 million, consisting of $17.2 million of non-convertible promissory notes and debentures and $34.9 million of convertible notes. The convertible notes and non-convertible promissory notes bear interest at rates ranging from 10% to 11% and, except for the 2011 convertible note listed below in the principal amount of $0.3 million, are unsecured. The net proceeds of the loans were used for working capital purposes. See Notes 7 and 11 to our consolidated statements for a description of recent amendments to our convertible promissory notes that make them convertible automatically into shares of Company common stock immediately prior to the effective time of our proposed merger transaction with MYnd Analytics., Inc.

Of the notes outstanding as of March 31, 2019, approximately $49.3 million principal amount of the notes are either due on demand or will become due and payable within the next 12 months. Our failure to raise capital as and when needed would have a negative impact on our financial condition and our ability to pursue our business strategies.

As described in Note 2 to our consolidated financial statements, we have had recurring operating losses, have a significant amount of notes payable and other obligations due within the next year and projected operating losses, including the expected costs relating to the commercialization of Endari that exceed both the existing cash balances and cash expected to be generated from operations for at least the remainder of 2019.

Our current cash burn rate for the three months ended March 31, 2019 was approximately $0.4 million per month.

Until we can generate a sufficient product revenue, our future cash needs are expected to be financed through public or private equity offerings, debt financings, loans, including loans from related parties, or other sources, such as strategic partnership agreements and licensing or other strategic arrangements. We have no understanding or arrangements with respect to future financings, and there can be no assurance of the availability of such capital on terms acceptable to us (or at all). Due to the uncertainty of our ability to meet our current operating and capital expenses, there is substantial doubt about our ability to continue as a going concern. There is also no assurance that revenues from sales of Endari will increase as expected.

For the three months ended March 31, 2019 and during the year ended December 31, 2018, we borrowed varying amounts pursuant to convertible notes and non-convertible promissory notes. As of March 31, 2019 and December 31, 2018, the aggregate principal amounts outstanding under convertible notes and non-convertible promissory notes totaled $52.2 million for both periods.

The table below lists our outstanding notes payable as of March 31, 2018 and December 31, 2018 and the material terms of our outstanding borrowings:

Year Issued	Interest Rate Range	Term of Notes	Conversion Price	Principal Outstanding March 31, 2019	Discount Amount March 31, 2019	Carrying Amount March 31, 2019	Shares Underlying Notes March 31, 2019	Principal Outstanding December 31, 2018	Discount Amount December 31, 2018	Carrying Amount December 31, 2018	Shares Underlying Notes December 31, 2018
Notes payable											
2013	10%	Due on demand	—	$ 902	$ —	$ 902	—	$ 909	$ —	$ 909	—
2015	10%	Due on demand	—	10	—	10	—	10	—	10	—
2016	10% - 11%	Due on demand	—	843	—	843	—	843	—	843	—
2017	5% - 11%	Due on demand	—	1,951	—	1,951	—	2,575	—	2,575	—
2018	10% - 11%	Due on demand- 18 months	—	12,311	7,847	4,464	—	12,311	9,233	3,078	—
2019	11%	Due on demand	—	752	—	752	—	—	—	—	—
				$ 16,769	**$ 7,847**	**$ 8,922**	**—**	**$ 16,648**	**$ 9,233**	**$ 7,415**	**—**
		Current		$ 14,569	$ 7,569	$ 7,000	—	$ 12,449	$ 6,054	$ 6,394	—
		Non-current		$ 2,200	$ 278	$ 1,922	—	$ 4,200	$ 3,179	$ 1,021	—
Notes payable - related party											
2016	10%	Due on demand	—	270	—	270	—	270	—	270	—
2017	10%	Due on demand	—	27	—	27	—	39	—	39	—
2018	11%	Due on demand	—	159	—	159	—	159	—	159	—
2019	10%	Due on demand	—	14	—	14	—	—	—	—	—
				$ 470	**$ —**	**$ 470**	**—**	**$ 468**	**$ —**	**$ 468**	**—**
		Current		$ 470	$ —	$ 470	—	$ 468	$ —	$ 468	—
		Non-current		$ —	$ —	$ —	—	$ —	$ —	$ —	—
Convertible notes payable											
2011	10%	5 years	$3.05	$ 300	$ —	$ 300	98	$ 300	$ —	$ 300	98
2014	10%	Due on demand - 2 years	$3.05 - $3.60	522	—	522	186	519	—	519	184
2016	10%	Due on demand - 2 years	$3.60 - $4.50	62	—	62	17	61	—	61	17
2017	10% - 13.5%	Due on demand - 3 years	$3.50 - $10.31	1,895	108	1,787	618	2,820	349	2,471	899
2018	6% - 10%	Due on demand - 2 years	$3.50 - $10.00	15,311	2,671	12,640	3,076	19,556	6,169	13,387	3,664
2019	10%	Due on demand - 1 year	$3.50 - $4.50	2,039	1,804	235	570	—	—	—	—
				$ 20,129	**$ 4,583**	**$ 15,546**	**4,565**	**$ 23,256**	**$ 6,518**	**$ 16,738**	**4,862**
		Current		$ 19,421	$ 4,264	$ 15,157	4,402	$ 16,604	$ 5,351	$ 11,253	3,981
		Non-current		$ 708	$ 319	$ 389	163	$ 6,652	$ 1,167	$ 5,485	881
Convertible notes payable - related party											
2012	10%	Due on demand	$ 3.30	$ 200	$ —	$ 200	76	$ 200	$ —	$ 200	74
2015	10%	2 years	$ 4.50	200	—	200	59	200	—	200	58
2017	10%	2 years	$ 10.00	5,000	218	4,782	545	5,000	311	4,689	533
2018	10%	2 years	$ 10.00	9,400	686	8,714	995	9,400	871	8,529	972
				$ 14,800	**$ 904**	**$ 13,896**	**1,675**	**$ 14,800**	**$ 1,182**	**$ 13,618**	**1,637**
		Current		$ 14,800	$ 904	$ 13,896	1,675	$ 5,400	$ 311	$ 5,089	665
		Non-current		$ —	$ —	$ —	—	$ 9,400	$ 871	$ 8,529	972
		Total		**$ 52,168**	**$ 13,334**	**$ 38,834**	**6,240**	**$ 55,172**	**$ 16,933**	**$ 38,239**	**6,499**

See Note 7 and 11 to our consolidated financial statements for information regarding recent amendments to our outstanding notes.

Cash flows for the three months ended March 31, 2019 and March 31, 2018

Net cash provided by operating activities

Net cash flows used in operating activities increased by $0.7 million, or 109%, to a negative net cash flow of $1.3 million for the three months ended March 31, 2019 from negative cash flow of $0.6 million for the three months ended March 31, 2018. This increase was primarily due to a $4.0 million increase of working capital expenditures and a $8.1 million increase in net loss partially offset by $11.2 million in the non-cash adjustments to net loss. The decrease in non-cash adjustments to net loss was primarily attributable to a $12.0 million increase in net loss on investment in marketable securities and $1.5 million increase in amortization of discount of convertible notes partially offset by $3.2 million decrease in loss on debt settlement.

Net cash used in investing activities

Net cash flows used in investing activities decrease by $0.5 million, or 97%, to approximately $16,000 for three months ended March 31, 2019 from $0.5 million for the three months ended March 31, 2018. Net cash used in investing activities includes purchase of marketable securities and investment at cost, as well as purchase of property and equipment.

Net cash from financing activities

Net cash flows used in financing activities decreased by $15.8 million, or 97%, to $0.5 million for the three months ended March 31, 2019 from $16.3 million for the three months ended March 31, 2018 , as a result of a decrease of $20.5million in repayment of notes payable and convertible notes and increase of $2.3 million in net proceeds from issuance of common stock in addition to no repurchase of common stock and warrant during the three months ended March 31, 2019 comparing to $7.5 million used during the three months ended March 31, 2018. The decrease of cash outflow is partially offset by the $14.4 million of proceeds from convertible notes received for the three months ended March 2018 while there was no corresponding proceeds during the three months ended March 31, 2019.

Off-Balance-Sheet Arrangements

We have no off-balance sheet arrangements.

Critical Accounting Policies

Management's discussion and analysis of financial condition and results of operations is based on our financial statements, which have been prepared in accordance with U.S. generally accepted accounting principles ("GAAP"), on the basis that the Company will continue as a going concern. Due to the uncertainty of the Company's ability to meet its current operating and capital expenses, there is substantial doubt about the Company's ability to continue as a going concern, as the continuation and expansion of its business is dependent upon obtaining further financing, successful and sufficient market acceptance of its products, and finally, achieving a profitable level of operations. The consolidated interim financial statements do not include any adjustments that might result from the outcome of these uncertainties. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities and expenses. On an ongoing basis, we evaluate these estimates and judgments, including those described below. We base our estimates on our historical experience and on various other assumptions that we believe to be reasonable under the present circumstances. These estimates and assumptions form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ materially from these estimates.

Refer to "Critical Accounting Policies" in Part II, Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations" of the Annual Report for our critical accounting policies. There have been no material changes in any of our critical accounting policies during the three months ended March 31, 2019 except for adopting the new lease accounting standard.

Item 3. Quantitative and Qualitative Disclosures about Market Risk

Not required for a smaller reporting company.

Item 4. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

Disclosure controls and procedures ("DCP") are controls and other procedures that are designed to ensure that information required to be disclosed by us in the reports that we file or submit under the Securities Exchange Act of 1934 (the "Exchange Act") is

recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms. DCP include, without limitation, controls and procedures designed to ensure that information required to be disclosed by us in the reports that we file under the Exchange Act is accumulated and communicated to our management, including our principal executive and financial officers, as appropriate to allow timely decisions regarding required disclosures.

As of the end of the period covered by this Form 10-Q, we conducted an evaluation, under the supervision and with the participation of our Chief Executive Officer and Chief Financial Officer, of the effectiveness of our DCP. Based upon this evaluation and due to the material weaknesses in our internal control over financial reporting as of December 31, 2018 described below, our Chief Executive Officer and Chief Financial Officer concluded that the Company's DCP were not effective. Our management is working at remediating the material weaknesses in our internal controls over financial reporting. However, we have not yet completed a full annual accounting cycle since December 31, 2019 to fully validate the remediation of the material weaknesses in our internal controls and the effectiveness of the Company's DCP.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) that occurred during the fiscal quarter ended March 31, 2019 which have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Material Weakness and Plan of Remediation

A material weakness is a deficiency, or combination of deficiencies, in internal control over financial reporting such that there is a reasonable possibility that a material misstatement of the Company's annual or interim financial statements will not be prevented or detected on a timely basis. Material weaknesses would permit information required to be disclosed by the Company in the reports that it files or submits to not be recorded, processed, summarized and reported, within the time periods specified in the SEC's rules and forms.

We conducted an evaluation pursuant to Rule 13a-15 of the Exchange Act of the effectiveness of the design and operation of our DCP as of December 31, 2018. This evaluation was conducted under the supervision (and with the participation) of our management, including our Chief Executive Officer and Chief Financial Officer. Based on that evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our DCP were not effective as of December 31, 2018, because of the continuance of a material weakness (the "Material Weakness") due to inadequate financial closing process, segregation of duties including access control of information technology especially financial information, inadequate documentation of policies and procedures over risk assessments, internal control and significant account process, and insufficient entity risk assessment process.

We are committed to remediating the control deficiencies that constituted the Material Weakness by implementing changes to our internal control over financial reporting. In 2018, we implemented measures designed to remediate the underlying causes of the control deficiencies that gave rise to the Material Weakness, including, without limitation:

- engaging a third-party accounting consulting firm to assist us in the review of our application of GAAP on complex debt financing transactions;
- using a GAAP Disclosure and SEC Reporting Checklist;
- increasing the amount of external continuing professional training and academic education on accounting subjects for accounting staff including management staff to receive professional certification as a CPA or CMA;
- enhancing the level of the precision of review controls related to our financial close and reporting; and
- engaging other supplemental internal and external resources.

Our management and Board of Directors are committed to the remediation of the Material Weakness, as well as the continued improvement of our overall system of DCP. We are in the process of implementing measures to remediate the underlying causes of the control deficiencies that gave rise to the Material Weakness, which primarily include engaging additional and supplemental internal and external resources with the technical expertise in GAAP, as well as to implement new policies and procedures to provide more effective controls to track, process, analyze, and consolidate the financial data and reports.

We believe these measures, once fully implemented, will remediate the control deficiencies that gave rise to the Material Weakness. As we continue to evaluate and work to remediate these control deficiencies, we may determine that additional remedial measures are required.

Part II. Other Information

Item 1. Legal Proceedings

Not applicable.

Item 1A. Risk Factors

Please refer to the risk factors disclosed in the "Risk Factors" section of the Annual Report.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

On February 2, 2019, the Company refinanced a convertible note to a third party in the original principal amount of $193,909 with a new convertible note in the principal amount of $213,300 that bears interest at 10% per annum and matures on the one-year anniversary date of the note. The principal amount plus any unpaid accrued interest due under the convertible note is convertible into shares of Company common stock at $4.50 per share.

On February 13, 2019, the Company issued 60,000 shares of common stock to The Bralina Group LLC, at a price of $3.50 per share for an aggregate price of $210,000.

On February 23, 2019, the Company refinanced a convertible note to a third party in the original principal amount of $607,753 with a new convertible note in the principal amount of $638,141 that bears interest at 10% per annum and matures in six months. The principal amount plus any unpaid accrued interest due under the convertible note is convertible into shares of Company common stock at $3.50 per share at any time during the term of the note upon the election of the holder.

On March 2, 2019, the Company refinanced a convertible note payable a third party in the original principal amount of $260,911 with a new convertible note in the principal amount of $287,002 that bears interest at 10% per annum. The note is due on demand up to one year from the date of issuance. The principal amount and any unpaid interest due under the note are convertible into shares of the Company's common stock at $3.60 per share at any time during the term of the note upon election of the holder.

On March 12, 2019, the Company refinanced a convertible note payable to a third party, in the original principal amount of $145,152 with a new convertible note in the principal amount of $174,182 which bears interest at 10% per annum. The note is due on demand up to two years from the date of issuance. The principal amount and any unpaid interest due under the note are convertible into shares of the Company's common stock at $3.60 per share at any time during the term of the note upon election of the holder.

On March 14, 2019, the Company refinanced a convertible note payable to a shareholder, in the original principal amount of $605,536 with a new convertible note in the principal amount of $726,644 which bears interest at 10% per annum. The note is due on demand up to two years from the date of issuance. The principal amount and any unpaid interest due under the note are convertible into shares of the Company's common stock at $3.50 per share at any time during the term of the note upon election of the holder.

In February and March 2019, the Company issued an aggregate of 247,500 shares of common stock to certain shareholders, at a price of $10.00 per share for an aggregate price of $2,475,000.

All of the securities noted above were issued in reliance upon the exemption from registration provided by Section 4(a)(2) of the Securities Act of 1933, as amended (the "Securities Act"), or Regulation D under the Securities Act or, in the case of refinancing, upon the exemption from registration provided by Section 3(a)(9) of the Securities Act. These securities qualified for exemption under Section 4(a)(2) of the Securities Act or Regulation D because the issuances did not involve a "public offering." The issuances were not a public offering based upon the following factors: (i) a limited number of securities were issued to a limited number of investors; (ii) there was no public solicitation; (iii) each investor was an "accredited investor" as such term is defined by Rule 501 under the Securities Act; and (iv) the investment intent of the investors. No broker-dealers were used in connection with such sales of unregistered securities. The securities issued in reliance upon the exemption from regulation Section 365(a) of the Securities Act qualified for the exemption because they were issued exclusively in exchange for our outstanding securities where no commission or remuneration was paid or given in soliciting the exchange.

Item 3. Defaults Upon Senior Securities

None.

Item 4. Mine Safety Disclosures

Not applicable.

Item 5. Other Information

None.

Item 6. Exhibits

(a) Exhibits

Exhibit Number	Exhibit Description	Incorporated by Reference: Form	File No.	Exhibit	Filing Date	Filed/ Furnished
2.1	Agreement and Plan of Merger and Reorganization dated as of January 4, 2019, by and among MYnd Analytics, Inc., Athena Merger Subsidiary, Inc. and Emmaus Life Sciences, Inc.	8-K	000-142031	2.1	January 7, 2019	
2.2	Amendment No.1 to Agreement and Plan of Merger and Reorganization dated as of May 10, 2019.					*
4.1	Form of Amended and Restated 10% Senior Secured Debenture.	8-K	000-142031	4.1	March 11, 2019	
4.2	Form of Amended and Restated Common Stock Purchase Warrant.	8-K	000-142031	4.1	March 11, 2019	
4.3	Convertible Promissory Note dated February 2, 2019.					*
4.4	Convertible Promissory Note dated February 23, 2019.					*
4.5	Convertible Promissory Note dated March 2, 2019.					*
4.6	Form of Convertible Promissory Note issued to the person indicated on Schedule A thereto.					*
10.1	Form of Emmaus Voting Agreement dated as of January 4, 2019, including form of irrevocable proxy.	8-K	000-142031	10.1	January 7, 2019	
10.2	Form of MYnd Voting Agreement dated as of January 4, 2019, including form of irrevocable proxy.	8-K	000-142031	10.2	January 7, 2019	
10.3	Form of Emmaus Lock-Up Agreement dated as of January 4, 2019.	8-K	000-142031	10.3	January 7, 2019	
10.4	Form of MYnd Lock-Up Agreement dated as of January 4, 2019.	8-K	000-142031	10.4	January 7, 2019	
10.5	Securities Amendment Agreement dated as of March 5, 2019 among Emmaus Life Sciences, Inc. and the Holders thereunder.	8-K	000-142031	10.1	March 11, 2019	
10.6	Form of Promissory Note issued to the persons indicated on Schedule A thereto.					*
31.1	Certification of Chief Executive Officer pursuant to Item 601(b)(31) of Regulation S-K, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002					*
31.2	Certification of Chief Financial Officer pursuant of Item 601(b)(31) of Regulation S-K, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002					*

Exhibit Number	Exhibit Description	Incorporated by Reference Form	File No.	Exhibit	Filing Date	Filed/ Furnished
32.1+	Certification of Chief Executive Office and Chief Financial Officer Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.					*+
101.INS	XBRL Instance Document					
101.SCH	XBRL Taxonomy Extension Schema Document					
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document					
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document					
101.LAB	XBRL Taxonomy Extension Label Linkbase Document					
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document					

* Filed herewith.

\+ This exhibit shall not be deemed “filed” for purposes of Section 18 of the Securities Exchange Act of 1934 or otherwise subject to the liabilities of that section, nor shall it be deemed incorporated by reference in any filing under the Securities Act of 1933 or the Securities Exchange Act of 1934, whether made before or after the date hereof and irrespective of any general incorporation language in any filings.

EMMAUS LIFE SCIENCES, INC.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Emmaus Life Sciences, Inc.

Dated: May 14, 2019	By:	/s/ Yutaka Niihara
	Name:	Yutaka Niihara, M.D., M.P.H.
	Its:	Chief Executive Officer
	By:	/s/ Kurt H. Kruger
	Name:	Kurt H. Kruger
	Its:	Chief Financial Officer

Exhibit 2.2

AMENDMENT NO. 1

TO

AGREEMENT AND PLAN OF MERGER AND REORGANIZATION

This AMENDMENT NO. 1 (this "***Amendment***"), dated as of May 10, 2019, to the Agreement and Plan of Merger and Reorganization (the "***Merger Agreement***"), dated as of January 4, 2019, is made and entered into by and among MYND ANALYTICS, INC., a Delaware corporation ("Parent"), ATHENA MERGER SUBSIDIARY INC., a Delaware corporation and a direct wholly owned subsidiary of Parent ("***Merger Sub***"), and EMMAUS LIFE SCIENCES, INC., a Delaware corporation (the "***Company***"). Parent, Merger Sub and the Company are sometimes referred to collectively as the "***Parties***."

WHEREAS, the Parties desire to amend certain provisions of the Merger Agreement as described herein; and

WHEREAS, the respective Boards of Directors of the Company and Parent have approved this Amendment.

NOW, THEREFORE, in consideration of the mutual covenants and agreements contained in the Merger Agreement and this Amendment, and for other good and valuable consideration, the receipt and adequacy of which are acknowledged, the Parties agree as follows:

1. <u>Definitions</u>. Terms used herein and not defined shall have the meanings ascribed thereto in the Merger Agreement.

2. <u>Amendments</u>.

(a) The definition of "Parent California Subsidiary" is hereby amended and restated in its entirety to read as:

> "**Parent California Subsidiary**" means Telemynd Inc., a Delaware corporation wholly-owned by Parent."

(b) The definition of "Contemplated Transactions" is hereby amended and restated in its entirety to read as:

> "**Contemplated Transactions**" means the transactions proposed under this Agreement and the Spinoff Agreement, including the Merger, the Reverse Stock Split, the Spinoff, any Permitted Asset Sale, Permitted Company Issuance, Permitted Company Reorganization or Permitted Parent Reorganization."

(c) The definition of "New Equity Incentive Plan" is hereby deleted in its entirety.

(d) The first sentence of Section 5.2(b) of the Merger Agreement is hereby amended and restated in its entirety to read as follows:

> "Parent Stockholder Meeting. Parent shall take all action necessary in accordance with applicable Laws and the Parent Charter and Parent Bylaws to call, give notice of, convene and hold a meeting of the Parent Stockholders (the "***Parent Stockholder Meeting***") to consider and vote on proposals to approve (i) the issuance of the shares of Parent Common Stock in connection with the Merger, (ii) the Spinoff and (iii) amendments to the Parent Charter to effect the Reverse Stock Split (if applicable) immediately prior to the Effective Time and to change the name of Parent to "Emmaus Life Sciences, Inc." at the Effective Time (collectively, the "***Parent Stockholder Proposals***")."

(e) Section 5.4(b) of the Merger Agreement is hereby amended and restated in its entirety to read as follows:

> "Parent shall prepare and deliver to the Company three (3) Business Days prior to the Closing, a schedule (the "***Parent Net Liabilities and Stockholders' Equity Schedule***") setting forth, in reasonable detail, Parent's good faith estimate of the Net Liabilities and stockholders' equity of Parent, as of the Closing, together with the work papers and back-up materials used in preparing such Parent Net Liabilities and Stockholders' Equity Schedule. For purposes of this Agreement, the term "**Net Liabilities**" means all Liabilities of Parent less the sum of (i) all cash and equivalents and deposits of Parent and (ii) all prepaid expenses of Parent as of the Effective Time which the Parties agree in good faith will be for the benefit of the Company after the Effective Time. Stockholders' equity (deficit) and prepaid expenses shall be determined in accordance with generally accepted accounting principles applied on a basis consistent with the Parent Financial Statements."

(f) Section 5.15 of the Merger Agreement is hereby amended to add the following sentence:

> "In addition, if any exchange ratio applicable to any Company Warrants, Company Convertible Notes or Company Debentures is reduced during the six (6) month period after the closing of the Merger for any reason, Parent will issue to Telemynd a number of shares of Parent common stock equal to 5.9% of the total number of shares that may be issued upon conversion of any Company Warrants, Company Convertible Notes or Company Debentures which are in excess of the number of shares already included in the calculation of the Exchange Ratio."

(g) Section 7.1(b) of the Merger Agreement is hereby amended and restated in its entirety to read as follows:

> "by either Parent or the Company if the Merger shall not have been consummated by July 31, 2019 (the "***Outside Date***"); provided, however,

that the right to terminate this Agreement under this Section 7.1(b) shall not be available to any Party whose action or failure to act has been a principal cause of the failure of the Merger to occur on or before such date and such action or failure to act constitutes a breach of this Agreement."

3. Effect of Amendment. This Amendment shall not constitute an amendment or waiver of any provision of the Merger Agreement not expressly amended or waived herein and shall not be construed as an amendment, waiver or consent to any action that would require an amendment, waiver or consent except as expressly stated herein. The Merger Agreement, as amended by this Amendment, is and shall continue to be in full force and effect and is in all respects ratified and confirmed hereby.

4. Counterparts. This Amendment may be executed in several counterparts, each of which shall be deemed an original and all of which shall constitute one and the same instrument. The exchange of a fully executed Amendment (in counterparts or otherwise) by all Parties by electronic transmission via ".pdf" shall be sufficient to bind the Parties to the terms and conditions of this Amendment.

5. Governing Law. This Amendment shall be governed by, and construed in accordance with, the Laws of the State of Delaware, regardless of the Laws that might otherwise govern under applicable principles of conflicts of Laws.

6. Other Miscellaneous Terms. The provisions of Article 8 (*Miscellaneous Provisions*) of the Merger Agreement shall apply *mutatis mutandis* to this Amendment, and to the Merger Agreement as modified by this Amendment, taken together as a single agreement, reflecting the terms as modified hereby.

(*Signature Page Follows*)

IN WITNESS WHEREOF, each of the Parties has caused this Amendment to be duly executed as of the date first written above.

MYND ANALYTICS, INC.

By: _/s/_Patrick_Herguth_______________
Name: Patrick Herguth
Title: Chief Executive Office

ATHENA MERGER SUBSIDIARY INC.

By: _/s/_Patrick_Herguth_______________
Name: Patrick Herguth
Title: President

EMMAUS LIFE SCIENCES, INC.

By: _/s/ Yutaka Niihara________________
Name: Yutaka Niihara
Title: Chairman and Chief Executive Officer

Exhibit 4.3

THIS CONVERTIBLE PROMISSORY NOTE AND THE SECURITIES INTO WHICH IT MAY BE CONVERTED HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "ACT"). NO SALE OR DISPOSITION MAY BE AFFECTED EXCEPT IN COMPLIANCE WITH RULE 144 UNDER SAID ACT OR AN EFFECTIVE REGISTRATION STATEMENT RELATED THERETO OR AN APPLICABLE EXEMPTION THEREFROM.

EMMAUS LIFE SCIENCES, INC.
Convertible Promissory Note

Principal Amount: US$213,300.25 Loan Date: 02/02/2019
Currency: U.S. Dollars Term: One Year
Interest Rate: 10% Loan Due Date: 02/02/2020
Interest Payment Period: Interest is accrued and paid upon Loan Due Date
Lender: Hiromi Saito

FOR VALUE RECEIVED, Emmaus Life Sciences, Inc., a Delaware corporation, located at 21250 Hawthorne Blvd., Suite 800, Torrance, CA 90503 ("Borrower") hereby promises to pay to the order of Lender the sum of the Principal Amount in the stated Currency, together with any accrued interest at the stated Interest Rate, under the following terms and conditions of this Convertible Promissory Note ("Note").

1. Terms of Repayment (Balloon Payment): The entire unpaid Principal Amount and any accrued interest shall become immediately due and payable upon the stated Loan Due Date. Simple interest at the stated Interest Rate will accrue on the outstanding Principal Amount commencing on the stated Loan Date.

2. Prepayment: This Note may be prepaid in whole or in part at any time without premium or penalty upon ten days advance written notice by Borrower to Lender. All prepayments shall first be applied to interest, and then to principal payments.

3. Place of Payment: All payments due under this Note shall be sent to the Lender's address, as noted in Attachment 1 hereto, or at such other place as the Lender or subsequently assigned holder ("Holder") of this Note may designate in writing in the future.

4. Conversion:

(a) Mandatory Conversion: Upon the listing of shares of common stock of the Borrower ("Common Stock") on the OTC market or trading on a national securities exchange (the "Qualification"), (i) the entire outstanding Principal Amount of this Note shall automatically be converted into the number of shares of Common Stock determined by dividing (x) the outstanding Principal Amount of this Note by a fixed share price of $4.50 (subject to appropriate adjustment in the event of any stock splits, stock dividends, recapitalizations and similar transactions with respect to the capital stock of Borrower). Within thirty days of such closing, all accrued and unpaid interest on the Note, if any, will be paid to the Holder in cash.

The Borrower shall notify the holder of this Note at least seven (7) calendar days following the Qualification. Thereafter, the holder of this Note shall deliver this Note to the Borrower and, as soon as reasonably practicable thereafter, the Borrower shall issue and deliver to the holder of this Note a certificate or certificates for the number of full shares of Common Stock issuable upon the conversion of this Note, and provision shall be made for any fraction of a share as provided in Section 4(b) below. At the time of the Qualification, and provided that the Borrower has complied fully with all of its obligations under this Section 4(a), the holder of this Note shall not have any further rights under this Note (including the right to receive payment of principal or interest hereunder) other than those rights set forth in this Section 4.

(b) Fractional Shares: No fractional shares or scrip shall be issued upon conversion of this Note. The number of full shares of Common Stock issuable upon conversion of this Note shall be computed on the basis of the aggregate value of outstanding principal of and, as applicable in accordance with the terms of this Section 4, accrued interest on this Note so surrendered. The value of any fractional shares of Common Stock shall be paid in cash.

(c) Conversion at the Election of the Holder: If the mandatory conversion is not executed, by or after the first anniversary of the Loan Date, Lender may by giving written Notice of Conversion to the Borrower in the form attached hereto as Exhibit A, elect to convert some or all of the unpaid Principal Amount, including up to all the interest accrued and unpaid thereon, into a number of shares of Common Stock determined by dividing (x) the outstanding Principal Amount of this Note by (y) the Conversion Price Per Share. As used in this Section 4(c), "Conversion Price Per Share" means $4.50 per share of Common Stock (subject to appropriate adjustment in the event of any stock splits, stock dividends, recapitalizations and similar transactions with respect to the capital stock of Borrower). Within two weeks following receipt of such Notice of Conversion, Borrower shall deliver to Lender one or more original stock certificates representing the full number of shares of Common Stock issuable upon such conversion, and provision shall be made for any fraction of a share as provided in Section 4(b) above. Upon such conversion, and provided that the Borrower has complied fully with all of its obligations under this Section 4(c), the holder of this Note shall not have any further rights under this Note (including the right to receive payment of principal or interest hereunder) other than those rights set forth in this Section 4.

5. Default: In the event of default, the Borrower agrees to pay all costs and expenses incurred by the Lender, including all reasonable attorney fees as permitted by law for the collection of this Note upon default.

6. Acceleration of Debt: If the Borrower (i) fails to make any payment due under the terms of this Note or seeks relief under the U.S. Bankruptcy Code, (ii) fails to deliver shares to the Lender by the deadline set forth in Section 4 hereof, (iii) suffers an involuntary petition in bankruptcy or receivership that is not vacated within thirty (30) days, (iv) consents to the appointment of a receiver, trustee, assignee, liquidator or similar official or such appointment is not discharged or stayed within 30 days, (v) makes a general assignment for the benefit of its creditors or (vi) admits in writing that it is generally unable to pay its debts as they become due, the entire balance of this Note and any interest accrued thereon shall be immediately due and payable to the holder of this Note.

7. Modification: No modification or waiver of any of the terms of this Note shall be allowed unless by written agreement signed by the Borrower and the Lender. No waiver of any breach or default hereunder shall be deemed a waiver of any subsequent breach or default of the same or similar nature.

8. Complete Note: This Note is the complete and exclusive statement of agreement of the Borrower and Lender with respect to matters in this Note. This Note replaces and supersedes all prior written or oral agreements or statements by and among the Borrower and Lender with respect to the matters covered by it. No representation, statement, condition or warranty not contained in this Note is binding on either the Borrower or Lender. Each Holder of this Note, by its acceptance hereof, agrees to be bound by, and shall be entitled to the benefits of, the terms set forth herein.

9. Transfer of the Note:

(a) Subject to Section 9(b) hereof, this Note may be transferred, in whole or in part, at any time or from time to time, by the Lender. The Borrower hereby agrees to remain bound by the terms of this Note subsequent to any such transfer, and agrees that the terms of this Note may be fully enforced by any subsequent holder of this Note. If this Note is to be transferred, the Lender shall surrender this Note to the Borrower, together with such additional documentation as the Lender may reasonably request, whereupon the Borrower will forthwith issue and deliver upon the order of the Lender a new Note registered as the Lender may request, representing the outstanding Principal Amount being transferred by the Lender and, if less then the entire outstanding Principal Amount is being transferred, a new Note to the Lender representing the outstanding Principal Amount not being transferred. The person in whose name this Note or any new Note issued in replacement hereof shall be registered shall be deemed and treated as the owner and holder thereof, and the Borrower shall not be affected by any notice or knowledge to the contrary except as provided in this Section 9(a). This Note may not be transferred by the Borrower, by operation of law or otherwise, without the prior written consent of the Lender.

(b) Lender acknowledges and agrees that this Note has been acquired for investment and has not been registered under the securities laws of the United States of America or any state thereof. Accordingly, notwithstanding Section 9(a), neither this Note nor any interest thereon may be offered for sale, sold or transferred in the absence of registration under applicable federal and state securities laws or an opinion of counsel of the Holder reasonably satisfactory to the Borrower that such registration is not required.

10. Lost, Stolen or Mutilated Note: Upon receipt by the Borrower of evidence reasonably satisfactory to the Borrower of the loss, theft, destruction or mutilation of this Note, and, in the case of loss, theft or destruction, of any indemnification undertaking by the Lender to the Borrower in customary form and, in the case of mutilation, upon surrender and cancellation of this Note, the Borrower shall execute and deliver to the Lender a new Note representing the outstanding Principal Amount and accrued and unpaid interest thereon.

11. Remedies: The remedies provided in this Note shall be cumulative and in addition to all other remedies available under this Note at law or in equity (including a decree of specific performance and/or other injunctive relief), and nothing herein shall limit the Lender's right to pursue actual and consequential damages for any failure by the Borrower to comply with the terms of this Note.

12. Severability of Provisions: If any portion of this Note is deemed unenforceable, all other provisions of this Note shall remain in full force and effect.

13. Choice of Law: All terms and conditions of this Note shall be interpreted under the laws of California, U.S.A., without regard to conflict of law principles.

Signed Under Penalty of Perjury, this 2nd day of February, 2019

Emmaus Life Sciences, Inc.

____

By: Yutaka Niihara, MD, MPH, Chairman and CEO

Acknowledged and accepted by Lender

____

By: Hiromi Saito

ATTACHMENT 1

Lender’s Name: Hiromi Saito

Lender’s Address:

EXHIBIT A

NOTICE OF CONVERSION

(To be executed by the Lender in order to convert the Note)

TO: Emmaus Life Sciences, Inc.

Theundersignedherebyirrevocablyelectstoconvert$ of the principal amount of the Note issued to the Lender by Emmaus Life Sciences, Inc. (the “Company”) into shares of Common Stock of the Company according to the conditions stated therein, as of the Conversion Date written below.

Conversion Date:

Applicable Conversion Price:

Signature:

Name:

Address:

Amount to be converted: $

Amount of Note unconverted: $

Number of shares of Common Stock to be issued:

Please issue the shares of Common Stock in the following name and to the following address:

Address:

Address:

Phone Number:

Exhibit 4.4

THIS CONVERTIBLE PROMISSORY NOTE AND THE SECURITIES INTO WHICH IT MAY BE CONVERTED HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "ACT"). NO SALE OR DISPOSITION MAY BE AFFECTED EXCEPT IN COMPLIANCE WITH RULE 144 UNDER SAID ACT OR AN EFFECTIVE REGISTRATION STATEMENT RELATED THERETO OR AN APPLICABLE EXEMPTION THEREFROM.

EMMAUS LIFE SCIENCES, INC.
Convertible Promissory Note
(6 Months up to 1 Year)

Principal Amount: _$638,140.79__ Loan Date: __02/23/2019________
Currency: __US Dollar_____ Term: _6 Months _________
Interest Rate: __10%__________ Loan Due Date: _08/23/2019__ ______
Interest Payment Period: __Interest is accrued and paid on Loan Due Date____________
Conversion Price per Share: __$3.50 _ __ _________________
Lender: _The Shitabata Family Trust____

FOR VALUE RECEIVED, Emmaus Life Sciences, Inc., a Delaware corporation, located at 21250 Hawthorne Blvd., Suite 800, Torrance, CA 90503 ("Borrower") agrees to pay to Lender the sum of the Principal Amount in the stated Currency, together with any accrued interest at the stated Interest Rate, under the following terms and conditions of this Convertible Promissory Note ("Note").

1. Terms of Repayment (Balloon Payment) and Conversion: The entire unpaid Principal Amount and any accrued interest shall become immediately due and payable upon the stated Loan Due Date. Lender has an option to renew this Note with the same term, up to a total of two years. Simple interest at the stated Interest Rate will accrue on the outstanding Principal Amount commencing on the Loan Date of this Note.

At any time during the term of this Note, Lender shall by giving written Notice of Conversion to the Borrower in the form attached hereto as Exhibit A, have the right to convert some or all of the unpaid Principal Amount, including up to all the interest accrued and unpaid thereon, into shares of Common Stock of Borrower (the "Shares") at the stated Conversion Price Per Share (subject to appropriate adjustment in the event of any stock splits, stock dividends, recapitalizations and similar transactions with respect to the capital stock of Borrower). Within two weeks following each conversion of this Note, Borrower shall deliver to Lender one or more original stock certificates representing the shares of common stock issued upon such conversion.

2. Prepayment: This Note may be prepaid in whole or in part without premium or penalty upon ten days advance written notice by Borrower to Lender, provided that Lender shall be permitted to exercise its conversion rights pursuant to Section 1 hereof at any time or from time to time prior to the expiration of such ten-day period. All prepayments shall first be applied to interest, and then to principal payments.

3. Place of Payment: All payments due under this Note shall be sent to the Lender's address, as noted in Attachment 1 hereto, or at such other place as the Lender or subsequently assigned holder of this Note may designate in writing in the future.

4. Default: In the event of default, the Borrower agrees to pay all costs and expenses incurred by the Lender, including all reasonable attorney fees as permitted by law for the collection of this Note upon default.

5. Acceleration of Debt: If the Borrower (i) fails to make any payment due under the terms of this Note or seeks relief under the U.S. Bankruptcy Code, (ii) fails to deliver shares to the Lender by the deadline set forth in Section 4 hereof, (iii) suffers an involuntary petition in bankruptcy or receivership that is not vacated within thirty (30) days, (iv) consents to the appointment of a receiver, trustee, assignee, liquidator or similar official or such appointment is not discharged or stayed within 30 days, (v) makes a general assignment for the benefit of its creditors or (vi) admits in writing that it is generally unable to pay its debts as they become due, the entire balance of this Note and any interest accrued thereon shall be immediately due and payable to the holder of this Note.

6. Modification: No modification or waiver of any of the terms of this Note shall be allowed unless by written agreement signed by the parties. No waiver of any breach or default hereunder shall be deemed a waiver of any subsequent breach or default of the same or similar nature.

7. Complete Note: This Note is the complete and exclusive statement of agreement of the parties with respect to matters in this Note. This Note replaces and supersedes all prior written or oral agreements or statements by and among the parties with respect to the matters covered by it. No representation, statement, condition or warranty not contained in this Note is binding on the parties.

8. Transfer of the Note: This Note may be transferred, in whole or in part, at any time or from time to time, by the Lender. The Borrower hereby waives any notice of the transfer of this Note by the Lender or by any subsequent holder of this Note, agrees to remain bound by the terms of this Note subsequent to any transfer, and agrees that the terms of this Note may be fully enforced by any subsequent holder of this Note. If this Note is to be transferred, the Lender shall surrender this Note to the Borrower, whereupon the Borrower will forthwith issue and deliver upon the order of the Lender a new Note registered as the Lender may request, representing the outstanding Principal Amount being transferred by the Lender and, if less then the entire outstanding Principal Amount is being transferred, a new Note to the Lender representing the outstanding Principal Amount not being transferred. This Note may not be transferred by the Borrower, by operation of law or otherwise, without the prior written consent of the Lender.

9. Lost, Stolen or Mutilated Note: Upon receipt by the Borrower of evidence reasonably satisfactory to the Borrower of the loss, theft, destruction or mutilation of this Note, and, in the case of loss, theft or destruction, of any indemnification undertaking by the Lender to the Borrower in customary form and, in the case of mutilation, upon surrender and cancellation of this Note, the Borrower shall execute and deliver to the Lender a new Note representing the outstanding Principal Amount and accrued and unpaid interest thereon.

10. Remedies: The remedies provided in this Note shall be cumulative and in addition to all other remedies available under this Note at law or in equity (including a decree of specific performance and/or other injunctive relief), and nothing herein shall limit the Lender's right to pursue actual and consequential damages for any failure by the Borrower to comply with the terms of this Note.

11. Severability of Provisions: If any portion of this Note is deemed unenforceable, all other provisions of this Note shall remain in full force and effect.

12. Insufficient Authorized Shares: The Borrower shall take all reasonable best action necessary to increase the Borrower's authorized shares of common stock to an amount sufficient to allow Borrower to reserve the Required Reserve Amount for the Note.

13. Choice of Law: All terms and conditions of this Note shall be interpreted under the laws of California, U.S.A., without regard to conflict of law principles.

14. Additional Guarantor: Lender understands and acknowledges that Emmaus Life Sciences, Inc. is the borrower of this Note. However, for added security to lender, this note is guaranteed by Yutaka Niihara, M.D., CEO.

Signed Under Penalty of Perjury, this _23rd___ day of _February____, _2019_____

Emmaus Life Sciences, Inc.

____

By:

____

By: Yutaka Niihara, M.D., MPH, Chairman and CEO

____

By: Lender

ATTACHMENT 1

Lender's Name: The Shitabata Family Trust

Lender's Address:

EXHIBIT A

NOTICE OF CONVERSION

(To be executed by the Lender in order to convert the Note)

TO: Emmaus Life Sciences, Inc.

The undersigned hereby irrevocably elects to convert $ of the principal amount of the Note issued to the Lender by Emmaus Life Sciences, Inc. (the "Company") into shares of Common Stock of the Company according to the conditions stated therein, as of the Conversion Date written below.

Conversion Date:

Applicable Conversion Price:

Signature:

Name:

Address:

Amount to be converted: $

Amount of Note unconverted: $

Number of shares of Common Stock to be issued:

Please issue the shares of Common Stock in the following name and to the following address:

Address:

Address:

Phone Number:

Exhibit 4.5

THIS CONVERTIBLE PROMISSORY NOTE AND THE SECURITIES INTO WHICH IT MAY BE CONVERTED HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "ACT"). NO SALE OR DISPOSITION MAY BE AFFECTED EXCEPT IN COMPLIANCE WITH RULE 144 UNDER SAID ACT OR AN EFFECTIVE REGISTRATION STATEMENT RELATED THERETO OR AN APPLICABLE EXEMPTION THEREFROM.

EMMAUS LIFE SCIENCES, INC.
Convertible Promissory Note

Principal Amount: _$287,002.07____ Loan Date: __03/02/
2019________
Currency: __US Dollar_____ Term: On Demand Up to 1 Year
Interest Rate: __10%__________ Loan Due Date: _03/01/2020__
______
Interest Payment Period: __Interest will be paid annually____________________________
Conversion Price per Share: __$3.60 ___________________
Lender: _J. R. Downey____

FOR VALUE RECEIVED, Emmaus Life Sciences, Inc., a Delaware corporation, located at 21250 Hawthorne Blvd., Suite 800, Torrance, CA 90503 ("Borrower") agrees to pay to Lender the sum of the Principal Amount in the stated Currency, together with any accrued interest at the stated Interest Rate, under the following terms and conditions of this Convertible Promissory Note ("Note").

1. Terms of Repayment (Balloon Payment) and Conversion: The entire unpaid Principal Amount and any accrued interest shall become immediately due and payable upon the stated Loan Due Date. Simple interest at the stated Interest Rate will accrue on the outstanding Principal Amount commencing on the Loan Date of this Note and the Borrower shall make payments of interest only as per the stated Interest Payment Period.

At any time during the term of this Note, Lender shall by giving written Notice of Conversion to the Borrower in the form attached hereto as Exhibit A, have the right to convert some or all of the unpaid Principal Amount, including up to all the interest accrued and unpaid thereon, into shares of Common Stock of Borrower (the "Shares") at the stated Conversion Price Per Share (subject to appropriate adjustment in the event of any stock splits, stock dividends, recapitalizations and similar transactions with respect to the capital stock of Borrower). Within two weeks following each conversion of this Note, Borrower shall deliver to Lender one or more original stock certificates representing the shares of common stock issued upon such conversion.

2. Prepayment: This Note may be prepaid in whole or in part at any time after six months from the Loan Date without premium or penalty upon ten days advance written notice by Borrower to Lender, provided that Lender shall be permitted to exercise its conversion rights pursuant to Section 1 hereof at any time or from time to time prior to the expiration of such ten-day period. All prepayments shall first be applied to interest, and then to principal payments.

3. Place of Payment: All payments due under this Note shall be sent to the Lender's address, as noted in Attachment 1 hereto, or at such other place as the Lender or subsequently assigned holder of this Note may designate in writing in the future.

4. Default: In the event of default, the Borrower agrees to pay all costs and expenses incurred by the Lender, including all reasonable attorney fees as permitted by law for the collection of this Note upon default.

5. Acceleration of Debt: If the Borrower (i) fails to make any payment due under the terms of this Note or seeks relief under the U.S. Bankruptcy Code, (ii) fails to deliver shares to the Lender by the deadline set forth in Section 4 hereof, (iii) suffers an involuntary petition in bankruptcy or receivership that is not vacated within thirty (30) days, (iv) consents to the appointment of a receiver, trustee, assignee, liquidator or similar official or such appointment is not discharged or stayed within 30 days, (v) makes a general assignment for the benefit of its creditors or (vi) admits in writing that it is generally unable to pay its debts as they become due, the entire balance of this Note and any interest accrued thereon shall be immediately due and payable to the holder of this Note.

6. Modification: No modification or waiver of any of the terms of this Note shall be allowed unless by written agreement signed by the parties. No waiver of any breach or default hereunder shall be deemed a waiver of any subsequent breach or default of the same or similar nature.

7. Complete Note: This Note is the complete and exclusive statement of agreement of the parties with respect to matters in this Note. This Note replaces and supersedes all prior written or oral agreements or statements by and among the parties with respect to the matters covered by it. No representation, statement, condition or warranty not contained in this Note is binding on the parties.

8. Transfer of the Note: This Note may be transferred, in whole or in part, at any time or from time to time, by the Lender. The Borrower hereby waives any notice of the transfer of this Note by the Lender or by any subsequent holder of this Note, agrees to remain bound by the terms of this Note subsequent to any transfer, and agrees that the terms of this Note may be fully enforced by any subsequent holder of this Note. If this Note is to be transferred, the Lender shall surrender this Note to the Borrower, whereupon the Borrower will forthwith issue and deliver upon the order of the Lender a new Note registered as the Lender may request, representing the outstanding Principal Amount being transferred by the Lender and, if less then the entire outstanding Principal Amount is being transferred, a new Note to the Lender representing the outstanding Principal Amount not being transferred. This Note may not be transferred by the Borrower, by operation of law or otherwise, without the prior written consent of the Lender.

9. Lost, Stolen or Mutilated Note: Upon receipt by the Borrower of evidence reasonably satisfactory to the Borrower of the loss, theft, destruction or mutilation of this Note, and, in the case of loss, theft or destruction, of any indemnification undertaking by the Lender to the Borrower in customary form and, in the case of mutilation, upon surrender and cancellation of this Note, the Borrower shall execute and deliver to the Lender a new Note representing the outstanding Principal Amount and accrued and unpaid interest thereon.

10. Remedies: The remedies provided in this Note shall be cumulative and in addition to all other remedies available under this Note at law or in equity (including a decree of specific performance and/or other injunctive relief), and nothing herein shall limit the Lender's right to pursue actual and consequential damages for any failure by the Borrower to comply with the terms of this Note.

11. Severability of Provisions: If any portion of this Note is deemed unenforceable, all other provisions of this Note shall remain in full force and effect.

12. Insufficient Authorized Shares: The Borrower shall take all reasonable best action necessary to increase the Borrower's authorized shares of common stock to an amount sufficient to allow Borrower to reserve the Required Reserve Amount for the Note.

13. Choice of Law: All terms and conditions of this Note shall be interpreted under the laws of California, U.S.A., without regard to conflict of law principles.

Signed Under Penalty of Perjury, this _2nd___ day of _March____, _2019_____

Emmaus Life Sciences, Inc.

____

By: Yutaka Niihara, MD, CEO

____

By: Investor

ATTACHMENT 1

Lender’s Name: J.R. Downey

Lender’s Address:

EXHIBIT A

NOTICE OF CONVERSION

(To be executed by the Lender in order to convert the Note)

TO: Emmaus Life Sciences, Inc.

Theundersignedherebyirrevocablyelectstoconvert$ of the principal amount of the Note issued to the Lender by Emmaus Life Sciences, Inc. (the “Company”) into shares of Common Stock of the Company according to the conditions stated therein, as of the Conversion Date written below.

Conversion Date:

Applicable Conversion Price:

Signature:

Name:

Address:

Amount to be converted: $

Amount of Note unconverted: $

Number of shares of Common Stock to be issued:

Please issue the shares of Common Stock in the following name and to the following address:

Address:

Address:

Phone Number:

Exhibit 4.6

THIS CONVERTIBLE PROMISSORY NOTE AND THE SECURITIES INTO WHICH IT MAY BE CONVERTED HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "ACT"). NO SALE OR DISPOSITION MAY BE AFFECTED EXCEPT IN COMPLIANCE WITH RULE 144 UNDER SAID ACT OR AN EFFECTIVE REGISTRATION STATEMENT RELATED THERETO OR AN APPLICABLE EXEMPTION THEREFROM.

EMMAUS LIFE SCIENCES, INC.
Convertible Promissory Note

Principal Amount: _$ ____ __ ________ Loan Date:

Currency: __US Dollar_____ Term: On Demand up to 2 Years
Interest Rate: __10%__________ Loan Due Date: __ ______

Interest Payment Period: __Interest will be paid upon Loan Due Date____________________
Conversion Price per Share: __ ___________________
Lender: _____________________________ _____

FOR VALUE RECEIVED, Emmaus Life Sciences, Inc., a Delaware corporation, located at 21250 Hawthorne Blvd., Suite 800, Torrance, CA 90503 ("Borrower") agrees to pay to Lender the sum of the Principal Amount in the stated Currency, together with any accrued interest at the stated Interest Rate, under the following terms and conditions of this Convertible Promissory Note ("Note").

1. Terms of Repayment (Balloon Payment) and Conversion: The entire unpaid Principal Amount and any accrued interest shall become immediately due and payable upon the stated Loan Due Date. Simple interest at the stated Interest Rate will accrue on the outstanding Principal Amount commencing on the Loan Date of this Note and the Borrower shall make payments of interest only as per the stated Interest Payment Period.

At any time during the term of this Note, Lender shall by giving written Notice of Conversion to the Borrower in the form attached hereto as Exhibit A, have the right to convert some or all of the unpaid Principal Amount, including up to all the interest accrued and unpaid thereon, into shares of Common Stock of Borrower (the "Shares") at the stated Conversion Price Per Share (subject to appropriate adjustment in the event of any stock splits, stock dividends, recapitalizations and similar transactions with respect to the capital stock of Borrower). Within two weeks following each conversion of this Note, Borrower shall deliver to Lender one or more original stock certificates representing the shares of common stock issued upon such conversion.

Reference is made to the Agreement and Plan of Merger, dated as of January 4, 2019 (as amended from time to time, the "Merger Agreement"), among Borrower, MYnd Analytics, Inc. ("MYnd") and Athena Merger Subsidiary, Inc. ("Merger Sub), pursuant to which, subject to the terms and conditions of the MA, Merger Sub will merge with and into Borrower (the "Merger"). Notwithstanding any other provision herein, immediately prior to the "Effective Time" (as defined in the Merger Agreement), the outstanding principal amount of and any and all accrued and unpaid interest on this Note shall automatically be converted into shares of Common Stock of Borrower at the Conversion Price Per Share (subject to appropriate adjustment in the event of any stock splits, stock dividends, recapitalizations and similar transactions with respect to the capital stock of Borrower), subject to applicable tax withholding requirements The holder of this Note shall indemnify, defend and hold Borrower and its officers, directors and employees harmless from any taxes arising from any payments made pursuant to this Note, or as a result of the conversion of this Note into shares of Common Stock of Borrower, including the failure to withhold taxes from any such payments or upon any such conversion. Borrower and its affiliates may withhold distributions and payments that would otherwise be payable to the holder or former holder of this Note to satisfy any applicable withholding requirement or to pay any amounts owing by the holder or former holder of this Note to Borrower or any of its officers, directors or employees pursuant to the foregoing. Alternatively, Borrower may reduce the shares of Common Stock of Borrower deliverable to the holder upon conversion of this Note to satisfy any amounts owing by the holder or former holder of this Note to Borrower or any of officers, directors or employees pursuant to the foregoing. The provisions of this paragraph shall survive the repayment, satisfaction, conversion or discharge of all obligations under this Note.

2. Prepayment: This Note may be prepaid in whole or in part at any time without premium or penalty upon ten days advance written notice by Borrower to Lender, provided that Lender shall be permitted to exercise its conversion rights pursuant to Section 1 hereof at any time or from time to time prior to the expiration of such ten-day period. All prepayments shall first be applied to interest, and then to principal payments.

3. Place of Payment: All payments due under this Note shall be sent to the Lender's address, as noted in Attachment 1 hereto, or at such other place as the Lender or subsequently assigned holder of this Note may designate in writing in the future.

4. Default: In the event of default, the Borrower agrees to pay all costs and expenses incurred by the Lender, including all reasonable attorney fees as permitted by law for the collection of this Note upon default.

5. Acceleration of Debt: If the Borrower (i) fails to make any payment due under the terms of this Note or seeks relief under the U.S. Bankruptcy Code, (ii) fails to deliver shares to the Lender by the deadline set forth in Section 4 hereof, (iii) suffers an involuntary petition in bankruptcy or receivership that is not vacated within thirty (30) days, (iv) consents to the appointment of a receiver, trustee, assignee, liquidator or similar official or such appointment is not discharged or stayed within 30 days, (v) makes a general assignment for the benefit of its creditors or (vi) admits in writing that it is generally unable to pay its debts as they become due, the entire balance of this Note and any interest accrued thereon shall be immediately due and payable to the holder of this Note.

6. Modification: No modification or waiver of any of the terms of this Note shall be allowed unless by written agreement signed by the parties. No waiver of any breach or default hereunder shall be deemed a waiver of any subsequent breach or default of the same or similar nature.

7. Complete Note: This Note is the complete and exclusive statement of agreement of the parties with respect to matters in this Note. This Note replaces and supersedes all prior written or oral agreements or statements by and among the parties with respect to the matters covered by it. No representation, statement, condition or warranty not contained in this Note is binding on the parties.

8. Transfer of the Note: This Note may be transferred, in whole or in part, at any time or from time to time, by the Lender. The Borrower hereby waives any notice of the transfer of this Note by the Lender or by any subsequent holder of this Note, agrees to remain bound by the terms of this Note subsequent to any transfer, and agrees that the terms of this Note may be fully enforced by any subsequent holder of this Note. If this Note is to be transferred, the Lender shall surrender this Note to the Borrower, whereupon the Borrower will forthwith issue and deliver upon the order of the Lender a new Note registered as the Lender may request, representing the outstanding Principal Amount being transferred by the Lender and, if less then the entire outstanding Principal Amount is being transferred, a new Note to the Lender representing the outstanding Principal Amount not being transferred. This Note may not be transferred by the Borrower, by operation of law or otherwise, without the prior written consent of the Lender.

9. Lost, Stolen or Mutilated Note: Upon receipt by the Borrower of evidence reasonably satisfactory to the Borrower of the loss, theft, destruction or mutilation of this Note, and, in the case of loss, theft or destruction, of any indemnification undertaking by the Lender to the Borrower in customary form and, in the case of mutilation, upon surrender and cancellation of this Note, the Borrower shall execute and deliver to the Lender a new Note representing the outstanding Principal Amount and accrued and unpaid interest thereon.

10. Remedies: The remedies provided in this Note shall be cumulative and in addition to all other remedies available under this Note at law or in equity (including a decree of specific performance and/or other injunctive relief), and nothing herein shall limit the Lender's right to pursue actual and consequential damages for any failure by the Borrower to comply with the terms of this Note.

11. Severability of Provisions: If any portion of this Note is deemed unenforceable, all other provisions of this Note shall remain in full force and effect.

12. Insufficient Authorized Shares: The Borrower shall take all reasonable best action necessary to increase the Borrower's authorized shares of common stock to an amount sufficient to allow Borrower to reserve the Required Reserve Amount for the Note.

13. Choice of Law: All terms and conditions of this Note shall be interpreted under the laws of California, U.S.A., without regard to conflict of law principles.

Signed Under Penalty of Perjury, this ____ day of _____, ______

Emmaus Life Sciences, Inc.

____

By:

____

By: Investor

ATTACHMENT 1

Lender's Name:

Lender's Address:

EXHIBIT A

NOTICE OF CONVERSION

(To be executed by the Lender in order to convert the Note)

TO: Emmaus Life Sciences, Inc.

Theundersignedherebyirrevocablyelectstoconvert$ of the principal amount of the Note issued to the Lender by Emmaus Life Sciences, Inc. (the "Company") into shares of Common Stock of the Company according to the conditions stated therein, as of the Conversion Date written below.

Conversion Date:

Applicable Conversion Price:

Signature:

Name:

Address:

Amount to be converted: $

Amount of Note unconverted: $

Number of shares of Common Stock to be issued:

Please issue the shares of Common Stock in the following name and to the following address:

Address:

Address:

Phone Number:

[INFORMATION FOR PURPOSES OF FILING WITH THE SECURITIES AND EXCHANGE COMMISSION]

SCHEDULE A

NOTEHOLDERS

Lender	Annual Interest Rate	Date of loan	Term of Loan	Loan Due Date	Principal Loan Amount	Interest Payment Period	Conversion Price
Shigenori Yoshida	10.0%	03/12/2019	On demand up to 2 years	03/12/2021	$ 174,182	Paid upon loan due date	$ 3.60
The Takemoto Family....................	10.0%	03/14/2019	On demand up to 2 years	03/14/2021	$ 726,644	Paid upon loan due date	$ 3.50

Exhibit 10.6

EMMAUS LIFE SCIENCES, INC.
Promissory Note

Principal Amount: $ Loan Date:
Currency: Term:
Interest Rate: Loan Due Date:
Interest Payment Period:
Lender:

FOR VALUE RECEIVED, Emmaus Life Sciences, Inc., a Delaware corporation, located at 21250 Hawthorne Blvd., Suite 800 Torrance, CA 90503 ("Borrower") agrees to pay to Lender the sum of the Principal Amount in the stated Currency, together with any accrued interest at the stated Interest Rate, under the following terms and conditions of this this Promissory Note ("Note").

1. Terms of Repayment (Balloon Payment): The entire unpaid Principal Amount and any accrued interest shall become immediately due and payable upon the stated Loan Due Date. Simple interest at the stated Interest Rate will accrue on the outstanding Principal Amount commencing on the Loan Date of this Note and the Borrower shall make payments of interest only as per the stated Interest Payment Period.

2. Prepayment: This Note may be prepaid in whole or in part at any time after six months of the Loan Date without premium or penalty. All prepayments shall first be applied to interest, and then to principal payments.

3. Place of Payment: All payments due under this Note shall be sent to the Lender's address, as noted in Attachment 1 hereto, or at such other place as the Lender or subsequently assigned holder of this Note may designate in writing in the future.

4. Default: In the event of default, the Borrower agrees to pay all costs and expenses incurred by the Lender, including all reasonable attorney fees as permitted by law for the collection of this Note upon default.

5. Acceleration of Debt: If the Borrower (i) fails to make any payment due under the terms of this Note or seeks relief under the U.S. Bankruptcy Code, (ii) fails to deliver shares to the Lender by the deadline set forth in Section 4 hereof, (iii) suffers an involuntary petition in bankruptcy or receivership that is not vacated within thirty (30) days, (iv) consents to the appointment of a receiver, trustee, assignee, liquidator or similar official or such appointment is not discharged or stayed within 30 days, (v) makes a general assignment for the benefit of its creditors or (vi) admits in writing that it is generally unable to pay its debts as they become due, the entire balance of this Note and any interest accrued thereon shall be immediately due and payable to the holder of this Note.

6. Modification: No modification or waiver of any of the terms of this Note shall be allowed unless by written agreement signed by the parties. No waiver of any breach or default hereunder shall be deemed a waiver of any subsequent breach or default of the same or similar nature.

7. Complete Note: This Note is the complete and exclusive statement of agreement of the parties with respect to matters in this Note. This Note replaces and supersedes all prior written or oral agreements or statements by and among the parties with respect to the matters covered by it. No representation, statement, condition or warranty not contained in this Note is binding on the parties.

8. Transfer of the Note: This Note may be transferred, in whole or in part, at any time or from time to time, by the Lender. The Borrower hereby waives any notice of the transfer of this Note by the Lender or by any subsequent holder of this Note, agrees to remain bound by the terms of this Note subsequent to any transfer, and agrees that the terms of this Note may be fully enforced by any subsequent holder of this Note. If this Note is to be transferred, the Lender shall surrender this Note to the Borrower, whereupon the Borrower will forthwith issue and deliver upon the order of the Lender a new Note registered as the Lender may request, representing the outstanding Principal Amount being transferred by the Lender and, if less then the entire outstanding Principal Amount is being transferred, a new Note to the Lender representing the outstanding Principal Amount not being transferred. This Note may not be transferred by the Borrower, by operation of law or otherwise, without the prior written consent of the Lender.

9. Lost, Stolen or Mutilated Note: Upon receipt by the Borrower of evidence reasonably satisfactory to the Borrower of the loss, theft, destruction or mutilation of this Note, and, in the case of loss, theft or destruction, of any indemnification undertaking by the Lender to the Borrower in customary form and, in the case of mutilation, upon surrender and cancellation of this Note, the Borrower shall execute and deliver to the Lender a new Note representing the outstanding Principal Amount and accrued and unpaid interest thereon.

10. Remedies: The remedies provided in this Note shall be cumulative and in addition to all other remedies available under this Note at law or in equity (including a decree of specific performance and/or other injunctive relief), and nothing herein shall limit the Lender's right to pursue actual and consequential damages for any failure by the Borrower to comply with the terms of this Note.

11. Severability of Provisions: If any portion of this Note is deemed unenforceable, all other provisions of this Note shall remain in full force and effect.

12. Insufficient Authorized Shares: The Borrower shall take all reasonable best action necessary to increase the Borrower's authorized shares of common stock to an amount sufficient to allow Borrower to reserve the Required Reserve Amount for the Note.

13. Choice of Law: All terms and conditions of this Note shall be interpreted under the laws of California, U.S.A., without regard to conflict of law principles.

Signed Under Penalty of Perjury, this ______ day of _______, ______

Emmaus Life Sciences, Inc.

____

By:

ATTACHMENT 1

Lender's Name:

Lender's Address:

[INFORMATION FOR PURPOSES OF FILING WITH THE SECURITIES AND EXCHANGE COMMISSION]

SCHEDULE A

NOTEHOLDERS

Lender	Annual Interest Rate	Date of loan	Term of Loan	Loan Due Date	Principal Loan Amount		Interest Payment Period	Conversion Price	
Lan T. Tran	10.0%	02/09/2019	On demand up to 2 years	02/09/2021	$	14,400	Annually	$	N/A
Shigeru Matsuda..........	11.0%	02/17/2019	On demand up to 2 years	02/17/2021	JPY	83,350,400	Annually	$	N/A

Exhibit 31.1

Certification of Chief Executive Officer pursuant to Item 601(b)(31) of Regulation S-K, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, Yutaka Niihara, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Emmaus Life Sciences, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: May 14, 2019

/s/ Yutaka Niihara

Yutaka Niihara, M.D., M.P.H.
Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

Certification of Chief Financial Officer pursuant to Item 601(b)(31) of Regulation S-K, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, Kurt H. Kruger, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Emmaus Life Sciences, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: May 14, 2019

/s/ Kurt H. Kruger

Kurt H. Kruger
Chief Financial Officer
(Principal Financial Officer)

Exhibit 32.1

Certification of Chief Executive Officer and Chief Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

In connection with the quarterly report of Emmaus Life Sciences, Inc. (the "Company") on Form 10-Q for the quarter ended March 31, 2019, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), each of the undersigned, in the capacities and on the date indicated below, hereby certifies, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to his knowledge:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Yutaka Niihara

Yutaka Niihara, M.D., M.P.H.
Chief Executive Officer
(Principal Executive Officer)
May 14, 2019

/s/ Kurt H. Kruger

Kurt H. Kruger
Chief Financial Officer
(Principal Financial and Accounting Officer)
May 14, 2019

Document and Entity Information - shares	3 Months Ended Mar. 31, 2019	May 10, 2019
Document And Entity Information [Abstract]		
Entity Registrant Name	EMMAUS LIFE SCIENCES, INC.	
Entity Central Index Key	0001420031	
Document Type	10-Q	
Trading Symbol	EMMA	
Document Period End Date	Mar. 31, 2019	
Amendment Flag	false	
Current Fiscal Year End Date	--12-31	
Entity's Reporting Status Current	Yes	
Entity Filer Category	Non-accelerated Filer	
Entity Small Business	true	
Entity Emerging Growth Company	true	
Entity Ex Transition Period	true	
Entity Common Stock, Shares Outstanding		36,051,394
Document Fiscal Period Focus	Q1	
Document Fiscal Year Focus	2019	

CONSOLIDATED BALANCE SHEET - USD ($) $ in Thousands	Mar. 31, 2019	Dec. 31, 2018
CURRENT ASSETS		
Cash and cash equivalents ($13,071 and $13,175 attributable to the VIE)	$ 15,310	$ 17,080
Accounts receivable, net	1,760	1,351
Inventories, net	5,795	4,705
Investment in marketable securities	42,873	49,343
Marketable securities, pledged to creditor	251	238
Prepaid expenses and other current assets ($271 and $273 attributable to the VIE)	818	743
Total current assets	66,807	73,460
PROPERTY AND EQUIPMENT, NET	153	152
OTHER ASSETS		
Long-term investment at cost	527	538
Intangibles, net	50	54
Right of use assets	2,838	
Deposits and other assets	360	352
Total other assets	3,775	944
Total assets	70,735	74,556
CURRENT LIABILITIES		
Accounts payable and accrued expenses	11,068	9,122
Deferred rent		19
Operating lease liabilities	682	
Other current liabilities	5,217	5,181
Notes payable, net	7,000	6,394
Notes payable to related parties, net	470	468
Convertible notes payable, net	15,157	11,253
Convertible notes payable to related parties, net	13,896	5,089
Total current liabilities	53,490	37,526
LONG-TERM LIABILITIES		
Deferred rent		268
Operating lease liabilities	2,478	
Other long-term liabilities	35,637	36,222
Warrant derivative liabilities	1,447	1,399
Notes payable, net	1,922	1,021
Convertible notes payable, net	389	5,485
Convertible notes payable to related parties, net		8,529
Total long-term liabilities	41,873	52,924
Total liabilities	95,363	90,450
STOCKHOLDERS' DEFICIT		
Preferred stock — par value $0.001 per share, 20,000,000 shares authorized, none issued and outstanding		

Common stock — par value $0.001 per share, 100,000,000 shares authorized, 35,947,804 shares and 35,558,305 shares issued and outstanding at March 31, 2019 and December 31, 2018, respectively	36	36
Additional paid-in capital	146,344	140,904
Accumulated other comprehensive income (loss)	(62)	(69)
Accumulated deficit	(170,864)	(156,668)
Total stockholders’ deficit	(24,546)	(15,797)
Noncontrolling interests	(82)	(97)
Total liabilities & stockholders’ deficit	$ 70,735	$ 74,556

CONSOLIDATED BALANCE SHEET (Parenthetical) - USD ($) $ in Thousands	Mar. 31, 2019	Dec. 31, 2018
Preferred stock, par value (in dollars per share)	$ 0.001	$ 0.001
Preferred stock, authorized	20,000,000	20,000,000
Preferred stock, issued	0	0
Preferred stock, outstanding	0	0
Common stock, par value (in dollars per share)	$ 0.001	$ 0.001
Common stock, authorized	100,000,000	100,000,000
Common stock, issued	35,947,804	35,558,305
Common stock, outstanding	35,947,804	35,558,305
Cash and cash equivalents	$ 15,310	$ 17,080
Prepaid expenses and other current assets	818	743
Variable Interest Entity [Member]		
Cash and cash equivalents	13,071	13,175
Prepaid expenses and other current assets	$ 271	$ 273

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS) (Unaudited) - USD ($) $ in Thousands	3 Months Ended	
	Mar. 31, 2019	Mar. 31, 2018
Income Statement [Abstract]		
REVENUES, NET	$ 5,307	$ 781
COST OF GOODS SOLD	200	134
GROSS PROFIT	5,107	647
OPERATING EXPENSES		
Research and development	513	411
Selling	1,485	870
General and administrative	3,681	3,807
Total operating expenses	5,679	5,088
LOSS FROM OPERATIONS	(572)	(4,441)
OTHER INCOME (EXPENSE)		
Loss on debt extinguishment		(3,245)
Change in fair value of warrant derivative liabilities	(48)	840
Change in fair value of embedded conversion option		466
Net gains (losses) on equity investment in marketable securities	(6,457)	5,535
Interest and other income (loss)	(111)	46
Interest expense	(6,965)	(5,298)
Total other income (expenses)	(13,581)	(1,656)
LOSS BEFORE INCOME TAXES	(14,153)	(6,097)
NET LOSS INCLUDING NONCONTROLLING INTERESTS	(14,153)	(6,097)
Net (income) loss attributable to noncontrolling interests	(14)	
NET LOSS ATTRIBUTABLE TO THE COMPANY	(14,167)	(6,097)
COMPONENTS OF OTHER COMPREHENSIVE INCOME (LOSS)		
Foreign currency translation adjustments	8	14
Other comprehensive income (loss)	8	14
COMPREHENSIVE INCOME (LOSS)	(14,145)	(6,083)
Amounts attributable to noncontrolling interests:		
Net (income) loss attributable to noncontrolling interests	(14)	
Foreign currency translation adjustments	(1)	
Comprehensive (income) loss attributable to noncontrolling interest	(15)	
COMPREHENSIVE INCOME (LOSS) ATTRIBUTABLE TO THE COMPANY	$ (14,160)	$ (6,083)
NET LOSS PER COMMON SHARE	$ (0.40)	$ (0.17)
WEIGHTED AVERAGE COMMON SHARES OUTSTANDING	35,684,038	34,891,450

CONSOLIDATED STATEMENT OF CHANGES IN STOCKHOLDERS' EQUITY (unaudited) - USD ($) $ in Thousands	Total	Common Stock [Member]	Additional Paid-In Capital [Member]	Accumulated Other Comprehensive Income (Loss) [Member]	Treasure Stock, at cost [Member]	Accumulated Deficit [Member]	Total Emmaus Stockholders' Equity / Deficit [Member]	Non-controlling Interests [Member]
Balance, beginning at Dec. 31, 2017	$ 14,291	$ 35	$ 113,112	$ 41,276		$ (140,132)	$ 14,291	
Balance, beginning (in shares) at Dec. 31, 2017		34,885,506						
Increase (Decrease) in Stockholders' Equity [Roll Forward]								
Cumulative effect adjustment on adoption | ASU 2016-01 [Member]				(41,362)		41,362		
Beneficial conversion feature relating to convertible and promissory notes payable	3,638		3,638				3,638	
Stock issued for cash	275		275				275	
Stock issued for cash (in shares)		25,000						
Repurchase of common stock	(1,314)				$ (1,314)		(1,314)	
Share-based compensation	710		710				710	
Foreign currency translation effect	14			14			14	
Net income (loss)	(6,097)					(6,097)	(6,097)	
Balance, ending at Mar. 31, 2018	11,517	$ 35	117,735	(72)	$ (1,314)	(104,867)	11,517	
Balance, ending (in shares) at Mar. 31, 2018		34,910,506						
Balance, beginning at Dec. 31, 2017	14,291	$ 35	113,112	41,276		(140,132)	14,291	
Balance, beginning (in shares) at Dec. 31, 2017		34,885,506						
Balance, ending at Dec. 31, 2018	(15,894)	$ 36	140,904	(69)		(156,668)	(15,797)	$ (97)
Balance, ending (in shares) at Dec. 31, 2018		35,558,305						
Increase (Decrease) in Stockholders' Equity [Roll Forward]								
Cumulative effect adjustment on adoption | ASU 2016-01 [Member]	41,400							
Cumulative effect adjustment on adoption | ASC 842 [Member]	(29)					(29)	(29)	
Beneficial conversion feature relating to convertible and promissory notes payable	2,039		2,039				2,039	
Exercise of warrants	5		5				5	

Exercise of warrants (in Shares)		500						
Stock issued for cash	2,530		2,530				2,530	
Stock issued for cash (in shares)		307,500						
Conversion of notes payable to common stock	329		329				329	
Conversion of notes payable to common stock (in shares)		81,332						
Share-based compensation	536		536				536	
Exercise of common stock options	1		1				1	
Exercise of common stock options (in shares)		167						
Foreign currency translation effect	8			7			7	1
Net income (loss)	(14,153)					(14,167)	(14,167)	14
Balance, ending at Mar. 31, 2019	$ (24,628)	$ 36	$ 146,344	$ (62)		$ (170,864)	$ (24,546)	$ (82)
Balance, ending (in shares) at Mar. 31, 2019		35,947,804						

CONSOLIDATED STATEMENT OF CHANGES IN STOCKHOLDERS' EQUITY (unaudited) (Parenthetical) - $ / shares	Mar. 31, 2019	Dec. 31, 2018
Statement Of Stockholders Equity [Abstract]		
Common stock, par value (in dollars per share)	$ 0.001	$ 0.001
Common stock, authorized	100,000,000	100,000,000

CONSOLIDATED STATEMENTS OF CASH FLOWS (Unaudited) - USD ($) $ in Thousands	3 Months Ended	
	Mar. 31, 2019	Mar. 31, 2018
CASH FLOWS FROM OPERATING ACTIVITIES		
Net loss	$ (14,153)	$ (6,097)
Adjustments to reconcile net loss to net cash flows from operating activities		
Depreciation and amortization	17	13
Cost of scrapped inventory written off		8
Amortization of discount of convertible notes	5,641	4,192
Foreign exchange adjustments on convertible notes and notes payable	(19)	135
Net losses (gains) on equity investment in marketable securities	6,457	(5,535)
Loss on debt settlement		3,245
Share-based compensation	536	710
Change in fair value of warrant derivative liabilities	48	(840)
Change in fair value of embedded conversion option		(466)
Net changes in operating assets and liabilities		
Accounts receivable	(409)	(658)
Inventories	(1,091)	(388)
Prepaid expenses and other current assets	(83)	94
Other non-current assets	(2,813)	(84)
Accounts payable and accrued expenses	2,339	(539)
Deferred revenue	500	596
Deferred rent	(287)	(41)
Other current liabilities	36	40
Other long-term liabilities	1,997	5,000
Net cash flows used in operating activities	(1,284)	(615)
CASH FLOWS FROM INVESTING ACTIVITIES		
Purchases of property and equipment	(16)	(15)
Purchase of marketable securities and investment at cost		(469)
Net cash flows used in investing activities	(16)	(484)
CASH FLOWS FROM FINANCING ACTIVITIES		
Repurchase of common stock and warrants		(7,500)
Proceeds from convertible notes payable issued, net of issuance cost and discount		14,395
Payments of notes payable		(3,500)
Payments of convertible notes	(3,048)	(20,000)
Proceeds from exercise of warrants	5	
Proceeds from issuance of common stock	2,530	275
Proceeds from conversion of notes payable to common stock	21	
Net cash flows used in financing activities	(492)	(16,330)
Effect of exchange rate changes on cash	22	(14)
Net decrease in cash, cash equivalents and restricted cash	(1,770)	(17,443)
Cash and cash equivalents, beginning of period	17,080	22,556

Cash and cash equivalents, end of period	15,310	5,113
SUPPLEMENTAL DISCLOSURES OF CASH FLOW ACTIVITIES		
Interest paid	385	$ 371
Conversion of notes payable to common stock	$ 308	

BASIS OF PRESENTATION	3 Months Ended Mar. 31, 2019
Organization Consolidation And Presentation Of Financial Statements [Abstract]	
BASIS OF PRESENTATION	**NOTE 1 — BASIS OF PRESENTATION** The accompanying unaudited consolidated interim financial statements of Emmaus Life Sciences, Inc. and subsidiaries (collectively, the "Company" or "Emmaus") have been prepared in accordance with accounting principles generally accepted in the United States of America ("GAAP") on the basis that the Company will continue as a going concern. The consolidated financial statements include the accounts of the Company and its consolidated subsidiaries. All significant intercompany transactions have been eliminated. The Company's unaudited consolidated interim financial statements contain adjustments, including normal recurring accruals necessary to present fairly the Company's consolidated financial position, results of operations, and cash flows. Due to the uncertainty of the Company's ability to meet its current operating and capital expenses, there is substantial doubt about the Company's ability to continue as a going concern, as the continuation and expansion of its business is dependent upon obtaining further financing, market acceptance of Endari™, and achieving a profitable level of revenues. The consolidated interim financial statements do not include any adjustments that might result from the outcome of these uncertainties. The consolidated interim financial statements should be read in conjunction with the Company's Annual Report on Form 10-K for the year ended December 31, 2018, filed with the Securities and Exchange Commission ("SEC") on March 21, 2019 (the "Annual Report"). Interim results for the periods presented herein are not necessarily indicative of the results that may be expected for the fiscal year ending December 31, 2019. The preparation of the consolidated financial statements requires the use of management estimates. Actual results could differ materially from those estimates.

SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES	3 Months Ended Mar. 31, 2019
Accounting Policies [Abstract]	
SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES	**NOTE 2 — SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES** Refer to the Annual Report for a summary of significant accounting policies. There have been no material changes to the Company's significant accounting policies during the three months ended March 31, 2019 except for leases, which are discussed below. Below are disclosures of certain interim balances, transactions, and significant assumptions used in computing fair value as of and for the three months ended March 31, 2019 and comparative amounts from the prior fiscal periods: **Revenues –** Effective January 1, 2018, the Company adopted Accounting Standard codification ("ASC") Topic 606, *Revenue from Contracts with Customers* using the modified retrospective transition methods. The adoption of ASC 606 did not have a material impact on the measurement or on the recognition of revenue of contracts for which all revenue had not been recognized as of January 1, 2018, therefore no cumulative adjustment has been made to the opening balance of accumulated deficit at the beginning of 2018. The comparative information has not been restated and continues to be reported under the accounting standards in effect for the periods presented. Since January 2018, the Company has generated revenues through the sale of Endari as a treatment for sickle cell disease ("SCD"). The Company also generates revenues to a much lesser extent from the sale of AminoPure®, a nutritional supplement. Revenues from Endari product sales are recognized upon delivery and transfer of control of products to the Company's distributors and specialty pharmacy customers. Distributors resell the products to other specialty pharmacy providers, health care providers, hospitals, patients and clinics. In addition to distribution agreements with distributors, the Company enters into contractual arrangements with specialty pharmacy providers, in-office dispensing providers, group purchasing organizations, and government entities that provide for government-mandated or privately-negotiated rebates, chargebacks and discounts with respect to the purchase of our products. These various discounts, rebates, and charge-backs are referred to as "variable consideration." Revenues from product sales are recorded net of variable consideration. Prior to recognizing revenues, the Company's management forecasts and estimates variable consideration. Amounts of variable consideration are included in the transaction price to the extent that it is probable that a significant reversal in the amount of cumulative revenues recognized will not occur when the uncertainty associated with the variable consideration is subsequently resolved. Provisions for returns and other variable consideration adjustments are provided for in the period in which the related revenues are recorded. Actual amounts of consideration ultimately received may differ from our estimates. If actual results in the future vary from our estimates, we will adjust these estimates, which would affect net product revenue and earnings in the period such variances become known. The following are our significant categories of sales discounts and allowances: Sales Discounts: The Company provides its customers contractual prompt payment discounts and from time to time offers additional one-time discounts that are recorded as a reduction of revenues in the period the revenues are recognized.

Product Returns: The Company offers its distributors a right to return product purchased directly from the Company based principally upon (i) overstocks, (ii) inactive product or non-moving product due to market conditions, and (iii) expired products. Product return allowances are estimated and recorded at the time of sale.

Government Rebates: The Company is subject to discount obligations under state Medicaid programs and the Medicare prescription drug coverage gap program. The Company's management estimates Medicaid and Medicare prescription drug coverage gap rebates based upon a range of possible outcomes that are probability-weighted for the estimated payor mix. These reserves are recorded in the same period the related revenues are recognized, resulting in a reduction of product revenues and the establishment of a current liability that is included as accounts payable and accrued expenses in our balance sheet. The liability for these rebates consists primarily of estimates of claims expected to be received in future periods related to the recognized revenues.

Chargebacks and Discounts: Chargebacks for fees and discounts represent the estimated obligations resulting from contractual commitments to sell products to certain specialty pharmacy providers, in-office dispensing providers, group purchasing organizations, and government entities at prices lower than the list prices charged to distributors. The distributors charge the Company for the difference between what they pay for the products and the Company's contracted selling price to these specialty pharmacy providers, in-office dispensing providers, group purchasing organizations, and government entities. These reserves are established in the same period that the related revenues are recognized, resulting in a reduction of revenues. Chargeback amounts are generally determined at the time of resale of products by the distributors.

Leases — As described below under "Recent accounting pronouncements," we adopted ASU 2016-02 – Leases (Topic 842) ("ASU 2016-02") as of January 1, 2019. Pursuant to ASU 2016-02, all of our leases outstanding on January 1, 2019 continued to be classified as operating leases. With the adoption of ASU 2016-02, we recorded an operating lease right-of-use asset and an operating lease liability on our balance sheet. Right-of-use lease assets represent our right to use the underlying asset during the lease term and the lease obligation represents our commitment to make lease payments arising from the lease. Right-of-use lease assets and obligations were recognized based on the present value of remaining lease payments over the lease term. As the Company's leases do not provide an implicit rate, we have used an estimated incremental borrowing rate based on the information available at our adoption date in determining the present value of lease payments. Operating lease expense is recognized on a straight-line basis over the lease term. Variable lease costs such as common area costs and other operating costs are expensed as incurred. For all lease agreements we combine lease and non-lease components. No right-of-use asset and related lease liability are recorded for leases with an initial term of 12 months or less.

Prior to our adoption of ASU 2016-02, when our lease agreements contained tenant improvement allowances and rent escalation clauses, we recorded a deferred rent asset or liability equal to the difference between the rent expense and the future minimum lease payments due. The lease expense related to operating leases was recognized on a straight-line basis in the statements of operations over the term of each lease. In cases where the lessor granted us leasehold improvement allowances, we capitalized the improvements as incurred and recognized it over the shorter of the lease term or the expected useful life of the improvements.

Inventories — Substantially all of the raw material purchased during the three months ended March 31, 2019 and for the year ended December 31, 2018 were from one vendor. The below table presents inventory by category (in thousands):

Inventories by category	**March 31, 2019**	**December 31, 2018**
Raw materials and components	$ 647	$ 171

Work-in-process	1,584	2,471
Finished goods	3,564	2,063
Total	$ 5,795	$ 4,705

Marketable securities— The Company's marketable securities consist of the following securities; (a) 39,250 shares of capital stock of CellSeed, Inc. ("CellSeed") acquired in January 2009 at ¥680 JPY per share ($7.69 USD); (b) 6,643,559 shares of capital stock of Telcon, Inc. ("Telcon") which were acquired in July 2017 for ₩36,001,446,221 KRW (equivalent to $31.8 million USD) at ₩5,419 KRW per share.

As of March 31, 2019 and December 31, 2018, the closing prices per CellSeed share on the Tokyo Stock Exchange were ¥710 ($6.40 USD) and ¥668 JPY ($6.07 USD), respectively, and the closing prices per Telcon share on the Korean Securities Dealers Automated Quotations ("KOSDAQ") were ₩7,350 ($6.45 USD) and ₩8,280 KRW ($7.43 USD), respectively.

As of March 31, 2019, and December 31, 2018, 39,250 shares of CellSeed common stock were pledged to secure a $300,000 convertible note of the Company issued to Mitsubishi UFJ Capital III Limited Partnership that is due on demand and were classified as marketable securities, pledged to creditor in our balance sheet.

Prepaid expenses and other current assets — Prepaid expenses and other current assets consisted of the following at March 31, 2019 and December 31, 2018 (in thousands):

	March 31, 2019	December 31, 2018
Prepaid insurance	$ 80	$ 82
Other prepaid expenses and current assets	738	661
	$ 818	$ 743

Other long-term liabilities—Other long-term liabilities consisted of the following at March 31, 2019 and December 31, 2018 (in thousands):

	March 31, 2019	December 31, 2018
Trade discount	$ 25,137	$ 26,222
Unearned revenue	10,500	10,000
Other long-term liabilities	—	—
Total other long-term liabilities	$ 35,637	$ 36,222

The Company entered into an API Supply Agreement (the "API Agreement") with Telcon pursuant to which Telcon advanced to the Company approximately ₩36.0 billion KRW (approximately $31.8 million USD), accounted for as a trade discount, in consideration for the right to supply 25% of the Company's requirements for bulk containers of pharmaceutical grade L-glutamine ("PGLG"). Refer Note 10 for additional details.

Fair value measurements — The following table presents the change in fair value of warrant derivative liabilities on a recurring basis using Level 3 inputs during the year ended December 31, 2018 (in thousands):

Warrant Derivative Liabilities—Stock Purchase Warrants	Year Ended December 31, 2018
Balance, beginning of period	$ 26,377
Repurchased	(6,186)
Change in fair value included in the statement of comprehensive income (loss)	(20,191)

Balance, end of period	$ —

The following table presents the change in fair value of warrants issued to GPB Debt Holdings II, LLC as described in Note 8 as of March 31, 2019 and December 31, 2018 (in thousands):

	For the Three Months Ended March 31, 2019		Year Ended December 31, 2018	
Warrant Derivative Liabilities—GPB	**Warrants**	**Embedded Conversion Option**	**Warrants**	**Embedded Conversion Option**
Balance, beginning of period	$ 1,399	$ —	$ 1,882	$ 1,289
Fair value at issuance date	—	—	—	—
Change in fair value included in the statement of comprehensive income (loss)	48	—	(483)	(466)
Extinguished upon debt repayment	—	—	—	(823)
Balance, end of period	$ 1,447	$ —	$ 1,399	$ —

The value of warrant derivative liabilities and the change in fair value of the warrant derivative liabilities were determined using a Binomial Monte-Carlo Cliquet (aka "Ratchet") Option Pricing Model. The model is similar to traditional Black-Scholes-type option pricing models, except that the exercise price resets at certain dates in the future.

The value as of the dates set forth in the table above, was based on upon following assumptions:

	March 31, 2019	December 31, 2018
Stock price	$ 10.30	$ 9.10
Risk-free interest rate	2.22%	2.48%
Expected volatility (peer group)	70.00%	70.00%
Expected life (in years)	3.75	4.00
Expected dividend yield	—	—
Number outstanding	240,764	240,764
Balance, end of period:		
Warrant derivative liabilities (long-term) (in thousands)	$ 1,447	$ 1,399

Debt and related party debt — The following table presents the effective interest rates on loans originated and refinanced in the respective periods that either had a beneficial conversion feature or an attached warrant:

Type of Loan	Term of Loan	Stated Annual Interest	Original Loan Principal Amount	Conversion Rate	Beneficial Conversion Discount Amount	Warrants Issued with Notes	Exercise Price	Warrant FMV Discount Amount	Effective Interest Rate Including Discounts
2017 convertible notes payable	Due on demand - 2 years	10%	$ 5,795	$3.50-$10.00	$ 1,545	$ —	N/A	N/A	25% - 110%
2018 convertible notes payable	Due on demand - 2 years	10%	24,135	$3.50-$10.00	10,266	—	—	—	10%-110%
2019 convertible notes payable	Due on demand - 1 year	10%	2,039	$3.50-$4.50	2,039	—	—	—	110%
2018 notes payable	18 months	10%	12,200	N/A	—	1,220,000	$ 11.30	9,687	89%
			$ 44,169		$ 13,850	$ 1,220,000		$ 9,687	

Related party notes are reflected as a separate line items in the Company's consolidated balance sheets.

Net loss per share — As of March 31, 2019 and 2018, respectively, the Company had outstanding potentially dilutive securities exercisable for or convertible into 16,317,940 and

17,122,176 shares of Company common stock. No potentially dilutive securities were included in the calculation of diluted net loss per share since their effect would be anti-dilutive for all periods presented.

Recent accounting pronouncements—In January 2016, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2016-01, *Recognition and Measurement of Financial Assets and Financial Liabilities*. The ASU amendments applicable to the Company (1) supersede the guidance to classify equity securities, except equity method securities, with readily determinable fair values into trading or available-for-sale categories and require equity securities to be measured at fair value with changes in the fair value recognized through net income, (2) allow equity investments that do not have readily determinable fair values to be remeasured at fair value either upon the occurrence of an observable price change or upon identification of an impairment, (3) require assessment for impairment of equity investments without readily determinable fair values qualitatively at each reporting period, (4) eliminate the requirement to disclose the methods and significant assumptions used in calculating the fair value of financial instruments required to be disclosed for financial instruments measured at amortized cost on the balance sheet, (5) require public business entities to use the exit price notion when measuring the fair value of financial instruments for disclosure purposes, (6) require separate presentation of financial assets and financial liabilities by measurement category and form of financial asset (that is, securities or loans and receivables) on the balance sheet or the accompanying notes to the financial statements, (7) clarify that an entity should evaluate the need for a valuation allowance on a deferred tax asset related to available-for-sale securities in combination with the entity's other deferred tax assets. This ASU was effective beginning January 1, 2018. Since then, the Company has recognized any changes in the fair value of certain equity investments in net income as prescribed by the new standard rather than in other comprehensive income. The Company recognized a cumulative effect adjustment to increase the opening balance of retained earnings as of January 1, 2018 by $41.4 million, net of $12.3 million income tax benefit. Refer to Note 5 for additional disclosures required by this ASU.

In February 2016, the FASB issued ASU No. 2016-02, *Leases*. The amendments in this Update require a lessee to recognize in the statement of financial position a liability to make lease payments (the lease liability) and a right-of-use asset representing its right to use the underlying asset for the lease term for all leases with terms greater than twelve months. For leases less than twelve months, an entity is permitted to make an accounting policy election by class of underlying asset not to recognize lease assets and lease liabilities. If a lessee makes this election, it should recognize lease expense for such leases generally on a straight-line basis over the lease term. The amendments in this Update are effective for the Company for fiscal years beginning after December 15, 2018, including interim periods within those years, with early adoption permitted. Additionally, in July 2018, the FASB issued ASU No. 2018-11, Leases (Topic 842): *Targeted Improvements* and ASU No. 2018-10 Codification Improvements to Topic 842, Leases with certain targeted changes and improvements to previously issued lease accounting standard. The Company recognized operating lease liabilities of approximately $3.2 million and a right-of-use asset of approximately $2.9 million, derecognized deferred rent of approximately $286,000 and recognized the cumulative effect adjustment to increase the opening balance of accumulated deficit as of January 1, 2019 by approximately $29,000. We did not restate any financial information prior to January 1, 2019. Refer to Note 9 for additional disclosures required by this ASU.

In April 2016, the FASB issued ASU 2016-10, *Revenue from Contracts with Customers (Topic 606): Identifying Performance Obligations and Licensing* ("ASU 2016-10"). The amendments in ASU 2016-10 clarify identification of performance obligations and licensing implementation. The amendments do not change the core principle of the guidance in Topic 606. The effective date and transition requirements for the amendments are the same as the effective date and transition requirements in Topic 606: For public companies, this Update is effective for annual periods, including interim periods within those annual periods, beginning after December 15, 2017. The Company adopted the new revenue standard as of January 1, 2018 using the modified retrospective transition method. The adoption of ASU 2016-10 did not have a material impact on the Company's consolidated financial statements; however, adoption did result in significant changes to the Company's financial statement notes.

In July 2017, the FASB issued ASU No. 2017-11, *Earnings Per Share (Topic 260) Distinguishing Liabilities from Equity (Topic 480) Derivatives and Hedging (Topic 815): I. Accounting for Certain Financial Instruments with Down Round Features, II. Replacement of the Indefinite Deferral for Mandatorily Redeemable Financial Instruments of Certain Nonpublic Entities and Certain Mandatorily Redeemable Noncontrolling Interests with a Scope Exception ("ASU 2017-11").* The amendments in this guidance intended to reduce the complexity associated with the issuer's accounting for certain financial instruments with characteristics of liabilities and equity. Specifically, the Board determined that a down round feature (as defined) would no longer cause a freestanding equity-linked financial instrument (or an embedded conversion option) to be accounted for as a derivative liability at fair value with changes in fair value recognized in current earnings. In addition, the Board re-characterized the indefinite deferral of certain provisions of Topic 480 to a scope exception. The re-characterization has no accounting effect. Down round features will no longer cause freestanding equity-linked financial instruments and embedded conversion options to be considered "not indexed to an entity's own stock." ASU 2017-11 is effective for public business entities for fiscal year beginning after December 15, 2018. All others have an additional year. Early adoption is permitted for all entities, including in an interim period. Entities may use the retrospective or modified retrospective transition method. The Company early adopted this ASU without a material impact on previously recorded balances on its consolidated financial statements.

In February 2018, the FASB issued ASU No. 2018-02, Income Statement – Reporting Comprehensive Income (Topic 220): *Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income* ("ASU 2018-02"). ASU 2018-02 allows a reclassification from accumulated other comprehensive income to retained earnings for stranded tax effects resulting from the Tax Cuts and Jobs Act. Consequently, the amendments eliminate the stranded tax effects resulting from the Tax Cuts and Jobs Act and will improve the usefulness of information reported to financial statement users. However, because the amendments only relate to the reclassification of the income tax effects of the Tax Cuts and Jobs Act, the underlying guidance that requires that the effect of a change in tax laws or rates be included in income from continuing operations is not affected. ASU 2018-02 also requires certain disclosures about stranded tax effects. ASU 2018-02 is effective for all entities for fiscal years beginning after December 15, 2018, and interim periods within those fiscal years, with early adoption permitted. ASU 2018-02 should be applied either in the period of adoption or retrospectively to each period (or periods) in which the effect of the change in the U.S. federal corporate income tax rate in the Tax Cuts and Jobs Act is recognized. The adoption of ASU 2018-02 does not have a material impact on the Company's consolidated financial statements.

In February 2018, the FASB issued ASU No. 2018-03, Technical Corrections and Improvements to Financial Instruments—Overall (Subtopic 825-10): *Recognition and Measurement of Financial Assets and Financial Liabilities* ("ASU 2018-03"). The amendments in ASU 2018-03 (1) clarify that an entity measuring an equity security using the measurement alternative may change its measurement approach to a fair value method in accordance with Topic 820, *Fair Value Measurement*, through an irrevocable election that would apply to that security and all identical or similar investments of the same issuer, (2) clarify that the adjustments made under the measurement alternative are intended to reflect the fair value of the security as of the date that the observable transaction for a similar security took place, (3) clarify that remeasuring the entire value of forward contracts and purchased options is required when observable transactions occur on the underlying equity securities, (4) clarify that when the fair value option is elected for a financial liability, the guidance in paragraph 825-10- 45-5 should be applied, regardless of whether the fair value option was elected under either Subtopic 815-15, *Derivatives and Hedging— Embedded Derivatives*, or 825- 10, *Financial Instruments— Overall*, (5) clarify that for financial liabilities for which the fair value option is elected, the amount of change in fair value that relates to the instrument specific credit risk should first be measured in the currency of denomination when presented separately from the total change in fair value of the financial liability, and then both components of the change in the fair value of the liability should be remeasured into the functional currency of the reporting entity using end-of-period spot rates, (6) clarify that the prospective transition approach for equity securities without a readily determinable fair value in the amendments in ASU 2016-01 is meant only for instances in which the measurement alternative is applied. For public business entities, ASU 2018-03 is effective for fiscal years beginning after December 15, 2017, and interim periods within those fiscal years beginning after June 15, 2018. Public business entities with fiscal years beginning between December 15, 2017, and June 15, 2018, are not required to adopt these amendments until the interim period beginning after June 15, 2018, and public business entities with fiscal years beginning between June 15, 2018, and December 15, 2018, are not required to adopt these amendments before adopting the amendments in ASU 2016-01. The impact of the adoption of the amendments in ASU 2018-03 depends on the amount of equity securities and financial instruments subject to the amendments in this Update held by the Company at the time of adoption. The adoption of ASU 2018-03 did not have a material impact on the Company's consolidated financial statements.

In June 2018, the FASB issued ASU No. 2018-07, Compensation – Stock Compensation (Topic 718): *Improvements to Nonemployee Share-Based Payment Accounting* ("ASU 2018-07"), which supersedes ASC 505-05 and expands the scope of ASC 718 to include all share-based payment arranges related to the acquisition of goods and services from both nonemployees and employee. As a result, most of the guidance in ASC 718 associated with employee share-based payments, including most of its requirements related to classification and measurement, applies to nonemployee share-based payment arrangements. ASC 2018-07 is effective for all entities for fiscal year beginning after December 15, 2018, and interim periods within those fiscal year, with early adoption permitting but no earlier than the date on which an entity adopts ASC 606. The adoption of ASU 20218-07 did not have a material impact on the Company's consolidated financial statements.

In August 2018, the FASB issued ASU No. 2018-13, Fair Value Measurement (Topic 820): *Disclosure Framework – Changes to the Disclosure Requirements for Fair Value Measurement* ("ASU 2018-13"), which changes the fair value measurement disclosure requirements of ASC 820. The amendments in ASU 22018-13 remove some disclosures, modify others, and add some new disclosure requirements. The amendments in this ASU are effective for all entities for fiscal years, and interim period within those fiscal years, beginning after December 15, 2019 with early adoption permitted. The Company is currently assessing the impact the adoption of ASU 2018-13 will have on its consolidated financial statements and accompanying footnote disclosures.

In October 2018, the FASB issued ASU 2018-17, Consolidation (Topic 810) *Targeted Improvements to Related Party guidance for Variable Interest Entities ("ASU 2018-17")*, which amends two aspects of the related-party guidance in ASC 810. Specifically, ASU2018-17 (1) adds an elective private-company scope exception to the variable interest entity guidance for entities under common control and (2) removes a sentence in ASC 810-10-55-37D regarding the evaluation of fees paid to decision makers to conform with the amendments in ASU 2016-17, *Interest Held Through Related Parties That Are Under Common Control.* The amendments in ASU 2018-17 are effective for fiscal years beginning after December 15, 2019, and interim periods within those fiscal years. The Company does not expect the adoption of ASU 2018-17 to have a material impact on its consolidated financial statements.

REVENUES	**3 Months Ended Mar. 31, 2019**

Revenue From Contract With Customer [Abstract]

REVENUES

NOTE 3 — REVENUES

Revenues disaggregated by category were as follows (in thousands):

	Three months ended	
	March 31, 2019	March 31, 2018
Endari	$ 5,787	$ 720
Other	105	102
Gross sales	5,892	822
Less: discounts and allowances		
Endari	(585)	(30)
Other	—	(11)
Total	$ 5,307	$ 781

The following table summarizes the revenue allowance and accrual activities for the three months ended March 31, 2019 (in thousands):

	Trade Discounts, Allowances and Chargebacks	Government Rebates and Other Incentives	Returns	Total
Balance as of December 31, 2018	$ 303	$ 1,880	$ 181	$2,363
Provision related to sales in the current year	293	729	54	1,076
Adjustments related prior period sales	—	(600)	—	(600)
Credit and payments made	(316)	(568)	—	(884)
Balance as of March 31, 2019	$ 279	$ 1,441	$ 235	$1,955

The following table summarizes revenues attributable to each of our customers who accounted for 10% or more of our total revenues (as a percentage of total revenues):

	Three months ended	
	March 31, 2019	March 31, 2018
AmerisourceBergen Specialty Group	60%	88%
McKesson Plasma and Biologics LLC	17%	—

PROPERTY AND EQUIPMENT	3 Months Ended Mar. 31, 2019
Property Plant And Equipment [Abstract]	
PROPERTY AND EQUIPMENT	**NOTE 4 — PROPERTY AND EQUIPMENT**

Property and equipment consisted of the following (in thousands):

	March 31, 2019	December 31, 2018
Equipment	$ 306	$ 306
Leasehold improvements	71	70
Furniture and fixtures	79	79
Total property and equipment	456	455
Less: accumulated depreciation	(317)	(303)
Total depreciable assets	139	152
Construction-in-progress	14	—
Property and equipment, net	$ 153	$ 152

During the three months ended March 31, 2019 and 2018, depreciation expense was approximately $14,000 and $13,000, respectively.

INVESTMENTS

3 Months Ended
Mar. 31, 2019

Investments [Abstract]

INVESTMENTS

NOTE 5 — INVESTMENTS

Equity Securities—Effective January 1, 2018, the Company adopted ASU 2016-01 which requires the Company to measure all equity investments that do not result in consolidation and are not accounted for under the equity method at fair value and recognize in earnings any changes in such fair value. The Company uses quoted market prices to determine the fair value of equity securities with readily determinable fair values. For equity securities without readily determinable fair values, the Company has elected the measurement alternative under which the Company measures these investments at cost minus impairment, if any, plus or minus changes resulting from observable price changes in orderly transactions for the identical or a similar investment of the same issuer. Management assesses each of these investments on an individual basis. Additionally, on a quarterly basis, management is required to make a qualitative assessment of whether the investment is impaired; however, the Company is not required to determine the fair value of these investments unless impairment indicators existed. When impairment indicators exist, the Company generally uses discounted cash flow analyses to determine the fair value. For the three months ended March 31, 2019 and the year ended December 31, 2018, the Company did not recognize any fair value adjustments for equity securities without readily determinable fair values. The Company recognized a cumulative effect adjustment of $41.4 million, net of $12.3 million income tax benefit, to increase the opening balance of retained earnings with an offset to accumulated other comprehensive income as of January 1, 2018, in connection with the adoption of ASU 2016-01.

At March 31, 2019 and December 31, 2018, the carrying values of equity securities were included in the following line items in our consolidated balance sheets (in thousands):

	March 31, 2019		December 31, 2018	
	Fair Value with Changes Recognized in Income	Measurement Alternative - No Readily Determinable Fair Value	Fair Value with Changes Recognized in Income	Measurement Alternative - No Readily Determinable Fair Value
Marketable securities	$ 43,124	$ —	$ 49,581	$ —
Long-term investment at cost	—	527	—	538
Total equity securities	$ 43,124	$ 527	$ 49,581	$ 538

Net realized losses on available-for-sales on marketable securities still held at March 31, 2019 was approximately $ 6.5 million and net realized gain on available-for sales on marketable securities still held at March 31, 2018 was approximately $ 5.5 million.

ACCOUNTS PAYABLE AND ACCRUED EXPENSES	3 Months Ended
	Mar. 31, 2019
Payables And Accruals [Abstract]	
ACCOUNTS PAYABLE AND ACCRUED EXPENSES	

NOTE 6 — ACCOUNTS PAYABLE AND ACCRUED EXPENSES

At March 31, 2019 and December 31, 2018, accounts payable and accrued expenses consisted of the following (in thousands):

	March 31, 2019	December 31, 2018
Accounts payable:		
Clinical and regulatory expenses	$ 356	$ 83
Professional fee	1,961	2,157
Selling expenses	421	382
Manufacturing costs	1,756	—
Other vendors	692	980
Total accounts payable	5,186	3,602
Accrued interest payable, related parties	1,217	842
Accrued interest payable	2,306	2,138
Accrued expenses:		
Payroll expenses	796	713
Accrued rebates	1,441	1,744
Other accrued expenses	122	83
Total accrued expenses	2,359	2,540
Total accounts payable and accrued expenses	$ 11,068	$ 9,122

NOTES PAYABLE

3 Months Ended Mar. 31, 2019

Debt Disclosure [Abstract]

NOTES PAYABLE

NOTE 7 — NOTES PAYABLE

Notes payable consisted of the following at March 31, 2019 and December 31, 2018 (in thousands):

Year Issued	Interest Rate Range	Term of Notes	Conversion Price	Principal Outstanding March 31, 2019	Discount Amount March 31, 2019	Carrying Amount March 31, 2019	Shares Underlying Notes March 31, 2019	Principal Outstanding December 31, 2018	Discount Amount December 31, 2018	Carrying Amount December 31, 2018	Shares Underlying Notes December 31, 2018
Notes payable											
2013	10%	Due on demand	—	$ 902	$ —	$ 902	—	$ 909	$ —	$ 909	—
2015	10%	Due on demand	—	10	—	10	—	10	—	10	—
2016	10% - 11%	Due on demand	—	843	—	843	—	843	—	843	—
2017	5% - 11%	Due on demand	—	1,951	—	1,951	—	2,575	—	2,575	—
2018	10% - 11%	Due on demand- 18 months	—	12,311	7,847	4,464	—	12,311	9,233	3,078	—
2019	11%	Due on demand	—	752	—	752	—	—	—	—	—
				$ 16,769	$ 7,847	$ 8,922	—	$ 16,648	$ 9,233	$ 7,415	—
		Current		$ 14,569	$ 7,569	$ 7,000	—	$ 12,449	$ 6,054	$ 6,394	—
		Non-current		$ 2,200	$ 278	$ 1,922	—	$ 4,200	$ 3,179	$ 1,021	—
Notes payable - related party											
2016	10%	Due on demand	—	270	—	270	—	270	—	270	—
2017	10%	Due on demand	—	27	—	27	—	39	—	39	—
2018	11%	Due on demand	—	159	—	159	—	159	—	159	—
2019	10%	Due on demand	—	14	—	14	—	—	—	—	—
				$ 470	$ —	$ 470	—	$ 468	$ —	$ 468	—
		Current		$ 470	$ —	$ 470	—	$ 468	$ —	$ 468	—
		Non-current		$ —	$ —	$ —	—	$ —	$ —	$ —	—
Convertible notes payable											
2011	10%	5 years	$3.05	$ 300	$ —	$ 300	98	$ 300	$ —	$ 300	98
2014	10%	Due on demand - 2 years	$3.05 - $3.60	522	—	522	186	519	—	519	184
2016	10%	Due on demand - 2 years	$3.60 - $4.50	62	—	62	17	61	—	61	17
2017	10% - 13.5%	Due on demand - 3 years	$3.50 - $10.31	1,895	108	1,787	618	2,820	349	2,471	899
2018	6% - 10%	Due on demand - 2 years	$3.50 - $10.00	15,311	2,671	12,640	3,076	19,556	6,169	13,387	3,664
2019	10%	Due on demand - 1 year	$3.50 - $4.50	2,039	1,804	235	570	—	—	—	—
				$ 20,129	$ 4,583	$ 15,546	4,565	$ 23,256	$ 6,518	$ 16,738	4,862
		Current		$ 19,421	$ 4,264	$ 15,157	4,402	$ 16,604	$ 5,351	$ 11,253	3,981
		Non-current		$ 708	$ 319	$ 389	163	$ 6,652	$ 1,167	$ 5,485	881
Convertible notes payable - related party											
2012	10%	Due on demand	$ 3.30	$ 200	$ —	$ 200	76	$ 200	$ —	$ 200	74
2015	10%	2 years	$ 4.50	200	—	200	59	200	—	200	58
2017	10%	2 years	$ 10.00	5,000	218	4,782	545	5,000	311	4,689	533
2018	10%	2 years	$ 10.00	9,400	686	8,714	995	9,400	871	8,529	972
				$ 14,800	$ 904	$ 13,896	1,675	$ 14,800	$ 1,182	$ 13,618	1,637
		Current		$ 14,800	$ 904	$ 13,896	1,675	$ 5,400	$ 311	$ 5,089	665
		Non-current		$ —	$ —	$ —	—	$ 9,400	$ 871	$ 8,529	972
		Total		$ 52,168	$ 13,334	$ 38,834	6,240	$ 55,172	$ 16,933	$ 38,239	6,499

The weighted-average stated interest rates of notes payable were 10% as of each of March 31, 2019 and December 31, 2018. weighted average effective interest rates of notes payable as of March 31, 2019 and December 31, 2018 were 48% and 35% respectively, after giving effect to discounts relating to beneficial conversion features and the fair value of warrants issued in connection with these notes. The notes payable and convertible notes payable contain no restrictive financial covenants or acceleration clauses associated with a material adverse change event. The holders of the convertible notes have the option to convert their notes into Company common stock at conversion prices ranging $3.05 to $10.00 per share during the terms of the notes. Certain notes with a $4.50 or a $10.00 stated conversion price in the second year of their two-year term are subject to automatic conversion into shares of Company common stock at a conversion price equal to 80% of the initial public offering price at the time of a qualified public offering. All notes due on demand are treated as current liabilities.

During the three months ended March 31, 2019, the Company proposed to the holders of its outstanding convertible promissory notes to amend the terms thereof to provide for an automatic conversion into shares of Company common stock at their respective conversion prices immediately prior to the effective time of the proposed merger transaction with MYnd Analytics, Inc. As such, the conversion shares would be deemed outstanding immediately prior to the merger and would be converted into shares of MYnd Analytics, Inc. common stock as a result of the merger in the same manner as other outstanding shares of Company common stock based the merger “exchange ratio.” As of March 31, 2019, the holders of an aggregate of $4.8 million, or 14%, in principal amount of the outstanding convertible notes, had agreed to the amendment. See Note 12 for information regarding the amendment of additional convertible notes subsequent to March 31, 2019.

Contractual principal payments due on notes payable are as follows:

Year Ending		
2019 (nine months)	$	31,703
2020		20,465
Total	$	52,168

The Company estimated the total fair value of any beneficial conversion feature and accompanying warrants in allocating the note proceeds. The proceeds allocated to the beneficial conversion feature were determined by taking the estimated fair value of shares issuable under the convertible notes less the fair value of the number of shares that would be issued if the conversion rate equaled the fair value of Company common stock as of the date of issuance (see Note 2). The fair value of the warrants issued in conjunction with notes was determined using the Binominal Monte-Carlo Cliquet Option Pricing Model with the following inputs for the year ended December 31, 2018.

		Year ended December 31, 2018
Stock price	$	11.10
Exercise price	$	11.30
Term		5 years
Risk-free interest rate		3.05%
Expected dividend yield		—
Expected volatility		70.0%

With respect to the notes that included both a beneficial conversion feature and a warrant, the proceeds were allocated to the beneficial conversion feature and the warrant based on their respective pro rata fair values.

The Company did not issue any notes with warrants notes in the three months ended March 31, 2019.

STOCKHOLDERS' DEFICIT	3 Months Ended Mar. 31, 2019
Stockholders Equity Note [Abstract]	
STOCKHOLDERS' DEFICIT	NOTE 8 — STOCKHOLDERS' DEFICIT

NOTE 8 — STOCKHOLDERS' DEFICIT

Private placement — On September 11, 2013, the Company issued an aggregate of 3,020,501 units at a price of $2.50 per unit (the "Private Placement"). Each unit consisted of one share of common stock and one common stock warrant for the purchase of an additional share of common stock. The aggregate purchase price for the units was approximately $7.6 million. In addition, 300,000 warrants for the purchase of a share of common stock were issued to a broker under the same terms as the Private Placement transaction (the "Broker Warrants").

The warrants issued in the Private Placement and the Broker Warrants entitle the holders thereof to purchase, at any time on or prior to September 11, 2018, shares of common stock of the Company at an exercise price of $3.50 per share. The warrants contain non-standard anti-dilution protection and, consequently, are being accounted for as liabilities, were originally recorded at fair value, and are adjusted to fair market value each reporting period. Because the shares of common stock underlying the Private Placement warrants and Broker Warrants were not effectively registered for resale by September 11, 2014, the warrant holders have an option to exercise the warrants using a cashless exercise feature. The shares have not been registered for resale as of September 30, 2018. The availability to warrant holders of the cashless exercise feature as of September 11, 2014 caused the then-outstanding 2,225,036 Private Placement warrants and Broker Warrants with fair value of approximately $7.1 million to be reclassified from liability classified warrants to warrant derivative liabilities and to continue to be remeasured at fair value each reporting period. On June 10, 2014, certain warrant holders exercised 1,095,465 warrants issued in the Private Placement for the exercise price of $3.50 per share, resulting in the Company receiving aggregate exercise proceeds of $3.8 million and issuing 1,095,465 shares of common stock. Prior to exercise, these Private Placement warrants were accounted for at fair value as liability classified warrants. As of June 10, 2014, immediately prior to exercise, the carrying value of these Private Placement warrants was reduced to their fair value of $1.8 million, representing their intrinsic value, with this adjusted carrying value of $1.8 million being transferred to additional paid-in capital. Also on June 10, 2014, based on an offer made to holders of Private Placement warrants in connection with such exercises, the Company issued an aggregate of 1,095,465 replacement warrants to holders exercising Private Placement warrants, which replacement warrants have terms that are generally the same as the exercised warrants, including an expiration date of September 11, 2018 and an exercise price of $3.50 per share.

The replacement warrants are treated for accounting purposes as liability classified warrants, and their issuance gave rise to a $3.5 million warrant exercise inducement expense based on their fair value as of issuance as determined using a Binomial Monte-Carlo Cliquet (aka Ratchet) Option Pricing Model. Because the shares of common stock underlying the replacement warrants were not effectively registered for resale by June 10, 2015, the warrant holders have an option to exercise the warrants using a cashless exercise feature. The availability to warrant holders of the cashless exercise feature as of June 10, 2015 caused the then-outstanding 1,095,465 replacement warrants with fair value of approximately $2.5 million to be reclassified from liability classified warrants to warrant derivative liabilities and to continue to be remeasured at fair value each reporting period.

As of September 11, 2018, all of the Private Placement warrants, replacement warrants and Broker Warrants had been exercised primarily on a cashless basis or had expired.

Purchase Agreement with GPB—On December 29, 2017, the Company entered into the Purchase Agreement with GPB Debt Holdings II, LLC ("GPB"), pursuant to which the Company issued to GPB a $13 million principal amount senior secured convertible promissory note (the

"GPB Note") for an aggregate purchase price of approximately $12.5 million, which reflected a 4.0% original issue discount.

In connection with the issuance of the GPB Note, the Company also issued to GPB a warrant (the "GPB Warrant to purchase up to 240,674 of Company common stock at an exercise price of $10.80 per company share, with customary adjustments for stock splits, stock dividends and other recapitalization events and anti-dilution provisions set forth in the GPB Warrant. If the Company effects a public listing of common stock for trading on any securities market or exchange, whether through a direct listing application or merger transaction, at a price per share less than the exercise price, the exercise price will be adjusted on a one-time basis to a 10% premium to the dilutive issuance price and the number of shares issuable under the GPB Warrant will be increased on a full ratchet basis. The GPB Warrant became exercisable six months after issuance and has a term of five years after the initial exercise date.

In connection with the Purchase Agreement, the Company entered into a Registration Rights Agreement (the "Registration Rights Agreement") pursuant to which the Company has agreed to file a registration statement with SEC relating to the offer and sale by GPB of the common stock underlying the GPB Warrant within one hundred eighty (180) days of closing of a public listing of the Company's Common Stock for trading on any national securities exchange (excluding any over-the-counter market), whether through a direct listing application or merger transaction. The Company is required to have the registration statement become effective on the earlier of (A) the date that is two-hundred and forty (240) days following the later to occur of (i) the date of closing of the public listing or (ii) or in the event the registration statement receives a "full review" by the Commission, the date that is 300 days following the date of closing of the public listing, or (B) the date which is within three (3) business days after the date on which the Commission informs the Company (i) that the Commission will not review the registration statement or (ii) that the Company may request the acceleration of the effectiveness of the registration statement. If the Company does not timely effect such registration, it will be required to pay GPB certain late payments specified in the Registration Rights Agreement.

In February 2018, the Company prepaid the GPB Note in full. Upon such prepayment, the Purchase Agreement and the Company's obligations under the transaction documents entered into pursuant to the Purchase Agreement terminated except for the GPB Warrant and the Registration Rights Agreement.

In October 2018, the Company sold and issued $12.2 million principal amount of debentures and warrants to purchase an aggregate of up to 1,220,000 share of the Company common stock pursuant to a securities purchase agreement dated as of September 18, 2018 among the Company and limited number of accredited investors. The net proceeds of the sale of the debentures and warrants were used to fund the Company's loan to EJ Holdings, Inc., a variable interest entity ("VIE")reflected in the Company's consolidated financial statements.

The debentures bear interest at the rate of 10% per annum, payable monthly commencing November 1, 2018, and will mature on April 21, 2020. The Company will be obliged to redeem $1 million principal amount debentures monthly, commencing in May 2019, which was amended to commence in June 2019 pursuant to securities amendment agreement dated as of March 5, 2019, and to redeem the debentures in full upon a "subsequent financing" of at least $20 million, subject to certain exceptions, or in the "event of default" (as defined). The Company's obligations under the debentures are secured by a security interest in substantially all of our assets, except for certain pledged marketable securities and are guaranteed by the U.S. subsidiaries, Emmaus Medical, Inc. and Newfield Nutrition Corporation.

The common stock purchase warrants are exercisable for five years beginning April 22, 2019 at an initial exercise price of $11.30 per share, which will be subject to reduction if we become a listed company or our common stock becomes listed or quoted on a trading market based upon the public offering price or "VWAP" of the Company common stock. The exercise price also will be subject to adjustment in certain other customary circumstances.

T.R. Winston & Company, LLC acted as placement agent in connection with the sales of the debentures and warrants pursuant to an amended and restated fee agreement with us dated October 1, 2018. In accordance with the fee agreement, the Company paid T.R. Winston a cash fee equal to 5% of the gross proceeds received from the purchasers granted T.R. Winston warrants to purchase up to 120,000 shares of the Company common stock on the same terms as the common stock purchase warrants sold to the purchasers and reimbursed T.R. Winston for certain legal fees and expenses.

Effective as of March 5, 2019, the Company entered into a securities amendment agreement with the debenture holders related warrants which provides that the securities purchase agreement among the Company and the holders of the debentures and warrants is to be amended in certain respects, and the debentures and warrants are to be amended in certain respects and restated in their entirety, immediately prior to and subject to the completion of our proposed merger transaction with MYnd Analytics, Inc. described in our Current Report on Form 8-K filed with the Securities and Exchange Commission on January 7, 2019.

Pursuant to the terms of the securities amendment agreement, (i) the debenture holders waived their right to the monthly redemption of $1,000,000 principal amount of the debentures that was due May 1, 2019 and their right to accelerate the repayment of the debentures in connection with the proposed merger transaction and (iii) the provision of the debentures requiring their mandatory redemption in connection with any “subsequent financing” was eliminated. If the merger does not occur, the securities amendment agreement will have no effect, except as described in this paragraph.

If issued in conjunction with the proposed merger transaction, the amended and restated debentures will provide that the monthly redemption of $1,000,000 principal amount thereof will commence in November 2019 and that they will mature on October 21, 2020, six months later than the current maturity date of the debentures. Unlike the debentures, the amended and restated debentures will be convertible at the option of each holder into shares of Company common stock at a conversion price of $10 a share, subject to adjustment for stock splits and other customary events. The amended and restated warrants will be exercisable for up to an aggregate of up to 1,460,000 shares of our common stock, or 240,000 more shares than are currently purchasable under the warrants, at an initial exercise price of $10.00 per share, or $1.30 less than the current exercise price of the warrants. The exercise price of the Warrants will be subject to reduction in connection with a “going public event,” which we expect to occur in conjunction with the proposed merger, based upon the public offering price if the Company completes a bona fide public offering or the “VWAP” (i.e., volume-weighted average trading price) of MYnd Analytics, Inc. (which will change its name to Emmaus Life Sciences, Inc. in conjunction with the merger) common stock at the time of the merger. The exercise price of the amended and restated warrants also will be subject to reduction pursuant to a “full-ratchet” exercise-price antidilution adjustment in the event of a sale or issuance of common stock or common stock equivalents within 60 days following the merger at an effective price per share below the exercise price of the amended and restated warrants. The exercise price also will be subject to adjustment for stock splits and other customary events. The amended and restated debentures and amended and restated warrants will be assumed by the ongoing company following the proposed merger and become convertible and exercisable for the number of shares of common stock of the ongoing company and at a conversion price and exercise price based upon the “exchange ratio” in the merger.

The original securities purchase agreement entitles the holders of the warrants to registration rights with respect to the shares issuable upon exercise of the warrants. The securities amendment agreement extends the same rights to the shares issuable upon conversion of the amended and restated debentures, as well.

A summary of outstanding warrants as of March 31, 2019 and December 31, 2018 is presented below:

	Three Months Ended March 31, 2019	Year Ended December 31, 2018
Warrants outstanding, beginning of period	3,436,431	5,265,432
Granted	—	1,542,000
Exercised	(500)	(2,385,317)
Cancelled, forfeited and expired	—	(985,684)
Warrants outstanding, end of period	3,435,931	3,436,431

A summary of outstanding warrants by year issued and exercise price as of March 31, 2019 is presented below:

		Outstanding			Exercisable	
Year issued and Exercise Price		Number of Warrants Issued	Weighted Average Remaining Contractual Life (Years)	Weighted Average Exercise Price	Total	Weighted Average Exercise Price
At December 31, 2014						
	$ 3.50	50,000	0.08	$ 3.50	50,000	$ 3.50
	2014 Total	50,000			50,000	
At December 31, 2015						
	$ 4.90	110,417	0.93	$ 4.90	110,417	$ 4.90
	2015 Total	110,417			110,417	
At December 31, 2016						
	$ 4.50	118,750	2.25	$ 4.50	118,750	$ 4.50
	$ 4.70	75,000	2.09	$ 4.70	75,000	$ 4.70
	$ 5.00	1,300,000	2.11	$ 5.00	1,300,000	$ 5.00
	2016 Total	1,493,750			1,493,750	
At December 31, 2017						
	$ 10.80	240,764	4.25	$ 10.80	240,764	$ 10.80
	2017 Total	240,764			240,764	
At December 31, 2018						
	$ 11.30	1,541,000	4.54	$ 11.30	1,541,000	$ 11.30
	2018 Total	1,541,000			1,541,000	
At March 31, 2019	Total	3,435,931			3,435,931	

Stock options—During the year ended December 31, 2018, the Company's Board of Directors granted its officers, directors and employees stock options to purchase up to 357,000 shares of Company's common stock. The options will vest and become exercisable with respect to the underlying shares as follows: as to one-third (1/3) of the share on the first anniversary of the grant date, and as to the remaining two-thirds (2/3) of the shares in twenty-four (24) approximately equal monthly installments over a period of two years thereafter.

Summaries of outstanding stock options as of March 31, 2019 and December 31, 2018 are presented below.

	March 31, 2019		December 31, 2018	
	Number of	Weighted-	Number of	Weighted-

	Options	Weighted Average Exercise Price	Options	Weighted Average Exercise Price
Options outstanding, beginning of period	6,642,200	$ 4.40	6,775,200	$ 4.12
Granted or deemed issued	—	$ —	357,000	$ 11.28
Exercised	(200)	$ 5.00	(170,000)	$ 4.59
Cancelled, forfeited and expired	—	$ —	(320,000)	$ 6.06
Options outstanding, end of period	6,642,000	$ 4.40	6,642,200	$ 4.40
Options exercisable, end of period	6,153,778	$ 4.01	5,958,783	$ 3.87
Options available for future grant	2,358,000		2,357,800	

During the three months ended March 31, 2019 and 2018, the Company recognized approximately $0.5 million and $0.7 million, respectively, of share-based compensation expense arising from stock options. As of March 31, 2019, there was approximately $2.1 million of total unrecognized compensation expense related to unvested share-based compensation arrangements granted under the Company's 2011 Stock Incentive Plan. That expense is expected to be recognized over the weighted-average remaining period of 2.2 years.

Registration rights— See Note 8 regarding registration rights relating to shares of Company common stock underlying warrant issued to GPB on December 29, 2017.

Korean Private Placement — On September 12, 2016, the Company entered into Letter of Agreement with KPM and Hanil, both Korean-based public companies whose shares are listed on KOSDAQ, a trading board of Korea Exchange in South Korea. In the Letter of Agreement, the parties agreed that KPM and Hanil would purchase $17.0 million and $3.0 million, respectively, of shares of the Company's common stock at a price of $4.50 per share. In exchange, the Company agreed to invest $13.0 million and $1.0 million in future capital increases by KPM and Hanil, respectively, at prices based upon the trading prices of KPM and Hanil shares on KOSDAQ. In connection with the Letter of Agreement, KPM and Hanil entered into the Company's standard form subscription agreement with respect to their purchase of shares which contains customary representations and warranties of the parties.

On September 29, 2016, KPM and Hanil purchased from the Company 3,777,778 shares and 666,667 shares, respectively, of common stock at a price of $4.50 a share for $17 million and $3 million, respectively, or a total of $20.0 million. The Company recognized $720,000 as a reduction to its additional paid-in-capital for fees and commissions paid by the Company in connection with the transaction.

The Company invested $13.0 million and $1.0 million in capital increases by KPM and Hanil, respectively, at $15.32 and $3.68, respectively, per capital share.

LEASES	3 Months Ended Mar. 31, 2019
Leases [Abstract]	
LEASES	

NOTE 9 — LEASES

Operating leases — The Company leases its office space under operating leases with unrelated entities.

We lease 13,734 square feet of office space for our headquarters in Torrance, California, at a base rental of $48,087 per month. In December 2018, we have entered into an amended lease to expand our headquarter by an additional 7,559 square feet commencing June 1, 2019. The base monthly rent for this additional space of $27,590 will be payable commencing January 1, 2020. The amended lease will expire on May 31, 2026. We also lease an additional 1,600 square feet office space in Torrance, California, at a base rent of $2,240 per month and 2,986 square feet office space in New York, New York, at a base rent of $5,500, which leases will expire on January 31, 2020 and December 30, 2019, respectively.

In addition, we lease 1,322 square feet of office space in Tokyo, Japan, which the lease will expire on September 30, 2020.

Rent expense during the three months ended March 31, 2019 and 2018 amounted to approximately $201,000 and $124,000, respectively.

Future minimum lease payments under the agreements were as follows as of March 31, 2019 (in thousands):

	Amount
2019 (nine months)	547
2020	980
2021	975
2022	1,003
2023 and thereafter	3,665
Total lease payments	7,170
Less: Interest	4,010
Present value of lease liabilities	3,160

The weighted average remaining lease term is 6.9 years and the weighted average discount rate is 13.8%.

COMMITMENTS AND CONTINGENCIES	3 Months Ended Mar. 31, 2019
Commitments And Contingencies Disclosure [Abstract]	
COMMITMENTS AND CONTINGENCIES	

NOTE 10 — COMMITMENTS AND CONTINGENCIES

Management Control Acquisition Agreement — On June 12, 2017, the Company entered into a Management Control Acquisition Agreement (the "MCAA") with Telcon Holdings, Inc., a Korean corporation, and Telcon Inc., a Korean-based public company whose shares are listed on KOSDAQ, a trading board of Korea Exchange in South Korea. In accordance with the MCAA, the Company invested the ₩36.0 billion KRW (approximately $31.8 million USD) proceeds from the advance payment by Telcon Inc. under the API Supply Agreement discussed below to purchase 6,643,559 shares of Telcon Inc's common shares at a purchase price of ₩5,419 KRW (approximately $4.79 USD) per share.

The MCAA was amended in certain respect and supplemented by an Agreement, dated as of September 29, 2017 (the "September 2017 Agreement"), among the parties. Pursuant to the Agreement, among other things, Telcon Inc. purchased 4,444,445 shares of Company common stock from KPM and Hanil at a price of $6.60 per share.

On July 2, 2018, the Company entered into an Additional Agreement with Evercore Investment Holdings Co., Ltd. (formerly Telcon Holdings Co., Ltd.) ("Evercore") and Telcon RF Pharmaceutical Inc. (formerly Telcon Inc.). In the Additional Agreement, the Company agreed to use the proceeds from any sales of the Company's KPM shares to repurchase shares of Company common stock from Telcon RF Pharmaceutical, Inc at a price of $7.60 a share, subject to certain exceptions, and Telcon RF Pharmaceutical Inc. granted the Company the right to repurchase all or a portion of Telcon RF Pharmaceutical Inc.'s shares of Company common stock at a price of $7.60 a share until October 31, 2018 and at a price to be agreed upon after October 31, 2018. In the Additional Agreement, Telcon RF Pharmaceutical Inc. also granted the Company a right of first refusal until June 30, 2019 to purchase any of the Company shares that Telcon RF Pharmaceutical Inc. may wish to sell.

Raw Material Supply Agreement — On June 12, 2017, the Company entered into an API Supply Agreement with Telcon RF Pharmaceutical Inc pursuant to which it advanced to the Company approximately ₩36.0 billion KRW (approximately $31.8 million USD) in consideration of the right to supply 25% of the Company's requirements for bulk containers of PGLG for a term to fifteen (15) years. The amount advanced to the Company was recorded as a deferred Trade Discount. On July 12, 2017, the parties entered into a Raw Material Supply Agreement which superseded the API Supply Agreement. The Raw Material Supply Agreement is effective for a term of five (5) years with ten (10) one-year renewal periods. The Raw Material Supply Agreement will automatically renew unless terminated by either party in writing. The Raw Material Supply Agreement provides that the Company will purchase from Telcon RF Pharmaceutical Inc. 940,000 kilograms of PGLG at $50 USD per kilogram, or a total of $47.0 million. The PGLG purchased from Telcon is included in inventory at net realizable value (i.e., approximately $189 per kilogram as of March 31, 2019) with the excess purchase price being recorded as a charge against the deferred Trade Discount.

RELATED PARTY TRANSACTIONS	3 Months Ended Mar. 31, 2019
Related Party Transactions [Abstract]	
RELATED PARTY TRANSACTIONS	

NOTE 11 — RELATED PARTY TRANSACTIONS

The following table sets forth information relating to our loans from related persons outstanding or at any time during the three months ended March 3

Class	Lender	Interest Rate	Date of Loan	Term of Loan	Principal Amount Outstanding at March 31, 2019	Highest Principal Outstanding	Amount of Principal Repaid or Converted into Stock
Current, Promissory note payable to related parties:							
	Lan T. Tran (2)	10%	4/29/2016	Due on Demand	20	20	—
	Hope Hospice (1)	10%	6/3/2016	Due on Demand	250	250	—
	Lan T. Tran (2)	10%	2/9/2017	Due on Demand	—	12	—
	Yutaka Niihara (2)(3)	10%	9/14/2017	Due on Demand	27	904	—
	Lan T. Tran (2)	10%	2/10/2018	Due on Demand	159	159	—
	Lan T. Tran (2)	10%	2/9/2019	Due on Demand	14	14	—
				Subtotal	**$ 470**	**$ 1,359**	**$ —**
Current, Convertible notes payable to related parties:							
	Yasushi Nagasaki (2)	10%	6/29/2012	Due on Demand	$ 200	$ 200	$ —
	Yutaka & Soomi Niihara (2)(3)	10%	11/16/2015	2 years	200	200	—
	Wei Peu Zen (3)	10%	11/6/2017	2 years	5,000	5,000	—
	Profit Preview International Group, Ltd. (4)	10%	2/1/2018	2 years	4,037	4,037	—
	Profit Preview International Group, Ltd. (4)	10%	3/21/2018	2 years	5,363	5,363	—
				Subtotal	**$ 14,800**	**$ 14,800**	**$ —**
				Total	**$ 15,270**	**$ 16,159**	**$ —**

(1) Dr. Niihara, a Director and Chief Executive Officer of the Company, is also the Chief Executive Officer of Hope Hospice.
(2) Officer.
(3) Director.
(4) Mr. Zen, a Director of the Company, is the sole owner of Profit Preview International Group, Ltd.

The following table sets forth information relating to our loans from related persons outstanding at any time during the year ended December 31, 2018

Class	Lender	Interest Rate	Date of Loan	Term of Loan	Principal Amount Outstanding at December 31, 2018	Highest Principal Outstanding	Amount of Principal Repaid or Converted into Stock
Current, Promissory note payable to related parties:							
	Masaharu & Emiko Osato (3)	11%	12/29/2015	Due on Demand	$ —	$ 300	$ 300
	Lan T. Tran (2)	11%	2/10/2016	Due on Demand	—	131	131
	Masaharu & Emiko Osato (3)	11%	2/25/2016	Due on Demand	—	400	400
	Lan T. Tran (2)	10%	4/29/2016	Due on Demand	20	20	—
	Hope Hospice (1)	10%	6/3/2016	Due on Demand	250	250	—
	Lan T. Tran (2)	10%	2/9/2017	Due on Demand	12	12	—
	Yutaka Niihara (2)(3)	10%	9/14/2017	Due on Demand	27	904	877
	Lan T. Tran (2)	11%	2/10/2018	Due on Demand	159	159	—
				Subtotal	**$ 468**	**$ 2,176**	**$ 1,708**
Current, Convertible notes payable to related parties:							
	Yasushi Nagasaki (2)	10%	6/29/2012	Due on Demand	200	200	—
	Yutaka & Soomi Niihara (2)(3)	10%	11/16/2015	2 years	200	200	—
	Wei Peu Zen (3)	10%	11/6/2017	2 years	5,000	5,000	—
				Subtotal	**$ 5,400**	**$ 5,400**	**$ —**
Non Current, Convertible notes payable to related parties:							
	Profit Preview International Group, Ltd. (4)	10%	2/1/2018	2 years	4,037	4,037	—
	Profit Preview International Group, Ltd. (4)	10%	3/21/2018	2 years	5,363	5,363	—
				Subtotal	**$ 9,400**	**$ 9,400**	**$ —**
				Total	**$ 15,268**	**$ 16,976**	**$ 1,708**

(1) Dr. Niihara, a Director and Chief Executive Officer of the Company, is also the Chief Executive Officer of Hope Hospice.
(2) Officer
(3) Director
(4) Mr. Zen, a Director of the Company, is the sole owner of Profit Preview International Group, Ltd.

SUBSEQUENT EVENTS	3 Months Ended Mar. 31, 2019
Subsequent Events [Abstract]	
SUBSEQUENT EVENTS	**NOTE 12 — SUBSEQUENT EVENTS** As discussed in Note 7, as of March 31, 2019 the Company had entered into amendments with the holders of an aggregate of $4.8 million, or 14%, in principal amount of the Company's outstanding convertible notes which provide that the notes will be converted automatically into shares of Company common stock at their respective conversion prices immediately prior to the effective time of the proposed merger transaction with MYnd Analytics, Inc. As such, the conversion shares would be deemed outstanding immediately prior to the merger and would be converted into shares of MYnd Analytics, Inc. common stock as a result of the merger in the same manner as other outstanding shares of Company common stock based the merger "exchange ratio." As of May 14, 2019, the holders of a total of an additional $4.2 million, or 12%, in principal amount of the outstanding convertible notes had also agreed to the amendment. The Company intends to continue discussions regarding the same or similar amendments with the holders of the remaining outstanding convertible notes. There is no assurance that the Company will be able to do so on the same terms, or at all. Subsequent to March 31, 2019, the Company issued the following:

	Amounts	Number of Shares Issued
Common shares	$ 711,550	103,590

SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Policies)	3 Months Ended
	Mar. 31, 2019
Accounting Policies [Abstract]	
Revenues	**Revenues –** Effective January 1, 2018, the Company adopted Accounting Standard codification (“ASC”) Topic 606, *Revenue from Contracts with Customers* using the modified retrospective transition methods. The adoption of ASC 606 did not have a material impact on the measurement or on the recognition of revenue of contracts for which all revenue had not been recognized as of January 1, 2018, therefore no cumulative adjustment has been made to the opening balance of accumulated deficit at the beginning of 2018. The comparative information has not been restated and continues to be reported under the accounting standards in effect for the periods presented.

Since January 2018, the Company has generated revenues through the sale of Endari as a treatment for sickle cell disease (“SCD”). The Company also generates revenues to a much lesser extent from the sale of AminoPure®, a nutritional supplement.

Revenues from Endari product sales are recognized upon delivery and transfer of control of products to the Company’s distributors and specialty pharmacy customers. Distributors resell the products to other specialty pharmacy providers, health care providers, hospitals, patients and clinics. In addition to distribution agreements with distributors, the Company enters into contractual arrangements with specialty pharmacy providers, in-office dispensing providers, group purchasing organizations, and government entities that provide for government-mandated or privately-negotiated rebates, chargebacks and discounts with respect to the purchase of our products. These various discounts, rebates, and charge-backs are referred to as “variable consideration.” Revenues from product sales are recorded net of variable consideration.

Prior to recognizing revenues, the Company’s management forecasts and estimates variable consideration. Amounts of variable consideration are included in the transaction price to the extent that it is probable that a significant reversal in the amount of cumulative revenues recognized will not occur when the uncertainty associated with the variable consideration is subsequently resolved.

Provisions for returns and other variable consideration adjustments are provided for in the period in which the related revenues are recorded. Actual amounts of consideration ultimately received may differ from our estimates. If actual results in the future vary from our estimates, we will adjust these estimates, which would affect net product revenue and earnings in the period such variances become known. The following are our significant categories of sales discounts and allowances:

Sales Discounts: The Company provides its customers contractual prompt payment discounts and from time to time offers additional one-time discounts that are recorded as a reduction of revenues in the period the revenues are recognized.

Product Returns: The Company offers its distributors a right to return product purchased directly from the Company based principally upon (i) overstocks, (ii) inactive product or non-moving product due to market conditions, and (iii) expired products. Product return allowances are estimated and recorded at the time of sale.

Government Rebates: The Company is subject to discount obligations under state Medicaid programs and the Medicare prescription drug coverage gap program. The Company’s management estimates Medicaid and Medicare prescription drug coverage gap rebates based upon a range of possible outcomes that are probability-weighted for the estimated payor mix.

These reserves are recorded in the same period the related revenues are recognized, resulting in a reduction of product revenues and the establishment of a current liability that is included as accounts payable and accrued expenses in our balance sheet. The liability for these rebates consists primarily of estimates of claims expected to be received in future periods related to the recognized revenues.

Chargebacks and Discounts: Chargebacks for fees and discounts represent the estimated obligations resulting from contractual commitments to sell products to certain specialty pharmacy providers, in-office dispensing providers, group purchasing organizations, and government entities at prices lower than the list prices charged to distributors. The distributors charge the Company for the difference between what they pay for the products and the Company's contracted selling price to these specialty pharmacy providers, in-office dispensing providers, group purchasing organizations, and government entities. These reserves are established in the same period that the related revenues are recognized, resulting in a reduction of revenues. Chargeback amounts are generally determined at the time of resale of products by the distributors.

Leases

Leases — As described below under "Recent accounting pronouncements," we adopted ASU 2016-02 – Leases (Topic 842) ("ASU 2016-02") as of January 1, 2019. Pursuant to ASU 2016-02, all of our leases outstanding on January 1, 2019 continued to be classified as operating leases. With the adoption of ASU 2016-02, we recorded an operating lease right-of-use asset and an operating lease liability on our balance sheet. Right-of-use lease assets represent our right to use the underlying asset during the lease term and the lease obligation represents our commitment to make lease payments arising from the lease. Right-of-use lease assets and obligations were recognized based on the present value of remaining lease payments over the lease term. As the Company's leases do not provide an implicit rate, we have used an estimated incremental borrowing rate based on the information available at our adoption date in determining the present value of lease payments. Operating lease expense is recognized on a straight-line basis over the lease term. Variable lease costs such as common area costs and other operating costs are expensed as incurred. For all lease agreements we combine lease and non-lease components. No right-of-use asset and related lease liability are recorded for leases with an initial term of 12 months or less.

Prior to our adoption of ASU 2016-02, when our lease agreements contained tenant improvement allowances and rent escalation clauses, we recorded a deferred rent asset or liability equal to the difference between the rent expense and the future minimum lease payments due. The lease expense related to operating leases was recognized on a straight-line basis in the statements of operations over the term of each lease. In cases where the lessor granted us leasehold improvement allowances, we capitalized the improvements as incurred and recognized it over the shorter of the lease term or the expected useful life of the improvements.

Inventories

Inventories — Substantially all of the raw material purchased during the three months ended March 31, 2019 and for the year ended December 31, 2018 were from one vendor. The below table presents inventory by category (in thousands):

Inventories by category	March 31, 2019	December 31, 2018
Raw materials and components	$ 647	$ 171
Work-in-process	1,584	2,471
Finished goods	3,564	2,063
Total	$ 5,795	$ 4,705

Marketable securities

Marketable securities— The Company's marketable securities consist of the following securities; (a) 39,250 shares of capital stock of CellSeed, Inc. ("CellSeed") acquired in January 2009 at ¥680 JPY per share ($7.69 USD); (b) 6,643,559 shares of capital stock of Telcon, Inc. ("Telcon") which were acquired in July 2017 for ₩36,001,446,221 KRW (equivalent to $31.8 million USD) at ₩5,419 KRW per share.

As of March 31, 2019 and December 31, 2018, the closing prices per CellSeed share on the Tokyo Stock Exchange were ¥710 ($6.40 USD) and ¥668 JPY ($6.07 USD), respectively, and the closing prices per Telcon share on the Korean Securities Dealers Automated Quotations ("KOSDAQ") were ₩7,350 ($6.45 USD) and ₩8,280 KRW ($7.43 USD), respectively.

As of March 31, 2019, and December 31, 2018, 39,250 shares of CellSeed common stock were pledged to secure a $300,000 convertible note of the Company issued to Mitsubishi UFJ Capital III Limited Partnership that is due on demand and were classified as marketable securities, pledged to creditor in our balance sheet.

Prepaid expenses and other current assets

Prepaid expenses and other current assets — Prepaid expenses and other current assets consisted of the following at March 31, 2019 and December 31, 2018 (in thousands):

	March 31, 2019	December 31, 2018
Prepaid insurance	$ 80	$ 82
Other prepaid expenses and current assets	738	661
	$ 818	$ 743

Other long-term liabilities

Other long-term liabilities—Other long-term liabilities consisted of the following at March 31, 2019 and December 31, 2018 (in thousands):

	March 31, 2019	December 31, 2018
Trade discount	$ 25,137	$ 26,222
Unearned revenue	10,500	10,000
Other long-term liabilities	—	—
Total other long-term liabilities	$ 35,637	$ 36,222

The Company entered into an API Supply Agreement (the "API Agreement") with Telcon pursuant to which Telcon advanced to the Company approximately ₩36.0 billion KRW (approximately $31.8 million USD), accounted for as a trade discount, in consideration for the right to supply 25% of the Company's requirements for bulk containers of pharmaceutical grade L-glutamine ("PGLG"). Refer Note 10 for additional details.

Fair value measurements

Fair value measurements — The following table presents the change in fair value of warrant derivative liabilities on a recurring basis using Level 3 inputs during the year ended December 31, 2018 (in thousands):

Warrant Derivative Liabilities—Stock Purchase Warrants	Year Ended December 31, 2018
Balance, beginning of period	$ 26,377
Repurchased	(6,186)
Change in fair value included in the statement of comprehensive income (loss)	(20,191)
Balance, end of period	$ —

The following table presents the change in fair value of warrants issued to GPB Debt Holdings II, LLC as described in Note 8 as of March 31, 2019 and December 31, 2018 (in thousands):

	For the Three Months Ended March 31, 2019		Year Ended December 31, 2018	
Warrant Derivative Liabilities—GPB	Warrants	Embedded Conversion Option	Warrants	Embedded Conversion Option

Balance, beginning of period	$ 1,399	$ —	$ 1,882	$ 1,289
Fair value at issuance date	—	—	—	—
Change in fair value included in the statement of comprehensive income (loss)	48	—	(483)	(466)
Extinguished upon debt repayment	—	—	—	(823)
Balance, end of period	$ 1,447	$ —	$ 1,399	$ —

The value of warrant derivative liabilities and the change in fair value of the warrant derivative liabilities were determined using a Binomial Monte-Carlo Cliquet (aka "Ratchet") Option Pricing Model. The model is similar to traditional Black-Scholes-type option pricing models, except that the exercise price resets at certain dates in the future.

The value as of the dates set forth in the table above, was based on upon following assumptions:

	March 31, 2019	December 31, 2018
Stock price	$ 10.30	$ 9.10
Risk-free interest rate	2.22%	2.48%
Expected volatility (peer group)	70.00%	70.00%
Expected life (in years)	3.75	4.00
Expected dividend yield	—	—
Number outstanding	240,764	240,764
Balance, end of period:		
Warrant derivative liabilities (long-term) (in thousands)	$ 1,447	$ 1,399

Debt and related party debt

Debt and related party debt — The following table presents the effective interest rates on loans originated and refinanced in the respective periods that either had a beneficial conversion feature or an attached warrant:

Type of Loan	Term of Loan	Stated Annual Interest	Original Loan Principal Amount	Conversion Rate	Beneficial Conversion Discount Amount	Warrants Issued with Notes	Exercise Price	Warrant FMV Discount Amount	Effective Interest Rate Including Discounts
2017 convertible notes payable	Due on demand - 2 years	10%	$ 5,795	$3.50-$10.00	$ 1,545	$ —	N/A	N/A	25% - 110%
2018 convertible notes payable	Due on demand - 2 years	10%	24,135	$3.50-$10.00	10,266	—	—	—	10%-110%
2019 convertible notes payable	Due on demand - 1 year	10%	2,039	$3.50-$4.50	2,039	—	—	—	110%
2018 notes payable	18 months	10%	12,200	N/A	—	1,220,000	$ 11.30	9,687	89%
			$ 44,169		$ 13,850	$ 1,220,000		$ 9,687	

Related party notes are reflected as a separate line items in the Company's consolidated balance sheets.

Net loss per share

Net loss per share — As of March 31, 2019 and 2018, respectively, the Company had outstanding potentially dilutive securities exercisable for or convertible into 16,317,940 and 17,122,176 shares of Company common stock. No potentially dilutive securities were included in the calculation of diluted net loss per share since their effect would be anti-dilutive for all periods presented.

Recent accounting pronouncements

Recent accounting pronouncements—In January 2016, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2016-01, *Recognition and Measurement of Financial Assets and Financial Liabilities*. The ASU amendments applicable to the Company (1) supersede the guidance to classify equity securities, except equity method securities, with readily determinable fair values into trading or available-for-sale categories and require equity securities to be measured at fair value with changes in the fair value recognized through net income, (2) allow equity investments that do not have readily determinable fair values to be remeasured at fair value either upon the occurrence of an observable price change or upon identification of an impairment, (3) require assessment for impairment of equity investments without readily determinable fair values qualitatively at each reporting period, (4) eliminate the requirement to disclose the methods and significant assumptions used in calculating the fair value of financial instruments required to be disclosed for financial instruments measured at amortized cost on the balance sheet, (5) require public business entities to use the exit price notion when measuring the fair value of financial instruments for disclosure purposes, (6) require separate presentation of financial assets and financial liabilities by measurement category and form of financial asset (that is, securities or loans and receivables) on the balance sheet or the accompanying notes to the financial statements, (7) clarify that an entity should evaluate the need for a valuation allowance on a deferred tax asset related to available-for-sale securities in combination with the entity's other deferred tax assets. This ASU was effective beginning January 1, 2018. Since then, the Company has recognized any changes in the fair value of certain equity investments in net income as prescribed by the new standard rather than in other comprehensive income. The Company recognized a cumulative effect adjustment to increase the opening balance of retained earnings as of January 1, 2018 by $41.4 million, net of $12.3 million income tax benefit. Refer to Note 5 for additional disclosures required by this ASU.

In February 2016, the FASB issued ASU No. 2016-02, *Leases*. The amendments in this Update require a lessee to recognize in the statement of financial position a liability to make lease payments (the lease liability) and a right-of-use asset representing its right to use the underlying asset for the lease term for all leases with terms greater than twelve months. For leases less than twelve months, an entity is permitted to make an accounting policy election by class of underlying asset not to recognize lease assets and lease liabilities. If a lessee makes this election, it should recognize lease expense for such leases generally on a straight-line basis over the lease term. The amendments in this Update are effective for the Company for fiscal years beginning after December 15, 2018, including interim periods within those years, with early adoption permitted. Additionally, in July 2018, the FASB issued ASU No. 2018-11, Leases (Topic 842): *Targeted Improvements* and ASU No. 2018-10 Codification Improvements to Topic 842, Leases with certain targeted changes and improvements to previously issued lease accounting standard. The Company recognized operating lease liabilities of approximately $3.2 million and a right-of-use asset of approximately $2.9 million, derecognized deferred rent of approximately $286,000 and recognized the cumulative effect adjustment to increase the opening balance of accumulated deficit as of January 1, 2019 by approximately $29,000. We did not restate any financial information prior to January 1, 2019. Refer to Note 9 for additional disclosures required by this ASU.

In April 2016, the FASB issued ASU 2016-10, *Revenue from Contracts with Customers (Topic 606): Identifying Performance Obligations and Licensing* ("ASU 2016-10"). The amendments in ASU 2016-10 clarify identification of performance obligations and licensing implementation. The amendments do not change the core principle of the guidance in Topic 606. The effective date and transition requirements for the amendments are the same as the effective date and transition requirements in Topic 606: For public companies, this Update is effective for annual periods, including interim periods within those annual periods, beginning after December 15, 2017. The Company adopted the new revenue standard as of January 1, 2018 using the modified retrospective transition method. The adoption of ASU 2016-10 did not have a material impact on the Company's consolidated financial statements; however, adoption did result in significant changes to the Company's financial statement notes.

In July 2017, the FASB issued ASU No. 2017-11, *Earnings Per Share (Topic 260) Distinguishing Liabilities from Equity (Topic 480) Derivatives and Hedging (Topic 815): I. Accounting for Certain Financial Instruments with Down Round Features, II. Replacement of the Indefinite Deferral for Mandatorily Redeemable Financial Instruments of Certain Nonpublic Entities and Certain Mandatorily Redeemable Noncontrolling Interests with a Scope Exception ("ASU 2017-11").* The amendments in this guidance intended to reduce the complexity associated with the issuer's accounting for certain financial instruments with characteristics of liabilities and equity. Specifically, the Board determined that a down round feature (as defined) would no longer cause a freestanding equity-linked financial instrument (or an embedded conversion option) to be accounted for as a derivative liability at fair value with changes in fair value recognized in current earnings. In addition, the Board re-characterized the indefinite deferral of certain provisions of Topic 480 to a scope exception. The re-characterization has no accounting effect. Down round features will no longer cause freestanding equity-linked financial instruments and embedded conversion options to be considered “not indexed to an entity’s own stock.” ASU 2017-11 is effective for public business entities for fiscal year beginning after December 15, 2018. All others have an additional year. Early adoption is permitted for all entities, including in an interim period. Entities may use the retrospective or modified retrospective transition method. The Company early adopted this ASU without a material impact on previously recorded balances on its consolidated financial statements.

In February 2018, the FASB issued ASU No. 2018-02, Income Statement – Reporting Comprehensive Income (Topic 220): *Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income* (“ASU 2018-02”). ASU 2018-02 allows a reclassification from accumulated other comprehensive income to retained earnings for stranded tax effects resulting from the Tax Cuts and Jobs Act. Consequently, the amendments eliminate the stranded tax effects resulting from the Tax Cuts and Jobs Act and will improve the usefulness of information reported to financial statement users. However, because the amendments only relate to the reclassification of the income tax effects of the Tax Cuts and Jobs Act, the underlying guidance that requires that the effect of a change in tax laws or rates be included in income from continuing operations is not affected. ASU 2018-02 also requires certain disclosures about stranded tax effects. ASU 2018-02 is effective for all entities for fiscal years beginning after December 15, 2018, and interim periods within those fiscal years, with early adoption permitted. ASU 2018-02 should be applied either in the period of adoption or retrospectively to each period (or periods) in which the effect of the change in the U.S. federal corporate income tax rate in the Tax Cuts and Jobs Act is recognized. The adoption of ASU 2018-02 does not have a material impact on the Company’s consolidated financial statements.

In February 2018, the FASB issued ASU No. 2018-03, Technical Corrections and Improvements to Financial Instruments—Overall (Subtopic 825-10): *Recognition and Measurement of Financial Assets and Financial Liabilities* (“ASU 2018-03”). The amendments in ASU 2018-03 (1) clarify that an entity measuring an equity security using the measurement alternative may change its measurement approach to a fair value method in accordance with Topic 820, *Fair Value Measurement*, through an irrevocable election that would apply to that security and all identical or similar investments of the same issuer, (2) clarify that the adjustments made under the measurement alternative are intended to reflect the fair value of the security as of the date that the observable transaction for a similar security took place, (3) clarify that remeasuring the entire value of forward contracts and purchased options is required when observable transactions occur on the underlying equity securities, (4) clarify that when the fair value option is elected for a financial liability, the guidance in paragraph 825-10- 45-5 should be applied, regardless of whether the fair value option was elected under either Subtopic 815-15, *Derivatives and Hedging— Embedded Derivatives*, or 825- 10, *Financial Instruments— Overall*, (5) clarify that for financial liabilities for which the fair value option is elected, the amount of change in fair value that relates to the instrument specific credit risk should first be measured in the currency of denomination when presented separately from the total change in fair value of the financial liability, and then both components of the change in the fair value of the liability should be remeasured into the functional currency of the reporting entity using end-of-period spot rates, (6) clarify that the prospective transition approach for equity securities without a readily determinable fair value in the amendments in ASU 2016-01 is meant only for instances in which the measurement alternative is applied. For public business entities, ASU 2018-03 is effective for fiscal years beginning after December 15, 2017, and interim periods within those fiscal years beginning after June 15, 2018. Public business entities with fiscal years beginning between December 15, 2017, and June 15, 2018, are not required to adopt these amendments until the interim period beginning after June 15, 2018, and public business entities with fiscal years beginning between June 15, 2018, and December 15, 2018, are not required to adopt these amendments before adopting the amendments in ASU 2016-01. The impact of the adoption of the amendments in ASU 2018-03 depends on the amount of equity securities and financial instruments subject to the amendments in this Update held by the Company at the time of adoption. The adoption of ASU 2018-03 did not have a material impact on the Company's consolidated financial statements.

In June 2018, the FASB issued ASU No. 2018-07, Compensation – Stock Compensation (Topic 718): *Improvements to Nonemployee Share-Based Payment Accounting* ("ASU 2018-07"), which supersedes ASC 505-05 and expands the scope of ASC 718 to include all share-based payment arranges related to the acquisition of goods and services from both nonemployees and employee. As a result, most of the guidance in ASC 718 associated with employee share-based payments, including most of its requirements related to classification and measurement, applies to nonemployee share-based payment arrangements. ASC 2018-07 is effective for all entities for fiscal year beginning after December 15, 2018, and interim periods within those fiscal year, with early adoption permitting but no earlier than the date on which an entity adopts ASC 606. The adoption of ASU 20218-07 did not have a material impact on the Company's consolidated financial statements.

In August 2018, the FASB issued ASU No. 2018-13, Fair Value Measurement (Topic 820): *Disclosure Framework – Changes to the Disclosure Requirements for Fair Value Measurement* ("ASU 2018-13"), which changes the fair value measurement disclosure requirements of ASC 820. The amendments in ASU 22018-13 remove some disclosures, modify others, and add some new disclosure requirements. The amendments in this ASU are effective for all entities for fiscal years, and interim period within those fiscal years, beginning after December 15, 2019 with early adoption permitted. The Company is currently assessing the impact the adoption of ASU 2018-13 will have on its consolidated financial statements and accompanying footnote disclosures.

In October 2018, the FASB issued ASU 2018-17, Consolidation (Topic 810) *Targeted Improvements to Related Party guidance for Variable Interest Entities ("ASU 2018-17")*, which amends two aspects of the related-party guidance in ASC 810. Specifically, ASU2018-17 (1) adds an elective private-company scope exception to the variable interest entity guidance for entities under common control and (2) removes a sentence in ASC 810-10-55-37D regarding the evaluation of fees paid to decision makers to conform with the amendments in ASU 2016-17, *Interest Held Through Related Parties That Are Under Common Control.* The amendments in ASU 2018-17 are effective for fiscal years beginning after December 15, 2019, and interim periods within those fiscal years. The Company does not expect the adoption of ASU 2018-17 to have a material impact on its consolidated financial statements.

SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Tables)	3 Months Ended
	Mar. 31, 2019
Accounting Policies [Abstract]	
Schedule of inventory	The below table presents inventory by category (in thousands):

Inventories by category	March 31, 2019	December 31, 2018
Raw materials and components	$ 647	$ 171
Work-in-process	1,584	2,471
Finished goods	3,564	2,063
Total	$ 5,795	$ 4,705

Schedule of prepaid expenses and other current assets

Prepaid expenses and other current assets consisted of the following at March 31, 2019 and December 31, 2018 (in thousands):

	March 31, 2019	December 31, 2018
Prepaid insurance	$ 80	$ 82
Other prepaid expenses and current assets	738	661
	$ 818	$ 743

Schedule of other long-term liabilities

Other long-term liabilities consisted of the following at March 31, 2019 and December 31, 2018 (in thousands):

	March 31, 2019	December 31, 2018
Trade discount	$ 25,137	$ 26,222
Unearned revenue	10,500	10,000
Other long-term liabilities	—	—
Total other long-term liabilities	$ 35,637	$ 36,222

Schedule of change in fair value of warrant derivative liabilities

The following table presents the change in fair value of warrant derivative liabilities on a recurring basis using Level 3 inputs during the year ended December 31, 2018 (in thousands):

Warrant Derivative Liabilities—Stock Purchase Warrants	Year Ended December 31, 2018
Balance, beginning of period	$ 26,377
Repurchased	(6,186)
Change in fair value included in the statement of comprehensive income (loss)	(20,191)
Balance, end of period	$ —

Schedule of change in fair value of warrants issued to GPB Debt Holdings II, LLC

The following table presents the change in fair value of warrants issued to GPB Debt Holdings II, LLC as described in Note 8 as of March 31, 2019 and December 31, 2018 (in thousands):

For the Three Months Ended	Year Ended
March 31, 2019	December 31, 2018

Warrant Derivative Liabilities—GPB	Warrants	Embedded Conversion Option	Warrants	Embedded Conversion Option
Balance, beginning of period	$ 1,399	$ —	$ 1,882	$ 1,289
Fair value at issuance date	—	—	—	—
Change in fair value included in the statement of comprehensive income (loss)	48	—	(483)	(466)
Extinguished upon debt repayment	—	—	—	(823)
Balance, end of period	$ 1,447	$ —	$ 1,399	$ —

Schedule of assumptions used in the valuation of warrants

The value as of the dates set forth in the table above, was based on upon following assumptions:

	March 31, 2019	December 31, 2018
Stock price	$ 10.30	$ 9.10
Risk-free interest rate	2.22%	2.48%
Expected volatility (peer group)	70.00%	70.00%
Expected life (in years)	3.75	4.00
Expected dividend yield	—	—
Number outstanding	240,764	240,764
Balance, end of period:		
Warrant derivative liabilities (long-term) (in thousands)	$ 1,447	$ 1,399

Schedule of notes payable with beneficial conversion feature or warrants

The following table presents the effective interest rates on loans originated and refinanced in the respective periods that either had a beneficial conversion feature or an attached warrant:

Type of Loan	Term of Loan	Stated Annual Interest	Original Loan Principal Amount	Conversion Rate	Beneficial Conversion Discount Amount	Warrants Issued with Notes	Exercise Price	Warrant FMV Discount Amount	Effective Interest Rate Including Discounts
2017 convertible notes payable	Due on demand - 2 years	10%	$ 5,795	$3.50-$10.00	$ 1,545	$ —	N/A	N/A	25% - 110%
2018 convertible notes payable	Due on demand - 2 years	10%	24,135	$3.50-$10.00	10,266	—	—	—	10%-110%
2019 convertible notes payable	Due on demand - 1 year	10%	2,039	$3.50-$4.50	2,039	—	—	—	110%
2018 notes payable	18 months	10%	12,200	N/A	—	1,220,000	$ 11.30	9,687	89%
			$ 44,169		**$ 13,850**	**$ 1,220,000**		**$ 9,687**	

REVENUES (Tables)	3 Months Ended Mar. 31, 2019
Revenue From Contract With Customer [Abstract]	
Summary of revenues disaggregated by category	Revenues disaggregated by category were as follows (in thousands):

	Three months ended March 31, 2019	Three months ended March 31, 2018
Endari	$ 5,787	$ 720
Other	105	102
Gross sales	5,892	822
Less: discounts and allowances		
Endari	(585)	(30)
Other	—	(11)
Total	$ 5,307	$ 781

Revenue Allowance and Accrual Activities

The following table summarizes the revenue allowance and accrual activities for the three months ended March 31, 2019 (in thousands):

	Trade Discounts, Allowances and Chargebacks	Government Rebates and Other Incentives	Returns	Total
Balance as of December 31, 2018	$ 303	$ 1,880	$ 181	$2,363
Provision related to sales in the current year	293	729	54	1,076
Adjustments related prior period sales	—	(600)	—	(600)
Credit and payments made	(316)	(568)	—	(884)
Balance as of March 31, 2019	$ 279	$ 1,441	$ 235	$1,955

Summarizes revenues from each of our customers accounted for 10% or more of total revenues

The following table summarizes revenues attributable to each of our customers who accounted for 10% or more of our total revenues (as a percentage of total revenues):

	Three months ended March 31, 2019	Three months ended March 31, 2018
AmerisourceBergen Specialty Group	60%	88%
McKesson Plasma and Biologics LLC	17%	—

PROPERTY AND EQUIPMENT (Tables)	3 Months Ended Mar. 31, 2019
Property Plant And Equipment [Abstract]	
Schedule of property and equipment	Property and equipment consisted of the following (in thousands):

	March 31, 2019	December 31, 2018
Equipment	$ 306	$ 306
Leasehold improvements	71	70
Furniture and fixtures	79	79
Total property and equipment	456	455
Less: accumulated depreciation	(317)	(303)
Total depreciable assets	139	152
Construction-in-progress	14	—
Property and equipment, net	$ 153	$ 152

INVESTMENTS (Tables)	3 Months Ended Mar. 31, 2019
Investments [Abstract]	
Schedule of carrying values of equity securities	At March 31, 2019 and December 31, 2018, the carrying values of equity securities were included in the following line items in our consolidated balance sheets (in thousands):

	March 31, 2019		December 31, 2018	
	Fair Value with Changes Recognized in Income	Measurement Alternative - No Readily Determinable Fair Value	Fair Value with Changes Recognized in Income	Measurement Alternative - No Readily Determinable Fair Value
Marketable securities	$ 43,124	$ —	$ 49,581	$ —
Long-term investment at cost	—	527	—	538
Total equity securities	$ 43,124	$ 527	$ 49,581	$ 538

ACCOUNTS PAYABLE AND ACCRUED EXPENSES (Tables)	3 Months Ended
	Mar. 31, 2019
Payables And Accruals [Abstract]	
Schedule of accounts payable and accrued expenses	At March 31, 2019 and December 31, 2018, accounts payable and accrued expenses consisted of the following (in thousands):

	March 31, 2019	December 31, 2018
Accounts payable:		
Clinical and regulatory expenses	$ 356	$ 83
Professional fee	1,961	2,157
Selling expenses	421	382
Manufacturing costs	1,756	—
Other vendors	692	980
Total accounts payable	5,186	3,602
Accrued interest payable, related parties	1,217	842
Accrued interest payable	2,306	2,138
Accrued expenses:		
Payroll expenses	796	713
Accrued rebates	1,441	1,744
Other accrued expenses	122	83
Total accrued expenses	2,359	2,540
Total accounts payable and accrued expenses	$ 11,068	$ 9,122

NOTES PAYABLE (Tables)

3 Months Ended Mar. 31, 2019

Debt Disclosure [Abstract]

Schedule of notes payable

Notes payable consisted of the following at March 31, 2019 and December 31, 2018 (in thousands):

Year Issued	Interest Rate Range	Term of Notes	Conversion Price	Principal Outstanding March 31, 2019	Discount Amount March 31, 2019	Carrying Amount March 31, 2019	Shares Underlying Notes March 31, 2019	Principal Outstanding December 31, 2018	Discount Amount December 31, 2018	Carrying Amount December 31, 2018	Shares Underlying Notes December 31, 2018
Notes payable											
2013	10%	Due on demand	—	$ 902	$ —	$ 902	—	$ 909	$ —	$ 909	—
2015	10%	Due on demand	—	10	—	10	—	10	—	10	—
2016	10% - 11%	Due on demand	—	843	—	843	—	843	—	843	—
2017	5% - 11%	Due on demand	—	1,951	—	1,951	—	2,575	—	2,575	—
2018	10% - 11%	Due on demand- 18 months	—	12,311	7,847	4,464	—	12,311	9,233	3,078	—
2019	11%	Due on demand	—	752	—	752	—	—	—	—	—
				$ 16,769	**$ 7,847**	**$ 8,922**	**—**	**$ 16,648**	**$ 9,233**	**$ 7,415**	**—**
		Current		$ 14,569	$ 7,569	$ 7,000	—	$ 12,449	$ 6,054	$ 6,394	—
		Non-current		$ 2,200	$ 278	$ 1,922	—	$ 4,200	$ 3,179	$ 1,021	—
Notes payable - related party											
2016	10%	Due on demand	—	270	—	270	—	270	—	270	—
2017	10%	Due on demand	—	27	—	27	—	39	—	39	—
2018	11%	Due on demand	—	159	—	159	—	159	—	159	—
2019	10%	Due on demand	—	14	—	14	—	—	—	—	—
				$ 470	**$ —**	**$ 470**	**—**	**$ 468**	**$ —**	**$ 468**	**—**
		Current		$ 470	$ —	$ 470	—	$ 468	$ —	$ 468	—
		Non-current		$ —	$ —	$ —	—	$ —	$ —	$ —	—
Convertible notes payable											
2011	10%	5 years	$3.05	$ 300	$ —	$ 300	98	$ 300	$ —	$ 300	98
2014	10%	Due on demand - 2 years	$3.05 - $3.60	522	—	522	186	519	—	519	184
2016	10%	Due on demand - 2 years	$3.60 - $4.50	62	—	62	17	61	—	61	17
2017	10% - 13.5%	Due on demand - 3 years	$3.50 - $10.31	1,895	108	1,787	618	2,820	349	2,471	899
2018	6% - 10%	Due on demand - 2 years	$3.50 - $10.00	15,311	2,671	12,640	3,076	19,556	6,169	13,387	3,664
2019	10%	Due on demand - 1 year	$3.50 - $4.50	2,039	1,804	235	570	—	—	—	—
				$ 20,129	**$ 4,583**	**$ 15,546**	**4,565**	**$ 23,256**	**$ 6,518**	**$ 16,738**	**4,862**
		Current		$ 19,421	$ 4,264	$ 15,157	4,402	$ 16,604	$ 5,351	$ 11,253	3,981
		Non-current		$ 708	$ 319	$ 389	163	$ 6,652	$ 1,167	$ 5,485	881
Convertible notes payable - related party											
2012	10%	Due on demand	$ 3.30	$ 200	$ —	$ 200	76	$ 200	$ —	$ 200	74
2015	10%	2 years	$ 4.50	200	—	200	59	200	—	200	58
2017	10%	2 years	$ 10.00	5,000	218	4,782	545	5,000	311	4,689	533
2018	10%	2 years	$ 10.00	9,400	686	8,714	995	9,400	871	8,529	972
				$ 14,800	**$ 904**	**$ 13,896**	**1,675**	**$ 14,800**	**$ 1,182**	**$ 13,618**	**1,637**
		Current		$ 14,800	$ 904	$ 13,896	1,675	$ 5,400	$ 311	$ 5,089	665
		Non-current		$ —	$ —	$ —	—	$ 9,400	$ 871	$ 8,529	972
		Total		**$ 52,168**	**$ 13,334**	**$ 38,834**	**6,240**	**$ 55,172**	**$ 16,933**	**$ 38,239**	**6,499**

Schedule of contractual principal payments of notes payable

Contractual principal payments due on notes payable are as follows:

Year Ending		
2019 (nine months)	$	31,703
2020		20,465
Total	$	52,168

Schedule of fair value assumptions for warrants issued in conjunction with notes

The fair value of the warrants issued in conjunction with notes was determined using the Binominal Monte-Carlo Cliquet Option Pricing Model with the following inputs for the year ended December 31, 2018.

		Year ended December 31, 2018
Stock price	$	11.10
Exercise price	$	11.30
Term		5 years
Risk-free interest rate		3.05%
Expected dividend yield		—
Expected volatility		70.0%

STOCKHOLDERS' DEFICIT (Tables)	3 Months Ended Mar. 31, 2019
Stockholders Equity Note [Abstract]	
Schedule of outstanding warrants	A summary of outstanding warrants as of March 31, 2019 and December 31, 2018 is presented below:

	Three Months Ended March 31, 2019	Year Ended December 31, 2018
Warrants outstanding, beginning of period	3,436,431	5,265,432
Granted	—	1,542,000
Exercised	(500)	(2,385,317)
Cancelled, forfeited and expired	—	(985,684)
Warrants outstanding, end of period	3,435,931	3,436,431

A summary of outstanding warrants by year issued and exercise price as of March 31, 2019 is presented below:

		Outstanding			Exercisable	
Year issued and Exercise Price		Number of Warrants Issued	Weighted Average Remaining Contractual Life (Years)	Weighted Average Exercise Price	Total	Weighted Average Exercise Price
At December 31, 2014						
	$ 3.50	50,000	0.08	$ 3.50	50,000	$ 3.50
	2014 Total	50,000			50,000	
At December 31, 2015						
	$ 4.90	110,417	0.93	$ 4.90	110,417	$ 4.90
	2015 Total	110,417			110,417	
At December 31, 2016						
	$ 4.50	118,750	2.25	$ 4.50	118,750	$ 4.50
	$ 4.70	75,000	2.09	$ 4.70	75,000	$ 4.70
	$ 5.00	1,300,000	2.11	$ 5.00	1,300,000	$ 5.00
	2016 Total	1,493,750			1,493,750	
At December 31, 2017						
	$ 10.80	240,764	4.25	$ 10.80	240,764	$ 10.80
	2017 Total	240,764			240,764	
At December 31, 2018						
	$ 11.30	1,541,000	4.54	$ 11.30	1,541,000	$ 11.30
	2018 Total	1,541,000			1,541,000	
At March 31, 2019	Total	3,435,931			3,435,931	

Schedule of stock option activity	Summaries of outstanding stock options as of March 31, 2019 and December 31, 2018 are presented below.

	March 31, 2019		December 31, 2018	
	Number of Options	Weighted-Average Exercise Price	Number of Options	Weighted-Average Exercise Price
Options outstanding, beginning of period	6,642,200	$ 4.40	6,775,200	$ 4.12
Granted or deemed issued	—	$ —	357,000	$ 11.28
Exercised	(200)	$ 5.00	(170,000)	$ 4.59
Cancelled, forfeited and expired	—	$ —	(320,000)	$ 6.06
Options outstanding, end of period	6,642,000	$ 4.40	6,642,200	$ 4.40
Options exercisable, end of period	6,153,778	$ 4.01	5,958,783	$ 3.87
Options available for future grant	2,358,000		2,357,800	

LEASES (Tables)	3 Months Ended Mar. 31, 2019
Leases [Abstract]	
Schedule of future minimum lease payments	Future minimum lease payments under the agreements were as follows as of March 31, 2019 (in thousands):

	Amount
2019 (nine months)	547
2020	980
2021	975
2022	1,003
2023 and thereafter	3,665
Total lease payments	7,170
Less: Interest	4,010
Present value of lease liabilities	3,160

RELATED PARTY TRANSACTIONS (Tables)	3 Months Ended Mar. 31, 2019
Related Party Transactions [Abstract]	
Schedule of outstanding loans from related parties	The following table sets forth information relating to our loans from related persons outstanding or at any time during the three months ended March 3

Class	Lender	Interest Rate	Date of Loan	Term of Loan	Principal Amount Outstanding at March 31, 2019	Highest Principal Outstanding	Amount of Principal Repaid or Converted into Stock
Current, Promissory note payable to related parties:							
	Lan T. Tran (2)	10%	4/29/2016	Due on Demand	20	20	—
	Hope Hospice (1)	10%	6/3/2016	Due on Demand	250	250	—
	Lan T. Tran (2)	10%	2/9/2017	Due on Demand	—	12	—
	Yutaka Niihara (2)(3)	10%	9/14/2017	Due on Demand	27	904	—
	Lan T. Tran (2)	10%	2/10/2018	Due on Demand	159	159	—
	Lan T. Tran (2)	10%	2/9/2019	Due on Demand	14	14	—
				Subtotal	**$ 470**	**$ 1,359**	**$ —**
Current, Convertible notes payable to related parties:							
	Yasushi Nagasaki (2)	10%	6/29/2012	Due on Demand	$ 200	$ 200	$ —
	Yutaka & Soomi Niihara (2)(3)	10%	11/16/2015	2 years	200	200	—
	Wei Peu Zen (3)	10%	11/6/2017	2 years	5,000	5,000	—
	Profit Preview International Group, Ltd. (4)	10%	2/1/2018	2 years	4,037	4,037	—
	Profit Preview International Group, Ltd. (4)	10%	3/21/2018	2 years	5,363	5,363	—
				Subtotal	**$ 14,800**	**$ 14,800**	**$ —**
				Total	**$ 15,270**	**$ 16,159**	**$ —**

(1) Dr. Niihara, a Director and Chief Executive Officer of the Company, is also the Chief Executive Officer of Hope Hospice.
(2) Officer.
(3) Director.
(4) Mr. Zen, a Director of the Company, is the sole owner of Profit Preview International Group, Ltd.

The following table sets forth information relating to our loans from related persons outstanding at any time during the year ended December 31, 2018

Class	Lender	Interest Rate	Date of Loan	Term of Loan	Principal Amount Outstanding at December 31, 2018	Highest Principal Outstanding	Amount of Principal Repaid or Converted into Stock
Current, Promissory note payable to related parties:							
	Masaharu & Emiko Osato (3)	11%	12/29/2015	Due on Demand	$ —	$ 300	$ 300
	Lan T. Tran (2)	11%	2/10/2016	Due on Demand	—	131	131
	Masaharu & Emiko Osato (3)	11%	2/25/2016	Due on Demand	—	400	400
	Lan T. Tran (2)	10%	4/29/2016	Due on Demand	20	20	—
	Hope Hospice (1)	10%	6/3/2016	Due on Demand	250	250	—
	Lan T. Tran (2)	10%	2/9/2017	Due on Demand	12	12	—
	Yutaka Niihara (2)(3)	10%	9/14/2017	Due on Demand	27	904	877
	Lan T. Tran (2)	11%	2/10/2018	Due on Demand	159	159	—
				Subtotal	**$ 468**	**$ 2,176**	**$ 1,708**
Current, Convertible notes payable to related parties:							
	Yasushi Nagasaki (2)	10%	6/29/2012	Due on Demand	200	200	—
	Yutaka & Soomi Niihara (2)(3)	10%	11/16/2015	2 years	200	200	—
	Wei Peu Zen (3)	10%	11/6/2017	2 years	5,000	5,000	—
				Subtotal	**$ 5,400**	**$ 5,400**	**$ —**
Non Current, Convertible notes payable to related parties:							
	Profit Preview International Group, Ltd. (4)	10%	2/1/2018	2 years	4,037	4,037	—
	Profit Preview International Group, Ltd. (4)	10%	3/21/2018	2 years	5,363	5,363	—
				Subtotal	**$ 9,400**	**$ 9,400**	**$ —**
				Total	**$ 15,268**	**$ 16,976**	**$ 1,708**

(1) Dr. Niihara, a Director and Chief Executive Officer of the Company, is also the Chief Executive Officer of Hope Hospice.
(2) Officer
(3) Director
(4) Mr. Zen, a Director of the Company, is the sole owner of Profit Preview International Group, Ltd.

SUBSEQUENT EVENTS (Tables)	3 Months Ended Mar. 31, 2019
Subsequent Events [Abstract]	
Schedule of subsequent events	Subsequent to March 31, 2019, the Company issued the following:

	Amounts	Number of Shares Issued
Common shares	$ 711,550	103,590

SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Details Narrative)						1 Months Ended				3 Months Ended		12 Months Ended				
	Jan. 01, 2019 USD ($)	Jul. 31, 2018 USD ($)	Jan. 01, 2018 USD ($)	Jun. 12, 2017 USD ($) $ / shares	Jun. 12, 2017 KRW (₩) ₩ / shares	Jul. 31, 2017 USD ($) shares	Jul. 31, 2017 KRW (₩) ₩ / shares shares	Jan. 31, 2009 $ / shares	Jan. 31, 2009 ¥ / shares	Mar. 31, 2019 USD ($) Vendor $ / shares shares	Mar. 31, 2018 USD ($)	Dec. 31, 2018 USD ($) Vendor $ / shares shares	Mar. 31, 2019 ¥ / shares	Mar. 31, 2019 ₩ / shares	Dec. 31, 2018 ¥ / shares	Dec. 31, 2018 ₩ / shares
Summary of Significant Accounting Policy [Line Items]																
Number of vendors | Vendor										1		1				
Potentially dilutive securities outstanding | shares										16,317,940		17,122,176				
Operating lease liabilities										$ 3,160,000						
Lease right-of-use asset										2,838,000						
Deferred rent										201,000	$ 124,000					
ASU 2016-01 [Member]																
Summary of Significant Accounting Policy [Line Items]																
Cumulative effect adjustment on adoption of ASU			$ 41,400,000							41,400,000						
Cumulative effect on retained earnings, tax			$ 12,300,000							12,300,000						
ASU 2016-02 [Member]																
Summary of Significant Accounting Policy [Line Items]																
Cumulative effect adjustment on adoption of ASU	$ (29,000)									(29,000)						
Operating lease liabilities		$ 3,200,000														
Lease right-of-use asset		2,900,000														
Deferred rent		$ 286,000														
2011 Convertible notes payable [Member]																
Summary of Significant Accounting Policy [Line Items]																
Convertible notes payable, carrying amount										$ 300,000		$ 300,000				
CellSeed, Inc. [Member]																
Summary of Significant Accounting Policy [Line Items]																
Shares held as marketable securities | shares										39,250						
Investment, in per share | (per share)								$ 7.69	¥ 680							
Investment, closing price | (per share)										$ 6.40		$ 6.07	¥ 710		¥ 668	
Stock pledged against note | shares										39,250		39,250				
Telcon, Inc. ("Telcon") [Member]																
Summary of Significant Accounting Policy [Line Items]																
Shares held as marketable securities | shares						6,643,559	6,643,559									
Investment, in per share | ₩ / shares							₩ 5,419									
Investment						$ 31,800,000	₩ 36,001,446,221									
Investment, closing price | (per share)										$ 6.45		$ 7.43		₩ 7,350		₩ 8,280
Telcon, Inc. ("Telcon") [Member] | API Supply Agreement [Member]																
Summary of Significant Accounting Policy [Line Items]																
Investment, closing price | $ / shares				$ 4.79												

Proceeds from supply agreement	$ 31,800,000	
Telcon, Inc. ("Telcon") [Member] | API Supply Agreement [Member] | Korea (South), Won		
Summary of Significant Accounting Policy [Line Items]		
Investment, in per share | ₩ / shares		₩ 5,419
Proceeds from supply agreement | ₩		₩ 36,000,000,000
Telcon, Inc. ("Telcon") [Member] | API Supply Agreement [Member] | Pharmaceutical Grade L-glutamine [Member]		
Summary of Significant Accounting Policy [Line Items]		
Percentage of right to supply	25.00%	25.00%

SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Details 1) - USD ($) $ in Thousands	Mar. 31, 2019	Dec. 31, 2018
Inventories by category		
Raw materials and components	$ 647	$ 171
Work-in-process	1,584	2,471
Finished goods	3,564	2,063
Total	$ 5,795	$ 4,705

SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Details 2) - USD ($) $ in Thousands	Mar. 31, 2019	Dec. 31, 2018
Accounting Policies [Abstract]		
Prepaid insurance	$ 80	$ 82
Other prepaid expenses and current assets	738	661
Prepaid expenses and other current assets	$ 818	$ 743

SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Details 3) - USD ($) $ in Thousands	Mar. 31, 2019	Dec. 31, 2018
Summary of Significant Accounting Policy [Line Items]		
Other long-term liabilities	$ 35,637	$ 36,222
Unearned Revenue [Member]		
Summary of Significant Accounting Policy [Line Items]		
Other long-term liabilities	10,500	10,000
Trade Discount [Member]		
Summary of Significant Accounting Policy [Line Items]		
Other long-term liabilities	$ 25,137	$ 26,222

SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Details 4) - USD ($) $ in Thousands	3 Months Ended Mar. 31, 2019	12 Months Ended Dec. 31, 2018
Warrant Derivative Liabilities - Stock Purchase Warrants [Member] | Level 3 [Member]		
Fair Value, Liabilities Measured on Recurring Basis, Unobservable Input Reconciliation, Calculation [Roll Forward]		
Balance, beginning of period		$ 26,377
Repurchased		(6,186)
Change in fair value included in the statement of comprehensive income (loss)		(20,191)
Derivative Liabilities - Warrants [Member] | GPB Debt Holdings II, LLC [Member]		
Fair Value, Liabilities Measured on Recurring Basis, Unobservable Input Reconciliation, Calculation [Roll Forward]		
Balance, beginning of period	$ 1,399	1,882
Change in fair value included in the statement of comprehensive income (loss)	48	(483)
Balance, end of period	$ 1,447	1,399
Warrant Derivative Liabilities - Embedded Conversion Option [Member] | GPB Debt Holdings II, LLC [Member]		
Fair Value, Liabilities Measured on Recurring Basis, Unobservable Input Reconciliation, Calculation [Roll Forward]		
Balance, beginning of period		1,289
Change in fair value included in the statement of comprehensive income (loss)		(466)
Extinguished upon debt repayment		$ (823)

SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Details 5) $ / shares in Units, $ in Thousands	Mar. 31, 2019 USD ($) $ / shares shares	Dec. 31, 2018 USD ($) $ / shares shares
Summary of Significant Accounting Policy [Line Items]		
Stock price | $ / shares	$ 10.30	$ 9.10
Number outstanding | shares	240,764	240,764
Warrant derivative liabilities (long-term) | $	$ 1,447	$ 1,399
Measurement Input, Risk Free Interest Rate		
Summary of Significant Accounting Policy [Line Items]		
Warrants and rights outstanding, measurement input	2.22	2.48
Measurement Input, Price Volatility		
Summary of Significant Accounting Policy [Line Items]		
Warrants and rights outstanding, measurement input	70.00	70.00
Measurement Input, Expected Term		
Summary of Significant Accounting Policy [Line Items]		
Expected life (in years)	3 years 9 months	4 years

SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Details 6)	3 Months Ended Mar. 31, 2019 USD ($) $ / shares $ / Warrant shares
Summary of Significant Accounting Policy [Line Items]	
Original Loan Principal Amount	$ 44,169
Beneficial Conversion Discount Amount	$ 13,850
Warrants Issued with Notes (in shares) | shares	1,220,000
Warrant FMV Discount Amount	$ 9,687
Minimum [Member]	
Summary of Significant Accounting Policy [Line Items]	
Conversion Rate (in dollars per share) | $ / shares	$ 3.05
Maximum [Member]	
Summary of Significant Accounting Policy [Line Items]	
Conversion Rate (in dollars per share) | $ / shares	$ 10.00
2017 Convertible Notes Payable [Member]	
Summary of Significant Accounting Policy [Line Items]	
Stated Annual Interest	10.00%
Original Loan Principal Amount	$ 5,795
Beneficial Conversion Discount Amount	$ 1,545
2017 Convertible Notes Payable [Member] | Minimum [Member]	
Summary of Significant Accounting Policy [Line Items]	
Term of Loan	Due on demand
Conversion Rate (in dollars per share) | $ / shares	$ 3.50
Effective Interest Rate Including Discounts	25.00%
2017 Convertible Notes Payable [Member] | Maximum [Member]	
Summary of Significant Accounting Policy [Line Items]	
Term of Loans	2 years
Conversion Rate (in dollars per share) | $ / shares	$ 10.00
Effective Interest Rate Including Discounts	110.00%
2018 Convertible Notes Payable [Member]	
Summary of Significant Accounting Policy [Line Items]	
Stated Annual Interest	10.00%
Original Loan Principal Amount	$ 24,135
Beneficial Conversion Discount Amount	$ 10,266
2018 Convertible Notes Payable [Member] | Minimum [Member]	
Summary of Significant Accounting Policy [Line Items]	
Term of Loan	Due on demand
Stated Annual Interest	6.00%
Conversion Rate (in dollars per share) | $ / shares	$ 3.50
Effective Interest Rate Including Discounts	10.00%
2018 Convertible Notes Payable [Member] | Maximum [Member]	

Summary of Significant Accounting Policy [Line Items]	
Term of Loans	2 years
Stated Annual Interest	10.00%
Conversion Rate (in dollars per share) | $ / shares	$ 10.00
Effective Interest Rate Including Discounts	110.00%
2019 Convertible Notes Payable [Member]	
Summary of Significant Accounting Policy [Line Items]	
Stated Annual Interest	10.00%
Original Loan Principal Amount	$ 2,039
Beneficial Conversion Discount Amount	$ 2,039
Effective Interest Rate Including Discounts	110.00%
2019 Convertible Notes Payable [Member] | Minimum [Member]	
Summary of Significant Accounting Policy [Line Items]	
Term of Loan	Due on demand
Conversion Rate (in dollars per share) | $ / shares	$ 3.50
2019 Convertible Notes Payable [Member] | Maximum [Member]	
Summary of Significant Accounting Policy [Line Items]	
Term of Loans	1 year
Conversion Rate (in dollars per share) | $ / shares	$ 4.50
Notes Payable 2018 [Member]	
Summary of Significant Accounting Policy [Line Items]	
Term of Loans	18 months
Stated Annual Interest	10.00%
Original Loan Principal Amount	$ 12,200
Warrants Issued with Notes (in shares) | shares	1,220,000
Exercise Price (in dollars per share) | $ / Warrant	11.30
Warrant FMV Discount Amount	$ 9,687
Effective Interest Rate Including Discounts	89.00%

REVENUES (Details) - USD ($) $ in Thousands	3 Months Ended	
	Mar. 31, 2019	Mar. 31, 2018
Disaggregation Of Revenue [Line Items]		
Gross sales	$ 5,892	$ 822
Total	5,307	781
Endari [Member]		
Disaggregation Of Revenue [Line Items]		
Gross sales	5,787	720
Discounts and allowances	(585)	(30)
Other [Member]		
Disaggregation Of Revenue [Line Items]		
Gross sales	$ 105	102
Discounts and allowances		$ (11)

REVENUES (Details 1) $ in Thousands	3 Months Ended Mar. 31, 2019 USD ($)
Disaggregation Of Revenue [Line Items]	
Balance as of December 31, 2018	$ 2,363
Provision related to sales in the current year	1,076
Adjustments related prior period sales	(600)
Credit and payments made	(884)
Balance as of March 31, 2019	1,955
Trade Discounts, Allowances and Chargebacks [Member]	
Disaggregation Of Revenue [Line Items]	
Balance as of December 31, 2018	303
Provision related to sales in the current year	293
Credit and payments made	(316)
Balance as of March 31, 2019	279
Government Rebates and Other Incentives [Member]	
Disaggregation Of Revenue [Line Items]	
Balance as of December 31, 2018	1,880
Provision related to sales in the current year	729
Adjustments related prior period sales	(600)
Credit and payments made	(568)
Balance as of March 31, 2019	1,441
Returns [Member]	
Disaggregation Of Revenue [Line Items]	
Balance as of December 31, 2018	181
Provision related to sales in the current year	54
Balance as of March 31, 2019	$ 235

REVENUES (Details 2) - Sales Revenue, Net [Member] - Customer Concentration Risk [Member]	3 Months Ended	
	Mar. 31, 2019	Mar. 31, 2018
AmerisourceBergen Specialty Group [Member]		
Entity Wide Revenue Major Customer [Line Items]		
Concentration risk, percentage	60.00%	88.00%
McKesson Plasma and Biologics LLC [Member]		
Entity Wide Revenue Major Customer [Line Items]		
Concentration risk, percentage	17.00%	

PROPERTY AND EQUIPMENT (Details) - USD ($) $ in Thousands	Mar. 31, 2019	Dec. 31, 2018
Property and equipment		
Property and equipment, gross	$ 456	$ 455
Less: accumulated depreciation	(317)	(303)
Total depreciable assets	139	152
Construction-in-progress	14	
Property and equipment, net	153	152
Equipment [Member]		
Property and equipment		
Property and equipment, gross	306	306
Leasehold Improvements [Member]		
Property and equipment		
Property and equipment, gross	71	70
Furniture and Fixtures [Member]		
Property and equipment		
Property and equipment, gross	$ 79	$ 79

PROPERTY AND EQUIPMENT (Details Narrative) - USD ($)	3 Months Ended	
	Mar. 31, 2019	Mar. 31, 2018
Property Plant And Equipment [Abstract]		
Depreciation expense	$ 14,000	$ 13,000

INVESTMENTS (Details Narrative) - USD ($) $ in Thousands	Jan. 01, 2018	3 Months Ended Mar. 31, 2019	Mar. 31, 2018
Schedule Of Investments [Line Items]			
Net realized (losses) gain on available-for-sales on marketable securities		$ (6,457)	$ 5,535
ASU 2016-01 [Member]			
Schedule Of Investments [Line Items]			
Cumulative effect adjustment on adoption of ASU 2016-01	$ 41,400	41,400	
Cumulative effect on accumulated deficit, tax	$ 12,300	$ 12,300	

INVESTMENTS (Details 1) - USD ($) $ in Thousands	Mar. 31, 2019	Dec. 31, 2018
Schedule Of Investments [Line Items]		
Fair Value with Changes Recognized in Income	$ 43,124	$ 49,581
Measurement Alternative - No Readily Determinable Fair Value	527	538
Marketable Equity Securities [Member]		
Schedule Of Investments [Line Items]		
Fair Value with Changes Recognized in Income	43,124	49,581
Long-Term Investment At Cost [Member]		
Schedule Of Investments [Line Items]		
Measurement Alternative - No Readily Determinable Fair Value	$ 527	$ 538

ACCOUNTS PAYABLE AND ACCRUED EXPENSES (Details) - USD ($) $ in Thousands	Mar. 31, 2019	Dec. 31, 2018
Accounts payable:		
Clinical and regulatory expenses	$ 356	$ 83
Professional fee	1,961	2,157
Selling expenses	421	382
Manufacturing costs	1,756	
Other vendors	692	980
Total accounts payable	5,186	3,602
Accrued interest payable, related parties	1,217	842
Accrued interest payable	2,306	2,138
Accrued expenses:		
Payroll expenses	796	713
Accrued rebates	1,441	1,744
Other accrued expenses	122	83
Total accrued expenses	2,359	2,540
Total accounts payable and accrued expenses	$ 11,068	$ 9,122

NOTES PAYABLE (Details) $ / shares in Units, $ in Thousands	3 Months Ended Mar. 31, 2019 USD ($) Number $ / shares	12 Months Ended Dec. 31, 2018 USD ($) Number
Principal Outstanding	$ 52,168	$ 55,172
Discount Amount	13,334	16,933
Carrying Amount	$ 38,834	$ 38,239
Shares Underlying Principal | Number	6,240	6,499
Notes payable, current	$ 7,000	$ 6,394
Notes payable, non-current	$ 1,922	1,021
Minimum [Member]		
Conversion Price | $ / shares	$ 3.05	
Maximum [Member]		
Conversion Price | $ / shares	$ 10.00	
2013 Notes payable [Member]		
Interest rate	10.00%	
Term of Notes	Due on demand	
Principal Outstanding	$ 902	909
Carrying Amount	$ 902	909
2015 Notes payable [Member]		
Interest rate	10.00%	
Term of Notes	Due on demand	
Principal Outstanding	$ 10	10
Carrying Amount	$ 10	10
2016 Notes payable [Member]		
Term of Notes	Due on demand	
Principal Outstanding	$ 843	843
Carrying Amount	$ 843	843
2016 Notes payable [Member] | Minimum [Member]		
Interest rate	10.00%	
2016 Notes payable [Member] | Maximum [Member]		
Interest rate	11.00%	
2017 Notes payable [Member]		
Term of Notes	Due on demand	
Principal Outstanding	$ 1,951	2,575
Carrying Amount	$ 1,951	2,575
2017 Notes payable [Member] | Minimum [Member]		
Interest rate	5.00%	
2017 Notes payable [Member] | Maximum [Member]		
Interest rate	11.00%	
2018 Notes payable [Member]		
Principal Outstanding	$ 12,311	12,311
Discount Amount	7,847	9,233

Carrying Amount	$ 4,464	3,078
2018 Notes payable [Member] | Minimum [Member]		
Interest rate	10.00%	
Term of Notes	Due on demand	
2018 Notes payable [Member] | Maximum [Member]		
Interest rate	11.00%	
Term of Notes	18 months	
2019 Notes payable [Member]		
Interest rate	11.00%	
Principal Outstanding	$ 752	
Carrying Amount	752	
Notes Payable [Member]		
Principal Outstanding	16,769	16,648
Discount Amount	7,847	9,233
Carrying Amount	8,922	7,415
Principal Outstanding, Current	14,569	12,449
Discount Amount Current	7,569	6,054
Notes payable, current	7,000	6,394
Principal Outstanding, Non Current	2,200	4,200
Discount Amount Non Current	278	3,179
Notes payable, non-current	$ 1,922	1,021
2016 Notes payable - related party [Member]		
Interest rate	10.00%	
Term of Notes	Due on demand	
Principal Outstanding	$ 270	270
Carrying Amount	$ 270	270
2017 Notes payable - related party [Member]		
Interest rate	10.00%	
Term of Notes	Due on demand	
Principal Outstanding	$ 27	39
Carrying Amount	$ 27	39
2018 Notes payable - related party [Member]		
Interest rate	11.00%	
Term of Notes	Due on demand	
Principal Outstanding	$ 159	159
Carrying Amount	$ 159	159
2019 Notes payable - related party [Member]		
Interest rate	10.00%	
Term of Notes	Due on demand	
Principal Outstanding	$ 14	
Carrying Amount	14	
Notes payable - related party [Member]		
Principal Outstanding	470	468
Carrying Amount	470	468

Principal Outstanding, Current	470	468
Notes payable, current	$ 470	$ 468

NOTES PAYABLE (Details 1) $ / shares in Units, $ in Thousands	3 Months Ended Mar. 31, 2019 USD ($) Number $ / shares	12 Months Ended Dec. 31, 2018 USD ($) Number
Principal Outstanding	$ 52,168	$ 55,172
Discount Amount	13,334	16,933
Carrying Amount	$ 38,834	$ 38,239
Shares Underlying Principal | Number	6,240	6,499
Convertible notes payable, Current	$ 15,157	$ 11,253
Convertible notes payable, Non Current	$ 389	5,485
Minimum [Member]		
Conversion Price | $ / shares	$ 3.05	
Maximum [Member]		
Conversion Price | $ / shares	$ 10.00	
2011 Convertible notes payable [Member]		
Interest rate	10.00%	
Term of Notes	5 years	
Conversion Price | $ / shares	$ 3.05	
Principal Outstanding	$ 300	300
Carrying Amount	$ 300	$ 300
Shares Underlying Principal | Number	98	98
2014 Convertible notes payable [Member]		
Interest rate	10.00%	
Principal Outstanding	$ 522	$ 519
Carrying Amount	$ 522	$ 519
Shares Underlying Principal | Number	186	184
2014 Convertible notes payable [Member] | Minimum [Member]		
Term of Notes	Due on demand	
Conversion Price | $ / shares	$ 3.05	
2014 Convertible notes payable [Member] | Maximum [Member]		
Term of Notes	2 years	
Conversion Price | $ / shares	$ 3.60	
2016 Convertible Notes Payable [Member]		
Interest rate	10.00%	
Principal Outstanding	$ 62	$ 61
Carrying Amount	$ 62	$ 61
Shares Underlying Principal | Number	17	17
2016 Convertible Notes Payable [Member] | Minimum [Member]		
Term of Notes	Due on demand	
Conversion Price | $ / shares	$ 3.60	
2016 Convertible Notes Payable [Member] | Maximum [Member]		
Term of Notes	2 years	
Conversion Price | $ / shares	$ 4.50	

2017 Convertible notes payable [Member]		
Principal Outstanding	$ 1,895	$ 2,820
Discount Amount	108	349
Carrying Amount	$ 1,787	$ 2,471
Shares Underlying Principal | Number	618	899
2017 Convertible notes payable [Member] | Minimum [Member]		
Interest rate	10.00%	
Term of Notes	Due on demand	
Conversion Price | $ / shares	$ 3.50	
2017 Convertible notes payable [Member] | Maximum [Member]		
Interest rate	13.50%	
Term of Notes	3 years	
Conversion Price | $ / shares	$ 10.31	
2018 Convertible Notes Payable [Member]		
Interest rate	10.00%	
Principal Outstanding	$ 15,311	$ 19,556
Discount Amount	2,671	6,169
Carrying Amount	$ 12,640	$ 13,387
Shares Underlying Principal | Number	3,076	3,664
2018 Convertible Notes Payable [Member] | Minimum [Member]		
Interest rate	6.00%	
Term of Notes	Due on demand	
Conversion Price | $ / shares	$ 3.50	
2018 Convertible Notes Payable [Member] | Maximum [Member]		
Interest rate	10.00%	
Term of Notes	2 years	
Conversion Price | $ / shares	$ 10.00	
2019 Convertible Notes Payable [Member]		
Interest rate	10.00%	
Principal Outstanding	$ 2,039	
Discount Amount	1,804	
Carrying Amount	$ 235	
Shares Underlying Principal | Number	570	
2019 Convertible Notes Payable [Member] | Minimum [Member]		
Term of Notes	Due on demand	
Conversion Price | $ / shares	$ 3.50	
2019 Convertible Notes Payable [Member] | Maximum [Member]		
Term of Notes	1 year	
Conversion Price | $ / shares	$ 4.50	
Convertible Notes Payable [Member]		
Principal Outstanding	$ 20,129	$ 23,256
Discount Amount	4,583	6,518
Carrying Amount	$ 15,546	$ 16,738
Shares Underlying Principal | Number	4,565	4,862

Principal Outstanding, Current	$ 19,421	$ 16,604
Principal Outstanding, Non Current	708	6,652
Discount Amount Current	4,264	5,351
Discount Amount Non Current	319	1,167
Convertible notes payable, Current	15,157	11,253
Convertible notes payable, Non Current	$ 389	$ 5,485
Shares Underlying Principal Current | Number	4,402	3,981
Shares Underlying Principal Non Current | Number	163	881
2012 Convertible notes payable - related party [Member]		
Interest rate	10.00%	
Term of Notes	Due on demand	
Conversion Price | $ / shares	$ 3.30	
Principal Outstanding	$ 200	$ 200
Carrying Amount	$ 200	$ 200
Shares Underlying Principal | Number	76	74
2015 Convertible notes payable - related party [Member]		
Interest rate	10.00%	
Term of Notes	2 years	
Conversion Price | $ / shares	$ 4.50	
Principal Outstanding	$ 200	$ 200
Carrying Amount	$ 200	$ 200
Shares Underlying Principal | Number	59	58
2017 Convertible notes payable - related party [Member]		
Interest rate	10.00%	
Term of Notes	2 years	
Conversion Price | $ / shares	$ 10.00	
Principal Outstanding	$ 5,000	$ 5,000
Discount Amount	218	311
Carrying Amount	$ 4,782	$ 4,689
Shares Underlying Principal | Number	545	533
2018 Convertible notes payable - related party [Member]		
Interest rate	10.00%	
Term of Notes	2 years	
Conversion Price | $ / shares	$ 10.00	
Principal Outstanding	$ 9,400	$ 9,400
Discount Amount	686	871
Carrying Amount	$ 8,714	$ 8,529
Shares Underlying Principal | Number	995	972
Convertible notes payable - related party [Member]		
Principal Outstanding	$ 14,800	$ 14,800
Discount Amount	904	1,182
Carrying Amount	$ 13,896	$ 13,618
Shares Underlying Principal | Number	1,675	1,637
Principal Outstanding, Current	$ 14,800	$ 5,400

Principal Outstanding, Non Current		9,400
Discount Amount Current	904	311
Discount Amount Non Current		871
Convertible notes payable, Current	$ 13,896	5,089
Convertible notes payable, Non Current		$ 8,529
Shares Underlying Principal Current | Number	1,675	665
Shares Underlying Principal Non Current | Number		972

NOTES PAYABLE (Details Narrative) - USD ($)	3 Months Ended Mar. 31, 2019	12 Months Ended Dec. 31, 2018
Average stated interest rate	10.00%	10.00%
Average effective interest rate	48.00%	35.00%
Description of debt conversion	Certain notes with a $4.50 or a $10.00 stated conversion price in the second year of their two-year term are subject to automatic conversion into shares of Company common stock at a conversion price equal to 80% of the initial public offering price at the time of a qualified public offering.	
Percentage of initial public offering price	80.00%	
Aggregate outstanding convertible notes converted into common stock	$ 4,800,000	
Percentage of outstanding convertible notes converted into common stock	14.00%	
Warrants issued in conjunction with notes payable	$ 0	
Warrants [Member]		
Method of calculation of fair value of warrants		Binominal Monte-Carlo Cliquet Option Pricing Model
Minimum [Member]		
Conversion Price	$ 3.05	
Maximum [Member]		
Conversion Price	$ 10.00	

NOTES PAYABLE (Details 2) $ in Thousands	Mar. 31, 2019 USD ($)
Long Term Debt By Maturity [Abstract]	
2019 (nine months)	$ 31,703
2020	20,465
Total	$ 52,168

NOTES PAYABLE (Details 3)	Mar. 31, 2019 $ / shares	Dec. 31, 2018 $ / shares
Stock price	$ 10.30	$ 9.10
Term [Member]		
Term	3 years 9 months	4 years
Risk-free Interest Rate [Member]		
Warrants and rights outstanding, measurement input	2.22	2.48
Expected Volatility [Member]		
Warrants and rights outstanding, measurement input	70.00	70.00
Warrants [Member] | Convertible Notes Payable [Member]		
Stock price		$ 11.10
Warrants [Member] | Convertible Notes Payable [Member] | Exercise Price [Member]		
Warrants and rights outstanding, measurement input		11.30
Warrants [Member] | Convertible Notes Payable [Member] | Term [Member]		
Term		5 years
Warrants [Member] | Convertible Notes Payable [Member] | Risk-free Interest Rate [Member]		
Warrants and rights outstanding, measurement input		3.05
Warrants [Member] | Convertible Notes Payable [Member] | Expected Volatility [Member]		
Warrants and rights outstanding, measurement input		70.0

STOCKHOLDERS' DEFICIT (Details Narrative) - USD ($)								1 Months Ended	3 Months Ended		12 Months Ended	
	Mar. 05, 2019	Dec. 29, 2017	Sep. 29, 2016	Sep. 12, 2016	Jun. 10, 2015	Jun. 10, 2014	Sep. 11, 2013	Oct. 31, 2018	Mar. 31, 2019	Mar. 31, 2018	Dec. 31, 2018	Sep. 11, 2014
Warrants outstanding									3,435,931			
Warrants Issued with Notes (in shares)									1,220,000			
Convertible notes prinicipal amount									$ 38,834,000		$ 38,239,000	
Original Loan Principal Amount									44,169			
Share-based compensation									$ 536,000	$ 710,000		
Period remaining for recognition of unrecognized compensation cost									2 years 2 months 12 days			
Common Stock [Member]												
Issuance of common stock for exercise of warrants									81,332			
2011 Stock Incentive Option Plan [Member]												
Exercise price - options vested											$ 11.28	
Total unrecognized compensation cost									$ 2,100,000			
2011 Stock Incentive Option Plan [Member] | Stock Options [Member]												
Share-based compensation									$ 500,000	$ 700,000		
2011 Stock Incentive Option Plan [Member] | Share Based Compensation Award, Tranche One [Member]												
Vesting percentage											33.33%	
Vesting period											1 year	
2011 Stock Incentive Option Plan [Member] | Share Based Compensation Award, Tranche Two [Member]												
Vesting percentage											66.67%	
Vesting period											2 years	
Maximum [Member]												
Conversion Rate (in dollars per share)									$ 10.00			
Maximum [Member] | 2011 Stock Incentive Option Plan [Member] | Common Stock [Member]												
Stock options granted to purchase common stock											357,000	
Minimum [Member]												
Conversion Rate (in dollars per share)									$ 3.05			
GPB Debt Holdings II, LLC [Member]												
Exercise price								$ 11.30				
Warrants exercisable term									5 years			
Date from which warrants are exercisable									Apr. 22, 2019			
GPB Debt Holdings II, LLC [Member] | T.R. Winston & Company, LLC [Member]												

Cash fee paid as percentage of gross proceeds from purchasers			5.00%
GPB Debt Holdings II, LLC [Member] | Securities Purchase Agreement [Member]			
Principal amount of debentures and warrants issued			$ 12,200,000
GPB Debt Holdings II, LLC [Member] | Securities Amendment Agreement [Member]			
Maturity date	May 01, 2019		
Monthly redemption payment on principal amount	$ 1,000,000		
GPB Debt Holdings II, LLC [Member] | Maximum [Member] | T.R. Winston & Company, LLC [Member]			
Number of common stock to be purchased			120,000
GPB Debt Holdings II, LLC [Member] | Maximum [Member] | Securities Purchase Agreement [Member]			
Number of common stock to be purchased			1,220,000
GPB Debt Holdings II, LLC [Member] | Maximum [Member] | Securities Amendment Agreement [Member]			
Exercise price	$ 1.30		
GPB Debt Holdings II, LLC [Member] | Minimum [Member] | Securities Amendment Agreement [Member]			
Warrants to purchase shares of common stock	240,000		
GPB Debt Holdings II, LLC [Member] | Senior Secured Convertible Promissory Note [Member]			
Exercise price		$ 10.80	
Warrants to purchase shares of common stock		240,674	
Percentage of premium dilutive issuance price and number of shares issuable		10.00%	
Warrants exercisable period after issuance		5 years	
GPB Debt Holdings II, LLC [Member] | 10% Redeemable Debenture [Member]			
Percentage of monthly payments interest rate			10.00%
Maturity date			Apr. 21, 2020
Monthly redemption payment on principal amount			$ 1,000,000
GPB Debt Holdings II, LLC [Member] | 10% Redeemable			

Debenture [Member] | Minimum [Member]					
Debt instrument redemption amount				$ 20,000,000	
GPB Debt Holdings II, LLC [Member] | Amended and Restated Debentures [Member] | Securities Amendment Agreement [Member]					
Maturity date	Oct. 21, 2020				
Monthly redemption payment on principal amount	$ 1,000,000				
Monthly redemption payment, commencement date	Nov. 30, 2019				
Conversion Rate (in dollars per share)	$ 10				
GPB Debt Holdings II, LLC [Member] | Convertible Debt | Senior Secured Convertible Promissory Note [Member]					
Convertible notes prinicipal amount		$ 13,000,000			
Original Loan Principal Amount		$ 12,500,000			
Original issue discount percentage		4.00%			
KPM Tech Co., Ltd [Member] | Letter of Agreement [Member]					
Common stock price			$ 15.32		
Future capital increases			$ 13,000,000		
Hanil Vacuum Co Ltd [Member] | Letter of Agreement [Member]					
Common stock price			$ 3.68		
Future capital increases			$ 1,000,000		
Amended and Restated Warrants [Member] | GPB Debt Holdings II, LLC [Member] | Securities Amendment Agreement [Member]					
Exercise price	$ 10.00				
Exercise price, description					The exercise price of the amended and restated warrants also will be subject to reduction pursuant to a “full-ratchet” exercise-price antidilution adjustment in the event of a sale or

						issuance of common stock or common stock equivalents within 60 days following the merger at an effective price per share below the exercise price of the amended and restated warrants.	
Amended and Restated Warrants [Member] | GPB Debt Holdings II, LLC [Member] | Maximum [Member] | Securities Amendment Agreement [Member]							
Warrants to purchase shares of common stock	1,460,000						
Private Placement [Member]							
Units issued in offering					3,020,501		
Unit price of offering					$ 2.50		
Units issued in offering					$ 7,600,000		
Warrants issued to broker of the offering					300,000		
Exercise price				$ 3.50	$ 3.50		
Warrants outstanding							2,225,036
Fair value of outstanding warrants				$ 1,800,000			$ 7,100,000
Number of warrants exercised				1,095,465			
Proceeds from exercise of warrants				$ 3,800,000			
Issuance of common stock for exercise of warrants				1,095,465			
Adjustment to additional paid-in capital - warrants				$ 1,800,000			
Private Placement [Member] | Letter of Agreement [Member]							
Reduction in additional paid in capital		$ 720,000					
Private Placement [Member] | KPM Tech Co., Ltd [Member] | Letter of Agreement [Member]							
Purchase of common stock			$ 17,000,000				
Common stock price			$ 4.50				
Future capital investment			$ 13,000,000				
Number of shares issued		3,777,778					
Private Placement [Member] | Hanil Vacuum Co Ltd [Member] | Letter of Agreement [Member]							
Purchase of common stock			3,000,000				

Future capital investment		$ 1,000,000	
Number of shares issued	666,667		
Private Placement [Member] | KPM Tech Co., Ltd and Hanil Vacuum Co Ltd [Member] | Letter of Agreement [Member]			
Purchase of common stock	$ 20,000,000		
Private Placement [Member] | Replacement Warrants [Member]			
Exercise price			$ 3.50
Warrants outstanding		1,095,465	
Fair value of outstanding warrants		$ 2,500,000	
Warrants Issued with Notes (in shares)			1,095,465
Warrant exercise inducement expense		$ 3,500,000	

STOCKHOLDERS' DEFICIT (Details) - shares	3 Months Ended Mar. 31, 2019	12 Months Ended Dec. 31, 2018
Warrants outstanding, ending	3,435,931	
Warrant [Member]		
Warrants outstanding, beginning	3,436,431	5,265,432
Granted		1,542,000
Exercised	(500)	(2,385,317)
Cancelled, forfeited and expired		(985,684)
Warrants outstanding, ending	3,435,931	3,436,431

STOCKHOLDERS' DEFICIT (Details 1)	3 Months Ended Mar. 31, 2019 $ / shares shares
Number of Warrants Issued, Outstanding	3,435,931
Total, Exercisable	3,435,931
Warrants Issued in 2014 - Exercise Price $3.50 [Member]	
Number of Warrants Issued, Outstanding	50,000
Weighted Average Remaining Contractual Life (Years), Outsanding	29 days
Weighted Average Exercise Price, Outsanding | $ / shares	$ 3.50
Total, Exercisable	50,000
Weighted Average Exercise Price, Exercisable | $ / shares	$ 3.50
Warrants Issued in 2014 [Member]	
Number of Warrants Issued, Outstanding	50,000
Total, Exercisable	50,000
Warrants Issued in 2015 - Exercise Price $4.90 [Member]	
Number of Warrants Issued, Outstanding	110,417
Weighted Average Remaining Contractual Life (Years), Outsanding	11 months 4 days
Weighted Average Exercise Price, Outsanding | $ / shares	$ 4.90
Total, Exercisable	110,417
Weighted Average Exercise Price, Exercisable | $ / shares	$ 4.90
Warrants Issued in 2015 [Member]	
Number of Warrants Issued, Outstanding	110,417
Total, Exercisable	110,417
Warrants Issued in 2016 - Exercise Price $4.50 [Member]	
Number of Warrants Issued, Outstanding	118,750
Weighted Average Remaining Contractual Life (Years), Outsanding	2 years 3 months
Weighted Average Exercise Price, Outsanding | $ / shares	$ 4.50
Total, Exercisable	118,750
Weighted Average Exercise Price, Exercisable | $ / shares	$ 4.50
Warrants Issued in 2016 - Exercise Price $4.70 [Member]	
Number of Warrants Issued, Outstanding	75,000
Weighted Average Remaining Contractual Life (Years), Outsanding	2 years 1 month 2 days
Weighted Average Exercise Price, Outsanding | $ / shares	$ 4.70
Total, Exercisable	75,000
Weighted Average Exercise Price, Exercisable | $ / shares	$ 4.70
Warrants Issued in 2016 - Exercise Price $5.00 [Member]	
Number of Warrants Issued, Outstanding	1,300,000
Weighted Average Remaining Contractual Life (Years), Outsanding	2 years 1 month 9 days
Weighted Average Exercise Price, Outsanding | $ / shares	$ 5.00
Total, Exercisable	1,300,000
Weighted Average Exercise Price, Exercisable | $ / shares	$ 5.00
Warrants Issued in 2016 [Member]	

Number of Warrants Issued, Outstanding	1,493,750
Total, Exercisable	1,493,750
Warrants Issued in 2017 - Exercise Price $ 10.80 [Member]	
Number of Warrants Issued, Outstanding	240,764
Weighted Average Remaining Contractual Life (Years), Outsanding	4 years 3 months
Weighted Average Exercise Price, Outsanding | $ / shares	$ 10.80
Total, Exercisable	240,764
Weighted Average Exercise Price, Exercisable | $ / shares	$ 10.80
Warrants Issued in 2017 [Member]	
Number of Warrants Issued, Outstanding	240,764
Total, Exercisable	240,764
Warrants Issued in 2018 - Exercise Price $ 11.30 [Member]	
Number of Warrants Issued, Outstanding	1,541,000
Weighted Average Remaining Contractual Life (Years), Outsanding	4 years 6 months 14 days
Weighted Average Exercise Price, Outsanding | $ / shares	$ 11.30
Total, Exercisable	1,541,000
Weighted Average Exercise Price, Exercisable | $ / shares	$ 11.30
Warrants Issued in 2018 [Member]	
Number of Warrants Issued, Outstanding	1,541,000
Total, Exercisable	1,541,000

STOCKHOLDERS' DEFICIT (Details 2) - 2011 Stock Incentive Option Plan [Member] - $ / shares	3 Months Ended Mar. 31, 2019	12 Months Ended Dec. 31, 2018
Options outstanding, beginning	6,642,200	6,775,200
Granted or deemed issued		357,000
Exercised	(200)	(170,000)
Cancelled, forfeited and expired		(320,000)
Options outstanding, end	6,642,000	6,642,200
Options exercisable	6,153,778	5,958,783
Options available for future grant	2,358,000	2,357,800
Options outstanding, beginning	$ 4.40	$ 4.12
Granted or deemed issued		11.28
Exercised	5.00	4.59
Cancelled, forfeited and expired		6.06
Options outstanding, end	4.40	4.40
Options exercisable	$ 4.01	$ 3.87

LEASES (Details Narrative)	1 Months Ended	3 Months Ended	
	Dec. 31, 2018 USD ($) ft²	Mar. 31, 2019 USD ($) ft²	Mar. 31, 2018 USD ($)
Leases [Line Items]			
Deferred rent | $		$ 201,000	$ 124,000
Weighted average remaining lease term		6 years 10 months 24 days	
Weighted average discount rate		13.80%	
Torrance, California [Member]			
Leases [Line Items]			
Operating lease, leased space | ft²		13,734	
Operating lease, base rental per month | $		$ 48,087	
Operating lease, additional space for rent | ft²	7,559	1,600	
Operating lease, commencing date	Jun. 01, 2019		
Operating lease, base rent per month for additional space | $	$ 27,590	$ 2,240	
Operating lease base rent payable commencing date	Jan. 01, 2020		
Operating lease, expiration date	May 31, 2026	Jan. 31, 2020	
New York [Member]			
Leases [Line Items]			
Operating lease, additional space for rent | ft²		2,986	
Operating lease, base rent per month for additional space | $		$ 5,500	
Operating lease, expiration date		Dec. 30, 2019	
Tokyo, Japan [Member]			
Leases [Line Items]			
Operating lease, leased space | ft²		1,322	
Operating lease, expiration date		Sep. 30, 2020	

LEASES (Details) $ in Thousands	Mar. 31, 2019 USD ($)
Leases [Abstract]	
2019 (nine months)	$ 547
2020	980
2021	975
2022	1,003
2023 and thereafter	3,665
Total lease payments	7,170
Less: Interest	4,010
Operating lease liabilities	$ 3,160

COMMITMENTS AND CONTINGENCIES (Details Narrative) ₩ / shares in Units, $ / shares in Units, $ in Millions						1 Months Ended					
	Oct. 31, 2018 $ / shares	Sep. 29, 2017 $ / shares shares	Jul. 12, 2017 USD ($) Number kg $ / kg	Jun. 12, 2017 USD ($) $ / shares shares	Jun. 12, 2017 KRW (₩) ₩ / shares	Jul. 31, 2017 USD ($)	Jul. 31, 2017 KRW (₩) ₩ / shares	Mar. 31, 2019 $ / shares $ / kg	Mar. 31, 2019 ₩ / shares $ / kg	Dec. 31, 2018 $ / shares	Dec. 31, 2018 ₩ / shares
Telcon, Inc. [Member]											
Investment						$ 31.8	₩ 36,001,446,221				
Investment, in per share | ₩ / shares							₩ 5,419				
Investment, closing price | (per share)								$ 6.45	₩ 7,350	$ 7.43	₩ 8,280
Share repurchases, initial price per share | $ / shares	$ 7.60										
Telcon, Inc. [Member] | Management Control Acquistion Agreement [Member]											
Investment | $				$ 31.8							
Telcon, Inc. [Member] | Management Control Acquistion Agreement [Member] | Korea (South), Won											
Investment | ₩					₩ 36,000,000,000						
Telcon, Inc. [Member] | API Supply Agreement [Member]											
Investment, closing price | $ / shares				$ 4.79							
Proceeds from supply agreement | $				$ 31.8							
Telcon, Inc. [Member] | API Supply Agreement [Member] | Pharmaceutical Grade L-glutamine [Member]											
Percentage of right to supply				25.00%	25.00%						
Agreement term				15 years	15 years						
Telcon, Inc. [Member] | API Supply Agreement [Member] | Korea (South), Won											
Shares originally purchased (in shares) | shares				6,643,559							
Investment, in per share | ₩ / shares					₩ 5,419						
Proceeds from supply agreement | ₩					₩ 36,000,000,000						
Telcon, Inc. [Member] | Raw Material Supply Agreement [Member]											
Agreement term			5 years								
Number of renewals | Number			10								

Telcon, Inc. [Member] | Raw Material Supply Agreement [Member] | Pharmaceutical Grade L-glutamine [Member]				
Weight of drug per supply agreement | kg		940,000		
Unit price of grade L-glutamine | $ / kg		50	189	189
Purchase amount | $		$ 47.0		
KPM Tech Co And Hanil Vacuum Co [Member] | Telcon, Inc. [Member]				
Number of shares issued | shares	4,444,445			
Common stock price | $ / shares	$ 6.60			

RELATED PARTY TRANSACTIONS (Details) $ / shares in Units, $ in Thousands		3 Months Ended Mar. 31, 2019 USD ($) Number $ / shares		12 Months Ended Dec. 31, 2018 USD ($) Number $ / shares	
Short-term Debt [Line Items]					
Principal Amount Outstanding		$ 38,834		$ 38,239	
Shares Underlying Notes | Number		6,240		6,499	
Lan T. Tran [Member]					
Short-term Debt [Line Items]					
Interest Rate		10.00%	[1]	10.00%	[2]
Date of Loan		Apr. 29, 2016	[1]	Apr. 29, 2016	[2]
Term of Loan		Due on Demand	[1]	Due on Demand	[2]
Principal Amount Outstanding		$ 20	[1]	$ 20	[2]
Highest Principal Outstanding		$ 20	[1]	$ 20	[2]
Hope Hospice [Member]					
Short-term Debt [Line Items]					
Interest Rate	[3]	10.00%		10.00%	
Date of Loan	[3]	Jun. 03, 2016		Jun. 03, 2016	
Term of Loan	[3]	Due on Demand		Due on Demand	
Principal Amount Outstanding	[3]	$ 250		$ 250	
Highest Principal Outstanding	[3]	$ 250		$ 250	
Lan T. Tran [Member]					
Short-term Debt [Line Items]					
Interest Rate		10.00%	[1]	10.00%	[2]
Date of Loan		Feb. 09, 2017	[1]	Feb. 09, 2017	[2]
Term of Loan		Due on Demand	[1]	Due on Demand	[2]
Principal Amount Outstanding	[2]			$ 12	
Highest Principal Outstanding		$ 12	[1]	$ 12	[2]
Yutaka Niihara [Member]					
Short-term Debt [Line Items]					
Interest Rate		10.00%	[1],[4]	10.00%	[2],[5]
Date of Loan		Sep. 14, 2017	[1],[4]	Sep. 14, 2017	[2],[5]
Term of Loan		Due on Demand	[1],[4]	Due on Demand	[2],[5]
Principal Amount Outstanding		$ 27	[1],[4]	$ 27	[2],[5]
Highest Principal Outstanding		$ 904	[1],[4]	904	[2],[5]

Amount of Principal Repaid	[2],[5]			877	
Amount of Interest Paid	[2],[5]			$ 95	
Lan T. Tran [Member]					
Short-term Debt [Line Items]					
Interest Rate		10.00%	[1]	11.00%	[2]
Date of Loan		Feb. 10, 2018	[1]	Feb. 10, 2018	[2]
Term of Loan		Due on Demand	[1]	Due on Demand	[2]
Principal Amount Outstanding		$ 159	[1]	$ 159	[2]
Highest Principal Outstanding		$ 159	[1]	159	[2]
Lan T. Tran [Member]					
Short-term Debt [Line Items]					
Interest Rate	[1]	10.00%			
Date of Loan	[1]	Feb. 09, 2019			
Term of Loan	[1]	Due on Demand			
Principal Amount Outstanding	[1]	$ 14			
Highest Principal Outstanding	[1]	14			
Promissory Note Payable To Related Parties [Member]					
Short-term Debt [Line Items]					
Principal Amount Outstanding		470		468	
Highest Principal Outstanding		$ 1,359		2,176	
Amount of Principal Repaid				1,708	
Amount of Interest Paid				$ 294	
Yasushi Nagasaki [Member]					
Short-term Debt [Line Items]					
Interest Rate		10.00%	[1]	10.00%	[2]
Date of Loan		Jun. 29, 2012	[1]	Jun. 29, 2012	[2]
Term of Loan		Due on Demand	[1]	Due on Demand	[2]
Principal Amount Outstanding		$ 200	[1]	$ 200	[2]
Highest Principal Outstanding		$ 200	[1]	$ 200	[2]
Conversion Rate (in dollars per share) | $ / shares		$ 3.30	[1]	$ 3.30	[2]
Shares Underlying Notes | Number		76,000	[1]	74,000	[2]
Yutaka & Soomi Niihara [Member]					
Short-term Debt [Line Items]					
Interest Rate		10.00%	[1],[4]	10.00%	[2],[5]
Date of Loan		Nov. 16, 2015	[1],[4]	Nov. 16, 2015	[2],[5]
Term of Loan		2 years	[1],[4]	2 years	[2],[5]

Principal Amount Outstanding		$ 200	[1],[4]	$ 200	[2],[5]
Highest Principal Outstanding		$ 200	[1],[4]	$ 200	[2],[5]
Conversion Rate (in dollars per share) | $ / shares		$ 4.50	[1],[4]	$ 4.50	[2],[5]
Shares Underlying Notes | Number		59,000	[1],[4]	58,000	[2],[5]
Wei Peu Zen [Member]					
Short-term Debt [Line Items]					
Interest Rate		10.00%	[4]	10.00%	[5]
Date of Loan		Nov. 06, 2017	[4]	Nov. 06, 2017	[5]
Term of Loan		2 years	[4]	2 years	[5]
Principal Amount Outstanding		$ 5,000	[4]	$ 5,000	[5]
Highest Principal Outstanding		5,000	[4]	5,000	[5]
Amount of Interest Paid		$ 250	[4]	$ 250	[5]
Conversion Rate (in dollars per share) | $ / shares		$ 10.00	[4]	$ 10.00	[5]
Shares Underlying Notes | Number		545,000	[4]	533,000	[5]
Profit Preview International Group, Ltd. [Member]					
Short-term Debt [Line Items]					
Interest Rate	[6]	10.00%		10.00%	
Date of Loan	[6]	Feb. 01, 2018		Feb. 01, 2018	
Term of Loan	[6]	2 years		2 years	
Principal Amount Outstanding	[6]	$ 4,037		$ 4,037	
Highest Principal Outstanding	[6]	4,037		4,037	
Amount of Interest Paid	[6]	$ 202		$ 202	
Conversion Rate (in dollars per share) | $ / shares	[6]	$ 10.00		$ 10.00	
Shares Underlying Notes | Number	[6]	430,000		420,000	
Profit Preview International Group, Ltd. [Member]					
Short-term Debt [Line Items]					
Interest Rate	[6]	10.00%		10.00%	
Date of Loan	[6]	Mar. 21, 2018		Mar. 21, 2018	
Term of Loan	[6]	2 years		2 years	
Principal Amount Outstanding	[6]	$ 5,363		$ 5,363	
Highest Principal Outstanding	[6]	5,363		5,363	
Amount of Interest Paid	[6]	$ 268		$ 268	
Conversion Rate (in dollars per share) | $ / shares	[6]	$ 10.00		$ 10.00	
Shares Underlying Notes | Number	[6]	565,000		552,000	
Convertible notes payable - related party current [Member]					
Short-term Debt [Line Items]					
Principal Amount Outstanding		$ 14,800		$ 5,400	

Highest Principal Outstanding		$ 14,800	5,400
Amount of Interest Paid			$ 250
Shares Underlying Notes | Number		1,675,000	665,000
Promissory note payable and convertible notes payable - related party [Member]			
Short-term Debt [Line Items]			
Principal Amount Outstanding		$ 15,270	$ 15,268
Highest Principal Outstanding		$ 16,159	16,976
Amount of Principal Repaid			1,708
Amount of Interest Paid			$ 1,014
Shares Underlying Notes | Number		1,675,000	1,637,000
Masaharu & Emiko Osato [Member]			
Short-term Debt [Line Items]			
Interest Rate	[5]		11.00%
Date of Loan	[5]		Dec. 29, 2015
Term of Loan	[5]		Due on Demand
Highest Principal Outstanding	[5]		$ 300
Amount of Principal Repaid	[5]		300
Amount of Interest Paid	[5]		$ 76
Lan T. Tran [Member]			
Short-term Debt [Line Items]			
Interest Rate	[2]		11.00%
Date of Loan	[2]		Feb. 10, 2016
Term of Loan	[2]		Due on Demand
Highest Principal Outstanding	[2]		$ 131
Amount of Principal Repaid	[2]		131
Amount of Interest Paid	[2]		$ 29
Masaharu & Emiko Osato [Member]			
Short-term Debt [Line Items]			
Interest Rate	[5]		11.00%
Date of Loan	[5]		Feb. 25, 2016
Term of Loan	[5]		Due on Demand
Highest Principal Outstanding	[5]		$ 400
Amount of Principal Repaid	[5]		400
Amount of Interest Paid	[5]		94
Convertible notes payable - related party non-current [Member]			
Short-term Debt [Line Items]			
Principal Amount Outstanding			9,400

Highest Principal Outstanding	9,400
Amount of Interest Paid	$ 470
Shares Underlying Notes | Number	972,000

[1] Officer.

[2] Officer

[3] Dr. Niihara, a Director and Chief Executive Officer of the Company, is also the Chief Executive Officer of Hope Hospice.

[4] Director.

[5] Director

[6] Mr. Zen, a Director of the Company, is the sole owner of Profit Preview International Group, Ltd.

SUBSEQUENT EVENTS (Details Narrative) - USD ($) $ in Millions		3 Months Ended
	May 13, 2019	Mar. 31, 2019
Subsequent Event [Line Items]		
Aggregate outstanding convertible notes converted into common stock		$ 4.8
Percentage of outstanding convertible notes converted into common stock		14.00%
Scenario, Forecast [Member]		
Subsequent Event [Line Items]		
Aggregate outstanding convertible notes converted into common stock	$ 4.2	
Percentage of outstanding convertible notes converted into common stock	12.00%	

SUBSEQUENT EVENTS (Details) - USD ($)		3 Months Ended	
	Apr. 01, 2019	Mar. 31, 2019	Mar. 31, 2018
Common shares		$ 2,530,000	$ 275,000
Common Stock [Member]			
Number of Shares Issued		307,500	25,000
Common Stock [Member] | Subsequent Event [Member]			
Common shares	$ 711,550		
Number of Shares Issued	103,590		