UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-Q

(Mark One)

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

For the quarterly period ended March 31, 2020

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 number 001-10865

AMAG Pharmaceuticals, Inc.
(Exact Name of Registrant as Specified in Its Charter)

Delaware	**04-2742593**
(State or Other Jurisdiction of Incorporation or Organization)	(I.R.S. Employer Identification No.)
1100 Winter Street, Waltham, Massachusetts	**02451**
(Address of Principal Executive Offices)	(Zip Code)

(617) 498-3300
(Registrant's Telephone Number, Including Area Code)

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

Title of each class	**Trading Symbol(s)**	**Name of each exchange on which registered**
Common Stock, par value $0.01 per share	AMAG	NASDAQ Global Select Market

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, a smaller reporting company, or an emerging growth company. See 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** ☒

As of May 6, 2020, there were 34,272,805 shares of the registrant's Common Stock, par value $0.01 per share, outstanding.

AMAG PHARMACEUTICALS, INC.
FORM 10-Q
FOR THE QUARTER ENDED MARCH 31, 2020
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PART I. FINANCIAL INFORMATION
Item 1. Financial Statements:

AMAG PHARMACEUTICALS, INC.
CONDENSED CONSOLIDATED BALANCE SHEETS
(IN THOUSANDS, EXCEPT SHARE AND PER SHARE DATA)
(Unaudited)

	March 31, 2020	December 31, 2019
ASSETS		
Current assets:		
Cash and cash equivalents	$ 54,455	$ 113,009
Marketable securities	70,288	58,742
Accounts receivable, net	106,484	94,163
Inventories	33,676	31,553
Prepaid and other current assets	25,734	19,100
Total current assets	290,637	316,567
Property and equipment, net	3,312	4,116
Goodwill	422,513	422,513
Intangible assets, net	13,783	23,620
Operating lease right-of-use asset	22,835	23,286
Deferred tax assets	—	630
Restricted cash	495	495
Total assets	$ 753,575	$ 791,227
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 16,520	$ 27,021
Accrued expenses	167,661	177,079
Current portion of operating lease liability	4,065	4,077
Current portion of acquisition-related contingent consideration	—	17
Total current liabilities	188,246	208,194
Long-term liabilities:		
Convertible notes, net	281,038	277,034
Long-term operating lease liability	19,433	19,791
Other long-term liabilities	1,120	89
Total liabilities	489,837	505,108
Commitments and contingencies (Note O)		
Stockholders' equity:		
Preferred stock, par value $0.01 per share, 2,000,000 shares authorized; none issued	—	—
Common stock, par value $0.01 per share, 117,500,000 shares authorized; 34,266,256 and 33,999,081 shares issued and outstanding at March 31, 2020 and December 31, 2019, respectively	342	339
Additional paid-in capital	1,300,572	1,297,917
Accumulated other comprehensive loss	(3,787)	(3,239)
Accumulated deficit	(1,033,389)	(1,008,898)
Total stockholders' equity	263,738	286,119
Total liabilities and stockholders' equity	$ 753,575	$ 791,227

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

AMAG PHARMACEUTICALS, INC.
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(IN THOUSANDS, EXCEPT PER SHARE DATA)
(Unaudited)

	Three Months Ended March 31,	
	2020	**2019**
Revenues:		
Product sales, net	$ 68,628	$ 75,729
Other revenues	33	75
Total revenues	68,661	75,804
Costs and expenses:		
Cost of product sales	24,359	18,477
Research and development expenses	11,180	18,066
Acquired in-process research and development	—	74,856
Selling, general and administrative expenses	52,697	74,682
Restructuring expenses	—	7,420
Total costs and expenses	88,236	193,501
Operating loss	(19,575)	(117,697)
Other income (expense):		
Interest expense	(6,604)	(6,450)
Interest and dividend income	477	1,586
Other income	1,311	340
Total other expense, net	(4,816)	(4,524)
Loss before income taxes	(24,391)	(122,221)
Income tax expense (benefit)	100	(137)
Net loss	$ (24,491)	$ (122,084)
Basic and diluted net loss per share	$ (0.72)	$ (3.54)
Weighted average shares outstanding used to compute net loss per share (basic and diluted)	34,104	34,469

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

AMAG PHARMACEUTICALS, INC.
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS
(IN THOUSANDS)
(Unaudited)

	Three Months Ended March 31,	
	2020	**2019**
Net loss	$ (24,491)	$ (122,084)
Other comprehensive loss:		
Holding (losses) gains associated with marketable securities arising during period, net of tax	(548)	609
Total comprehensive loss	$ (25,039)	$ (121,475)

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

AMAG PHARMACEUTICALS, INC.
CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(IN THOUSANDS, EXCEPT SHARES)
(Unaudited)

	Common Stock					
	Shares	Amount	Additional Paid-in Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total Stockholders' Equity
Balance at December 31, 2019	33,999,081	$ 339	$ 1,297,917	$ (3,239)	$ (1,008,898)	$ 286,119
Net shares issued in connection with the vesting of restricted stock units, net of withholdings	267,175	3	(1,213)	—	—	(1,210)
Non-cash equity based compensation	—	—	3,868	—	—	3,868
Unrealized losses on securities, net of tax	—	—	—	(548)	—	(548)
Net loss	—	—	—	—	(24,491)	(24,491)
Balance at March 31, 2020	34,266,256	$ 342	$ 1,300,572	$ (3,787)	$ (1,033,389)	$ 263,738

	Common Stock					
	Shares	Amount	Additional Paid-in Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total Stockholders' Equity
Balance at December 31, 2018	34,606,760	$ 346	$ 1,292,736	$ (3,985)	$ (542,442)	$ 746,655
Net shares issued in connection with the exercise of stock options and vesting of restricted stock units, net of withholdings	214,868	2	(1,606)	—	—	(1,604)
Repurchase of common stock pursuant to the share repurchase program	(1,074,800)	(11)	(13,719)	—	—	(13,730)
Non-cash equity based compensation	—	—	4,873	—	—	4,873
Unrealized gains on securities, net of tax	—	—	—	609	—	609
Net loss	—	—	—	—	(122,084)	(122,084)
Balance at March 31, 2019	33,746,828	$ 337	$ 1,282,284	$ (3,376)	$ (664,526)	$ 614,719

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

AMAG PHARMACEUTICALS, INC.
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(IN THOUSANDS)
(Unaudited)

	Three Months Ended March 31,	
	2020	**2019**
Cash flows from operating activities:		
Net loss	$ (24,491)	$ (122,084)
Adjustments to reconcile net loss to net cash (used in) provided by operating activities:		
Depreciation and amortization	10,318	4,375
Provision for bad debt expense	223	(16)
Amortization of premium/discount on purchased securities	4	(27)
Write-down of inventory	616	—
Non-cash equity-based compensation expense	3,868	4,873
Non-cash IPR&D expense	—	18,029
Amortization of debt discount and debt issuance costs	4,004	3,783
Gains on marketable securities, net	(9)	—
Change in fair value of contingent consideration	—	(6)
Deferred income taxes	630	458
Non-cash lease expense	451	—
Gain on sale of assets	(1,409)	—
Changes in operating assets and liabilities:		
Accounts receivable, net	(12,547)	(7,971)
Inventories	(2,770)	(2,973)
Prepaid and other current assets	(6,490)	(21,580)
Accounts payable and accrued expenses	(19,671)	31,432
Other assets and liabilities	664	1,799
Net cash used in operating activities	(46,609)	(89,908)
Cash flows from investing activities:		
Proceeds from sales or maturities of marketable securities	11,255	27,945
Purchase of marketable securities	(23,345)	(14,815)
Net proceeds from the sale of assets	1,440	—
Capital expenditures	(68)	(1,794)
Net cash (used in) provided by investing activities	(10,718)	11,336
Cash flows from financing activities:		
Payments to settle convertible notes	—	(21,417)
Payments of contingent consideration	(17)	(17)
Payments for repurchases of common stock	—	(13,730)
Proceeds from the exercise of common stock options	—	33
Payments of employee tax withholding related to equity-based compensation	(1,210)	(1,636)
Net cash used in financing activities	(1,227)	(36,767)
Net decrease in cash, cash equivalents, and restricted cash	(58,554)	(115,339)
Cash, cash equivalents, and restricted cash at beginning of the period	113,504	253,751
Cash, cash equivalents, and restricted cash at end of the period	$ 54,950	$ 138,412
Supplemental data for cash flow information:		
Cash (refunded) paid for taxes	$ (256)	$ 78
Cash paid for interest	$ —	$ 267
Non-cash investing and financing activities:		
Settlement of note receivable in connection with Perosphere acquisition	$ —	$ 10,000
Right-of-use assets obtained in exchange for lease liabilities	$ —	$ 918

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

AMAG PHARMACEUTICALS, INC.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

A. DESCRIPTION OF BUSINESS

AMAG Pharmaceuticals, Inc., a Delaware corporation, was founded in 1981. We are a pharmaceutical company focused on bringing innovative products to patients with unmet medical needs by leveraging our development and commercial expertise to invest in and grow our pharmaceutical products and product candidates across a range of therapeutic areas. Our currently marketed products support the health of patients in the areas of hematology and maternal and women's health, including Feraheme® (ferumoxytol injection) for intravenous use, Makena® (hydroxyprogesterone caproate injection) auto-injector, Intrarosa® (prasterone) vaginal inserts and Vyleesi® (bremelanotide injection). In addition to our approved products, our portfolio includes two product candidates, AMAG-423 (digoxin immune fab (ovine)), which is being studied for the treatment of severe preeclampsia, and ciraparantag, which is being studied as an anticoagulant reversal agent.

In December 2019, we completed a review of our product portfolio and strategy. This strategic review resulted in our intention to divest Intrarosa® (prasterone) and Vyleesi® (bremelanotide injection), as announced in January 2020. We determined that these anticipated actions did not result in the related assets meeting the criteria to be recorded as held for sale at March 31, 2020.

Throughout this Quarterly Report on Form 10-Q, AMAG Pharmaceuticals, Inc. and our consolidated subsidiaries are collectively referred to as "the Company," "AMAG," "we," "us," or "our."

COVID-19

The global spread of COVID-19 has created significant volatility, uncertainty and economic disruption on a global scale, including in the United States, where we market our products, where our operations and employees reside and where we conduct clinical trials, as well as in Europe and other countries where we are conducting our AMAG-423 Phase 2b/3a study. The COVID-19 pandemic did not significantly impact our financial results during the three months ended March 31, 2020, but will likely impact our financial results in future periods in 2020. The extent to which the COVID-19 pandemic impacts our business, operations and financial results will depend on numerous evolving factors that we may not be able to accurately predict. While there have been no material impairments to date, any prolonged material disruptions to our sales, supply, research and development efforts and/or operations could negatively impact the Company's business, operations and/or financial results.

B. BASIS OF PRESENTATION AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Presentation

These condensed consolidated financial statements are unaudited and, in the opinion of management, include all adjustments necessary for a fair statement of our financial position and results of operations for the interim periods presented. Such adjustments consisted only of normal recurring items. The year-end condensed consolidated balance sheet data was derived from audited financial statements, but does not include all disclosures required by accounting principles generally accepted in the United States of America ("GAAP").

In accordance with GAAP for interim financial reports and the instructions for Form 10-Q and the rules of the Securities and Exchange Commission, certain information and footnote disclosures normally included in annual financial statements have been condensed or omitted. Our accounting policies are described in the Notes to the Consolidated Financial Statements in our Annual Report on Form 10-K for the year ended December 31, 2019 (our "Annual Report"). Interim results are not necessarily indicative of the results of operations for the full year. These interim financial statements should be read in conjunction with our Annual Report.

Principles of Consolidation

The accompanying condensed consolidated financial statements include our accounts and the accounts of our wholly-owned subsidiaries. All intercompany balances and transactions have been eliminated in consolidation.

Use of Estimates and Assumptions

The preparation of our condensed consolidated financial statements in conformity with GAAP requires us to make estimates, judgments and assumptions that may affect the reported amounts of assets, liabilities, revenues and expenses, and the related disclosure of contingent liabilities. We base our estimates on historical experience and on various other assumptions that we believe are reasonable, the results of which form the basis for making judgments about the carrying values of assets, liabilities, equity and the amount of revenues and expenses. The full extent to which the COVID-19 pandemic will directly or indirectly impact our business, results of operations and financial condition, including product sales revenue; product sales allowances and accruals; allowance for expected credit losses; marketable securities; inventory; fair value estimates used to assess impairment of long-lived assets, including goodwill and other intangible assets; debt obligations; certain accrued liabilities, including clinical trial accruals; equity-based compensation expense; and income taxes, inclusive of valuation allowances, will depend on future developments that are highly uncertain, including new information that may emerge concerning COVID-19 and the actions taken to contain or treat its impact, as well as the economic impact on local, regional and national customers and markets. We have made estimates of the impact of COVID-19 within our financial statements and there may be changes to those estimates in future periods. Actual results could differ materially from these estimates.

Restricted Cash

We classified $0.5 million of our cash as restricted cash, a non-current asset on the balance sheet, as of March 31, 2020 and December 31, 2019. This amount represented the security deposit delivered to the landlord of our Waltham, Massachusetts headquarters.

Concentrations and Significant Customer Information

Financial instruments which potentially subject us to concentrations of credit risk consist principally of cash and cash equivalents, marketable securities, and accounts receivable. We currently hold our excess cash primarily in institutional money market funds, corporate debt securities, U.S. treasury and government agency securities and certificates of deposit. As of March 31, 2020, we did not have a material concentration in any single investment.

Our operations are located entirely within the U.S. We focus primarily on developing, manufacturing, and commercializing our products and product candidates. The following table sets forth customers who represented 10% or more of our total revenues for the three months ended March 31, 2020 and 2019:

	Three Months Ended March 31,	
	2020	2019
McKesson Corporation	40 %	37 %
AmerisourceBergen Drug Corporation	31 %	27 %
Cardinal Health	12 %	13 %

Our net accounts receivable primarily represent amounts due for products sold directly to wholesalers, distributors and specialty pharmacies. Accounts receivable for our products are recorded net of reserves for estimated chargeback obligations, prompt payment discounts and any allowance for expected credit losses. At March 31, 2020 and December 31, 2019, three customers accounted for 10% or more of our accounts receivable balances, representing approximately 87% and 85% in the aggregate of our total accounts receivable, respectively.

We are currently dependent on a single supplier for certain of our manufacturing processes, including for Feraheme drug substance (produced in two separate facilities) and a single supplier for our Makena auto-injector product. We have been and may continue to be exposed to a significant loss of revenue from the sale of our products in the event that our suppliers and/or manufacturers are not able to fulfill demand for any reason.

Credit Losses

In June 2016, the FASB issued ASU No. 2016-13, *Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments* (“Topic 326”). We adopted Topic 326 effective January 1, 2020 using a modified retrospective approach. The adoption of Topic 326 did not have a material impact on our condensed consolidated financial statements and accordingly, no transition adjustment was recorded at the adoption date. Under Topic 326, we estimate expected credit losses for our trade receivables held at the reporting date based on historical experience, current conditions and reasonable and supportable forecasts. We also evaluate any impaired marketable securities against the new impairment model within Topic 326 to determine whether any loss or allowance for credit loss should be recorded at the reporting date.

C. REVENUE RECOGNITION

Product Revenue and Allowances and Accruals

The following table provides information about disaggregated revenue by products for the three months ended March 31, 2020 and 2019 (in thousands):

	Three Months Ended March 31,	
	2020	2019
Product sales, net		
Feraheme	$ 44,433	$ 40,015
Makena	21,777	31,257
Intrarosa	3,169	4,414
Other	(751)	43
Total product sales, net	$ 68,628	$ 75,729

Total gross product sales were offset by product sales allowances and accruals for the three months ended March 31, 2020 and 2019 as follows (in thousands):

	Three Months Ended March 31,	
	2020	2019
Gross product sales	$ 232,741	$ 211,718
Provision for product sales allowances and accruals:		
Contractual adjustments	143,175	108,884
Governmental rebates	20,938	27,105
Total	164,113	135,989
Product sales, net	$ 68,628	$ 75,729

The following table summarizes the product revenue allowance and accrual activity for the three months ended March 31, 2020 (in thousands):

	Contractual Adjustments	Governmental Rebates	Total
Balance at December 31, 2019	$ 95,221	$ 41,319	$ 136,540
Provisions related to current period sales	147,235	18,175	165,410
Adjustments related to prior period sales	(4,060)	2,762	(1,298)
Payments/returns relating to current period sales	(95,284)	—	(95,284)
Payments/returns relating to prior period sales	(37,969)	(29,646)	(67,615)
Balance at March 31, 2020	$ 105,143	$ 32,610	$ 137,753

D. MARKETABLE SECURITIES

As of March 31, 2020 and December 31, 2019, our marketable securities consisted of securities classified as available-for-sale in accordance with accounting standards which provide guidance related to accounting and classification of certain investments in marketable securities.

The following is a summary of our marketable securities as of March 31, 2020 and December 31, 2019 (in thousands):

	March 31, 2020			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
Short-term marketable securities:*				
Corporate debt securities	$ 44,888	$ 42	$ (101)	$ 44,829
Certificates of deposit	4,800	—	—	4,800
Commercial paper	1,000	—	—	1,000
Total short-term marketable securities	$ 50,688	$ 42	$ (101)	$ 50,629
Long-term marketable securities:**				
Corporate debt securities	$ 18,858	$ 29	$ (228)	$ 18,659
Certificates of deposit	1,000	—	—	1,000
Total long-term marketable securities	$ 19,858	$ 29	$ (228)	$ 19,659
Total marketable securities	$ 70,546	$ 71	$ (329)	$ 70,288

* Represents marketable securities with a remaining maturity of less than one year.
** Represents marketable securities with a remaining maturity of one to three years classified as short-term on our condensed consolidated balance sheets.

	December 31, 2019			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
Short-term marketable securities:*				
Corporate debt securities	$ 46,186	$ 140	$ (2)	$ 46,324
U.S. treasury and government agency securities	2,750	—	—	2,750
Certificates of deposit	1,500	—	—	1,500
Total short-term marketable securities	$ 50,436	$ 140	$ (2)	$ 50,574
Long-term marketable securities:**				
Corporate debt securities	$ 8,016	$ 152	$ —	$ 8,168
Total long-term marketable securities	8,016	152	—	8,168
Total marketable securities	$ 58,452	$ 292	$ (2)	$ 58,742

* Represents marketable securities with a remaining maturity of less than one year.
** Represents marketable securities with a remaining maturity of one to three years classified as short-term on our condensed consolidated balance sheets.

Impairments and Unrealized Gains and Losses on Marketable Securities

We adopted Topic 326 effective January 1, 2020. Under Topic 326, we evaluate any impaired marketable securities against the new impairment model within Topic 326 to determine whether any loss or allowance for credit loss should be recorded at March 31, 2020.

We did not recognize any allowance for credit losses on our condensed consolidated statements of operations related to our marketable securities during the three months ended March 31, 2020. As of March 31, 2020, we had no losses in an unrealized loss position for more than one year. Based on the contractual terms and credit ratings of these investments, we expect to recover the entire amortized cost basis of each security. We do not intend to sell the investments and it is not more likely than not that we will be required to sell the investments before recovery of their amortized cost bases. We considered various factors, including the length of time that each security was in an unrealized loss position and our ability and intent to hold these securities until the recovery of their amortized cost basis occurs. Future events may occur, or additional information may become available, which may cause us to identify credit losses where we do not expect to receive cash flows sufficient to recover the entire amortized cost basis of a security and may necessitate the recording of future realized losses on securities in our portfolio. Significant losses in the estimated fair values of our marketable securities could have a material adverse effect on our earnings in future periods.

As of March 31, 2019, we had no material losses in an unrealized loss position for more than one year and did not recognize any other-than-temporary impairment losses in our condensed consolidated statements of operations related to our marketable securities during the three months ended March 31, 2019.

E. FAIR VALUE MEASUREMENTS

The following tables present information about our assets and liabilities that we measure at fair value on a recurring basis and indicate the level within the fair value hierarchy of the valuation techniques utilized to determine such fair value as of March 31, 2020 and December 31, 2019 (in thousands):

	Fair Value Measurements at March 31, 2020 Using:			
	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets:				
Cash equivalents	$ 1,890	$ 1,890	$ —	$ —
Corporate debt securities	63,488	—	63,488	—
Certificates of deposit	5,800	—	5,800	—
Commercial paper	1,000	—	1,000	—
Total assets	$ 72,178	$ 1,890	$ 70,288	$ —

	Fair Value Measurements at December 31, 2019 Using:			
	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets:				
Cash equivalents	$ 13,732	$ 13,732	$ —	$ —
Corporate debt securities	54,492	—	54,492	—
U.S. treasury and government agency securities	2,750	—	2,750	—
Certificates of deposit	1,500	—	1,500	—
Total assets	$ 72,474	$ 13,732	$ 58,742	$ —
Liabilities:				
Contingent consideration - MuGard	$ 17	$ —	$ —	$ 17
Total liabilities	$ 17	$ —	$ —	$ 17

Cash Equivalents

Our cash equivalents are classified as Level 1 assets under the fair value hierarchy as these assets have been valued using quoted market prices in active markets and do not have any restrictions on redemption. As of March 31, 2020 and December 31, 2019, cash equivalents were primarily comprised of funds in money market accounts.

Marketable Securities

Our marketable securities are classified as Level 2 assets under the fair value hierarchy as the values of these assets are primarily determined from independent pricing services, which normally derive security prices from recently reported trades for identical or similar securities, making adjustments based upon other significant observable market transactions. At the end of each reporting period, we perform quantitative and qualitative analysis of prices received from third parties to determine whether prices are reasonable estimates of fair value. After completing our analysis, we did not adjust or override any fair value measurements provided by our pricing services as of March 31, 2020. In addition, there were no transfers or reclassifications of any securities between Level 1 and Level 2 during the three months ended March 31, 2020.

Debt

We estimate the fair value of our debt obligations using quoted market prices obtained from third-party pricing services, which are classified as Level 2 inputs. As of March 31, 2020, the estimated fair value of our 2022 Convertible Notes (as defined below) was $247.7 million, which differed from its carrying value. See Note Q, "*Debt*" for additional information on our debt obligations.

F. INVENTORIES

Our major classes of inventories were as follows as of March 31, 2020 and December 31, 2019 (in thousands):

	March 31, 2020	December 31, 2019
Raw materials	$ 8,438	$ 5,211
Work in process	5,131	6,248
Finished goods	20,107	20,094
Total inventories	$ 33,676	$ 31,553

G. PROPERTY AND EQUIPMENT, NET

Property and equipment, net consisted of the following as of March 31, 2020 and December 31, 2019 (in thousands):

	March 31, 2020	December 31, 2019
Computer equipment and software	$ 1,568	$ 1,568
Furniture and fixtures	1,714	1,714
Leasehold improvements	4,985	4,984
Laboratory and production equipment	6,278	6,570
Construction in progress	236	656
	14,781	15,492
Less: accumulated depreciation	(11,469)	(11,376)
Property and equipment, net	$ 3,312	$ 4,116

H. GOODWILL AND INTANGIBLE ASSETS, NET

Goodwill

During the first quarter, as a result of a number of business factors, including our market capitalization being below our carrying value and the potential impact of the COVID-19 pandemic, we performed a qualitative interim impairment assessment of our goodwill balance as of March 31, 2020. We determined that it was not more likely than not that the fair value of our reporting unit was less than its carrying value and therefore, did not perform a quantitative interim impairment test as of March 31, 2020. Our qualitative assessment was based on management's estimates and assumptions, a number of which are dependent on external factors, including the severity and duration of the COVID-19 pandemic. To the extent actual results differ materially from these estimates and we experience further negative developments in subsequent periods, interim impairment assessments could be required, which could result in an impairment of goodwill.

Intangible Assets

As of March 31, 2020 and December 31, 2019, our intangible assets consisted of the following (in thousands):

	March 31, 2020				December 31, 2019			
	Cost	Accumulated Amortization	Cumulative Impairments	Net	Cost	Accumulated Amortization	Cumulative Impairments	Net
Amortizable intangible assets:								
Makena auto-injector developed technology	$ 79,100	$ 17,755	$ 55,426	$ 5,919	$ 79,100	$ 15,782	$ 55,426	$ 7,892
Intrarosa developed technology	77,655	18,786	56,881	1,988	77,655	16,798	56,881	3,976
Vyleesi developed technology	60,000	15,140	38,984	5,876	60,000	9,264	38,984	11,752
Total intangible assets	$ 216,755	$ 51,681	$ 151,291	$ 13,783	$ 216,755	$ 41,844	$ 151,291	$ 23,620

As of March 31, 2020, the weighted average remaining amortization period for our finite-lived intangible assets was less than one year. Total amortization expense for the three months ended March 31, 2020 and 2019 was $9.8 million and $3.9 million, respectively. Amortization expense is recorded in cost of product sales on our condensed consolidated statements of operations. We expect our finite-lived intangible assets to be fully amortized in 2020.

I. CURRENT LIABILITIES

Accrued expenses consisted of the following as of March 31, 2020 and December 31, 2019 (in thousands):

	March 31, 2020	December 31, 2019
Commercial rebates, fees and returns	$ 117,854	$ 118,427
Manufacturing costs	17,014	21,364
Salaries, bonuses, and other compensation	16,356	18,693
Professional, license, and other fees and expenses	10,232	13,392
Research and development expense	2,270	3,539
Interest expense	3,467	867
Restructuring expense	468	797
Total accrued expenses	$ 167,661	$ 177,079

J. INCOME TAXES

The following table summarizes our effective tax rate and income tax expense (benefit) for the three months ended March 31, 2020 and 2019 (in thousands except for percentages):

	Three Months Ended March 31,	
	2020	2019
Effective tax rate	— %	— %
Income tax expense (benefit)	$ 100	$ (137)

For the three months ended March 31, 2020, we recognized an immaterial income tax expense, representing an effective tax rate of 0%. The difference between the statutory federal tax rate of 21% and the effective tax rate of 0% for the three months ended March 31, 2020, was primarily attributable to the valuation allowance established against our current period losses generated. We have established a valuation allowance on our deferred tax assets to the extent that our existing taxable temporary differences would not be available as a source of income to realize the benefits of those deferred tax assets. The income tax expense for the three months ended March 31, 2020 primarily related to state income taxes.

On March 27, 2020, the Coronavirus Aid, Relief, and Economic Security (“CARES”) Act was signed into law making several changes to the Internal Revenue Code. The changes include, but are not limited to, temporarily increasing the limitation on the amount of deductible interest expense, allowing taxpayers with alternative minimum tax credits to claim a refund for the entire amount of the credit instead of recovering the credit through refunds over a period of years, as required by the 2017 Tax

Cuts and Jobs Act, allowing companies to carryback certain net operating losses, and temporarily increasing the amount of net operating loss carryforwards that corporations can use to offset taxable income. The tax law changes in the CARES Act did not have a material impact on our income tax provision.

For the three months ended March 31, 2019, we recognized an immaterial income tax benefit, representing an effective tax rate of 0%. The income tax benefit for the three months ended March 31, 2019 primarily related to state taxes and the offset of the recognition of the income tax expense recorded in other comprehensive loss associated with the increase in the fair value of the available-for-sale debt securities that we carried at fair market value during the period. The difference between the statutory federal tax rate of 21% and the effective tax rate of 0% for the three months ended March 31, 2019 was primarily attributable to the valuation allowance established against our current period losses generated and the non-deductible IPR&D expense related to the Perosphere acquisition.

K. ACCUMULATED OTHER COMPREHENSIVE LOSS

The following table summarizes the changes in the accumulated balances of other comprehensive loss during the three months ended March 31, 2020 and 2019 (in thousands):

	Three Months Ended March 31,	
	2020	2019
Beginning balance	$ (3,239)	$ (3,985)
Holding (losses) gains associated with marketable securities arising during period, net of tax	(548)	609
Ending balance	$ (3,787)	$ (3,376)

L. EARNINGS PER SHARE

The components of basic and diluted earnings per share for the three months ended March 31, 2020 and 2019 were as follows (in thousands, except per share data):

	Three Months Ended March 31,	
	2020	2019
Net loss	$ (24,491)	$ (122,084)
Weighted average common shares outstanding	34,104	34,469
Basic and diluted net loss per share	$ (0.72)	$ (3.54)

The following table sets forth the potential common shares issuable upon the exercise of outstanding options, the vesting of restricted stock units (“RSUs”), and the conversion of the 2022 Convertible Notes, which were excluded from our computation of diluted net loss per share because their inclusion would have been anti-dilutive (in thousands):

	Three Months Ended March 31,	
	2020	2019
Options to purchase shares of common stock	4,013	3,946
Shares of common stock issuable upon the vesting of RSUs	1,608	1,720
2022 Convertible Notes	11,695	11,695
Total	17,316	17,361

M. EQUITY-BASED COMPENSATION

We currently maintain three equity compensation plans; our 2019 Equity Incentive Plan (the "2019 Plan"), which was approved by our stockholders at our 2019 annual meeting and replaced our Fourth Amended and Restated 2007 Equity Incentive Plan (the "2007 Plan"), the Lumara Health Inc. Amended and Restated 2013 Incentive Compensation Plan (the "Lumara Health 2013 Plan") and our 2015 Employee Stock Purchase Plan ("2015 ESPP"). All outstanding stock options granted under each of our equity compensation plans other than our 2015 ESPP have an exercise price equal to the closing price of a share of our common stock on the grant date.

Stock Options

The following table summarizes stock option activity for the three months ended March 31, 2020:

	2019 Plan	2007 Plan	Lumara Health 2013 Plan	Inducement Grants	Total
Outstanding at December 31, 2019	472,412	2,585,466	131,775	696,164	3,885,817
Granted	228,650	—	—	—	228,650
Exercised	—	—	—	—	—
Expired or terminated	(35,600)	(113,530)	(2,988)	(32,598)	(184,716)
Outstanding at March 31, 2020	665,462	2,471,936	128,787	663,566	3,929,751

Restricted Stock Units

The following table summarizes RSU activity for the three months ended March 31, 2020:

	2019 Plan	2007 Plan	Lumara Health 2013 Plan	Inducement Grants	Total
Outstanding at December 31, 2019	128,742	1,407,305	2,167	41,223	1,579,437
Granted	647,029	—	—	—	647,029
Vested	—	(402,993)	(366)	(2,001)	(405,360)
Expired or terminated	(6,200)	(204,161)	—	(3,001)	(213,362)
Outstanding at March 31, 2020	769,571	800,151	1,801	36,221	1,607,744

Equity-Based Compensation Expense

Equity-based compensation expense for the three months ended March 31, 2020 and 2019 consisted of the following (in thousands):

	Three Months Ended March 31,	
	2020	2019
Cost of product sales	$ 203	$ 202
Research and development	70	680
Selling, general and administrative	3,512	3,325
Total equity-based compensation expense	3,785	4,207
Income tax effect	—	—
After-tax effect of equity-based compensation expense	$ 3,785	$ 4,207

In addition to the equity-based compensation expense presented in the table above, we incurred $0.7 million of equity-based compensation expense related to the restructuring activities during the first quarter of 2019, (as discussed further in Note R, below), which is classified within restructuring expense on our condensed consolidated statement of operations for the three months ended March 31, 2019.

N. STOCKHOLDERS' EQUITY

As of January 1, 2020, we had $26.8 million available under the share repurchase program initially approved by our Board of Directors in January 2016, which was updated in March 2019 to permit the repurchase of up to an aggregate of $80.0 million in shares of our common stock. During the three months ended March 31, 2020, we did not repurchase shares of common stock under this program. As of March 31, 2020, $26.8 million remains available for future repurchases under this program.

O. COMMITMENTS AND CONTINGENCIES

Commitments

Our long-term contractual obligations include commitments and estimated purchase obligations entered into in the normal course of business. These include commitments related to our facility and vehicle leases, purchases of inventory, debt obligations, and other purchase obligations.

Operating Lease Obligations

As of March 31, 2020, we had operating lease liabilities of $23.5 million and related right-of-use assets of $22.8 million related to operating leases for real estate, including our corporate headquarters, vehicles and office equipment. As of March 31, 2020, our leases have remaining terms of one to eight years. The weighted average remaining lease term and discount rate for our operating leases was 7.7 years and 5.1% at March 31, 2020, respectively.

Lease costs for our operating leases were $1.3 million and $1.1 million for the three months ended March 31, 2020 and 2019, respectively. Operating cash outflows for operating leases were $1.2 million for each of the three months ended March 31, 2020 and 2019, respectively.

Future minimum payments under our non-cancelable operating leases as of March 31, 2020 are as follows (in thousands):

Period		Future Minimum Lease Payments
Remainder of Year Ending December 31, 2020	$	3,076
Year Ending December 31, 2021		3,357
Year Ending December 31, 2022		3,898
Year Ending December 31, 2023		3,261
Year Ending December 31, 2024		3,246
Thereafter		12,192
Total	$	29,030
Less: Interest		5,532
Operating lease liability	$	23,498

Purchase Obligations

Purchase obligations primarily represent minimum purchase commitments for inventory. As of March 31, 2020, our minimum purchase commitments totaled $99.2 million.

Contingent Regulatory and Commercial Milestone Payments

We are required to make payments contingent on the achievement of certain regulatory and/or commercial milestones under the terms of our collaboration, license and other strategic agreements. Please refer to Note P, "*Acquisitions, Collaboration, License and Other Strategic Agreements*" for additional details regarding these contingent payments.

Contingencies

Legal Proceedings

We accrue a liability for legal contingencies when we believe that it is both probable that a liability has been incurred and that we can reasonably estimate the amount of the loss. We review these accruals and adjust them to reflect ongoing negotiations, settlements, rulings, advice of legal counsel and other relevant information. To the extent new information is obtained and our views on the probable outcomes of claims, suits, assessments, investigations or legal proceedings change,

changes in our accrued liabilities would be recorded in the period in which such determination is made. For certain matters referenced below, the liability is not probable or the amount cannot be reasonably estimated and, therefore, accruals have not been made. In addition, in accordance with the relevant authoritative guidance, for any matters in which the likelihood of material loss is at least reasonably possible, we will provide disclosure of the possible loss or range of loss. If a reasonable estimate cannot be made, however, we will provide disclosure to that effect. We expense legal costs as they are incurred.

On November 6, 2019, we were served with a summons in a case filed in the U.S. District Court, Northern District of Ohio, captioned Civil Case in Saginaw Chippewa Indian Tribe v. Purdue Pharma et al (Case No. 1-19-op-45841). The complaint names K-V Pharmaceutical Company ("KV") (Lumara Health's predecessor company), certain of its successor entities, subsidiaries and affiliate entities as defendants, along with over forty other pharmaceutical companies. We acquired Lumara Health in November 2014, a year after KV emerged from bankruptcy protection, at which time it and its then-existing subsidiaries became our wholly-owned subsidiaries. The plaintiff in this action alleges that KV's subsidiary, Ethex Corporation (as well as the other pharmaceutical companies named in the complaint), manufactured, promoted, sold, and distributed opioids, including a generic version of morphine. Defendants KV and Ethex Corporation were dismissed without prejudice from this Chippewa case pursuant to an order dated March 26, 2020. KV and Ethex were also named but not served in several other similar cases and were dismissed without prejudice from these other cases by orders dated March 26, 2020.

On November 1, 2019, we were named as a defendant in a class action lawsuit filed in the United States District Court for the Western District of Missouri, captioned Barnes v. AMAG Pharmaceuticals, Inc., Case No. 3:19-cv-05088-RK (W.D. Mo.). Subsequently, other plaintiffs represented by the same law firm filed similar class action lawsuits in other jurisdictions, and the lawsuits have been consolidated in the United States District Court for the District of New Jersey, Zamfirova et al. v. AMAG Pharmaceuticals, Inc., Case No. 20-00152-JMV-SCM (April 2, 2020). The plaintiffs in this action, on behalf of themselves and purported state-wide classes of similarly situated consumers in California, Kansas, Missouri, New Jersey, New York, and Wisconsin, assert claims for violation of state consumer protection laws and unjust enrichment based on allegations that we and/or our predecessor companies made misrepresentations and omissions regarding the effectiveness of Makena in connection with the sale and marketing of that product from 2011 through the present. Because this case is at the earliest stage, we are currently unable to predict the outcome or reasonably estimate the range of potential loss associated with this matter, if any.

On August 29, 2019, Lunar Representative, LLC ("Plaintiff"), on behalf of the former equity holders of Lumara Health Inc. ("Lumara"), filed a complaint against us in the Delaware Court of Chancery, captioned Lunar Representative, LLC v. AMAG Pharmaceuticals, Inc. (No. 2019-0688-JTL). On September 25, 2019, we filed a motion to dismiss the complaint. On January 9, 2020, Plaintiff filed an amended complaint. Plaintiff alleges that we did not exercise commercially reasonable efforts to market and sell the drug product Makena, and failed to achieve sales milestones for Makena, in breach of certain provisions of the September 28, 2014 Agreement and Plan of Merger between, among other parties, us and Lumara. Plaintiff filed an amended complaint on January 9, 2020. On January 24, 2020, we filed a motion to dismiss the amended complaint and filed our opening brief in support of such motion to dismiss the amended complaint on April 14, 2020. Plaintiff is seeking damages of $50.0 million, together with pre- and post-judgment interest, as well as attorneys' fees and costs. At this time, based on available information, we are unable to reasonably assess the ultimate outcome of this case or determine an estimate, or a range of estimates, of potential losses. We believe this lawsuit is without merit and intend to vigorously defend against the allegations.

On or about April 6, 2016, we received Notice of a Lawsuit and Request to Waive Service of a Summons in a case entitled Plumbers' Local Union No. 690 Health Plan v. Actavis Group et. al. ("Plumbers' Union"), which was filed in the Court of Common Pleas of Philadelphia County, First Judicial District of Pennsylvania and, after removal to federal court, is now pending in the United States District Court for the Eastern District of Pennsylvania (Civ. Action No. 16-65-AB). Thereafter, we were also made aware of a related complaint entitled Delaware Valley Health Care Coalition v. Actavis Group et. al. ("Delaware Valley"), which was filed with the Court of Common Pleas of Philadelphia County, First Judicial District of Pennsylvania District Court of Pennsylvania (Case ID: 160200806). The complaints name K-V Pharmaceutical Company ("KV") (Lumara Health's predecessor company), certain of its successor entities, subsidiaries and affiliate entities (the "Subsidiaries"), along with a number of other pharmaceutical companies. We acquired Lumara Health in November 2014, a year after KV emerged from bankruptcy protection, at which time it, along with its then existing subsidiaries, became our wholly-owned subsidiary. We have not been served with process or waived service of summons in either case. The actions are being brought alleging unfair and deceptive trade practices with regard to certain pricing practices that allegedly resulted in certain payers overpaying for certain of KV's generic products. On July 21, 2016, the Plaintiff in the Plumbers' Union case dismissed KV with prejudice to refiling and on October 6, 2016, all claims against the Subsidiaries were dismissed without prejudice. We are in discussions with Plaintiff's counsel to similarly dismiss all claims in the Delaware Valley case. Because we have not been served with process in the Delaware Valley case, we are currently unable to predict the outcome or reasonably estimate the range of potential loss associated with this matter, if any.

On July 20, 2015, the Federal Trade Commission (the "FTC") notified us that it is conducting an investigation into whether Lumara Health or its predecessor engaged in unfair methods of competition with respect to Makena or any

hydroxyprogesterone caproate product. As previously disclosed, we provided the FTC with a response in August 2015. We believe we have fully cooperated with the FTC and we have had no further interactions with the FTC on this matter since we provided our response to the FTC in August 2015. For further information on this matter, see Note P, "*Commitments and Contingencies*" to our Annual Report.

We may periodically become subject to other legal proceedings and claims arising in connection with ongoing business activities, including claims or disputes related to patents that have been issued or that are pending in the field of research on which we are focused. Other than the above actions, we are not aware of any material claims against us as of March 31, 2020.

P. ACQUISITIONS, COLLABORATION, LICENSE AND OTHER STRATEGIC AGREEMENTS

During the three months ended March 31, 2020, we were a party to the following collaboration, license or other strategic agreements:

Perosphere

On January 16, 2019, we acquired Perosphere pursuant to the Agreement and Plan of Merger (the "Perosphere Agreement"), dated as of December 12, 2018 between AMAG and Perosphere. We accounted for this transaction as an asset acquisition under ASU No. 2017-01, *Business Combinations (Topic 805): Clarifying the Definition of a Business* ("ASU 2017-01").

Under and subject to the terms and conditions set forth in the Perosphere Agreement, we are obligated to pay future contingent consideration of up to an aggregate of $365.0 million (the "Milestone Payments"), including (a) up to an aggregate of $140.0 million that becomes payable upon the achievement of specified regulatory milestones for ciraparantag (the "Regulatory Milestone Payments"), including a $40.0 million milestone payment upon approval of ciraparantag by the European Medicines Agency and (b) up to an aggregate of $225.0 million that becomes payable conditioned upon the achievement of specified sales milestones (the "Sales Milestone Payments"). If the final label approved for ciraparantag in the U.S. includes a boxed warning, the Regulatory Milestone Payments shall no longer be payable, and any previously paid Regulatory Milestone Payments shall be credited against 50% of any future Milestone Payments that otherwise becomes payable. The first sales milestone payment of $20.0 million will be payable upon annual net sales of ciraparantag of at least $100.0 million.

Velo

In September 2018, we exercised our option to acquire the global rights to the AMAG-423 program, pursuant to an option agreement entered into in July 2015 with Velo Bio, LLC ("Velo"), the terms of which were amended at the time of exercise. We accounted for this transaction as an asset acquisition under ASU No. 2017-01. Under the terms of the agreement, we are obligated to pay Velo a $30.0 million milestone payment upon FDA approval of AMAG-423. In addition, we are obligated to pay sales milestone payments to Velo of up to $240.0 million in the aggregate, triggered at various annual net sales thresholds between $300.0 million and $900.0 million and low-single digit royalties based on net sales. Further, we have assumed additional obligations under a previous agreement entered into by Velo with a third-party, including a $5.0 million milestone payment upon regulatory approval and $10.0 million following the first commercial sale of AMAG-423, payable in quarterly installments as a percentage of quarterly gross commercial sales until the obligation is met. We are also obligated to pay the third-party low-single digit royalties based on net sales.

Antares

We are party to a development and license agreement (the "Antares License Agreement") with Antares Pharma, Inc. ("Antares"), which grants us an exclusive, worldwide, royalty-bearing license, with the right to sublicense, to certain intellectual property rights, including know-how, patents and trademarks, to develop, use, sell, offer for sale and import and export the Makena auto-injector. Under the terms of the Antares License Agreement, as amended in March 2018, we are responsible for the clinical development and preparation, submission and maintenance of all regulatory applications in each country where we desire to market and sell the Makena auto-injector, including the U.S. We are required to pay royalties to Antares on net sales of the Makena auto-injector until the Antares License Agreement is terminated (the "Antares Royalty Term"). The royalty rates range from high single digit to low double digits and are tiered based on levels of net sales of the Makena auto-injector and decrease after the expiration of licensed patents or where there are generic equivalents to the Makena auto-injector being sold in a particular country. In addition, we are required to pay Antares sales milestone payments upon the achievement of certain annual net sales. The Antares License Agreement terminates at the end of the Antares Royalty Term, but is subject to early termination by us for convenience and by either party upon an uncured breach by or bankruptcy of the other

party. In March 2018, the Antares License Agreement was amended to, among other things, transfer the agreement to AMAG from our subsidiary, amend certain confidentiality provisions, and to provide for co-termination with the Antares Manufacturing Agreement (described below).

We are also party to a Manufacturing Agreement with Antares (the "Antares Manufacturing Agreement") that sets forth the terms and conditions pursuant to which Antares agreed to sell to us on an exclusive basis, and we agreed to purchase, the fully packaged Makena auto-injector for commercial distribution. Antares remains responsible for the manufacture and supply of the device components and assembly of the Makena auto-injector. We are responsible for the supply of the drug to be used in the assembly of the finished auto-injector product. The Antares Manufacturing Agreement terminates at the expiration or earlier termination of the Antares License Agreement, but is subject to early termination by us for certain supply failure situations, and by either party upon an uncured breach by or bankruptcy of the other party or our permanent cessation of commercialization of the Makena auto-injector for efficacy or safety reasons.

Endoceutics

In February 2017, we entered into the Endoceutics License Agreement with Endoceutics, Inc. ("Endoceutics") to obtain an exclusive right to commercialize Intrarosa for the treatment of vulvar and vaginal atrophy ("VVA") and FSD in the United States. We have agreed to use commercially reasonable efforts to market, promote and otherwise commercialize Intrarosa for the treatment of VVA. The transactions contemplated by the Endoceutics License Agreement closed on April 3, 2017. We accounted for the Endoceutics License Agreement as an asset acquisition under ASU 2017-01.

Upon the closing of the Endoceutics License Agreement, we made an upfront payment of $50.0 million and issued 600,000 shares of unregistered common stock to Endoceutics, which had a value of $13.5 million, as measured on April 3, 2017, the date of closing. In addition, we paid Endoceutics $10.0 million in the third quarter of 2017 upon the delivery by Endoceutics of Intrarosa launch quantities and $10.0 million in 2018 following the first anniversary of the closing. In the second quarter of 2017, we recorded a total of $83.5 million of consideration, of which $77.7 million was allocated to the Intrarosa developed technology intangible asset and $5.8 million was recorded as IPR&D expense based on their relative fair values. In 2019, we recorded impairment charges of $56.9 million to reduce the carrying value of the asset group containing the Intrarosa developed technology intangible asset to its estimated fair value based on our intention to divest Intrarosa in 2020.

Under the terms of the Endoceutics License Agreement, we pay tiered royalties to Endoceutics equal to a percentage of net sales of Intrarosa in the U.S. ranging from mid-teens to mid twenty percent. Endoceutics is also eligible to receive certain sales milestone payments up to an aggregate of $895.0 million, including a first sales milestone payment of $15.0 million, which would be triggered when Intrarosa annual net U.S. sales exceed $150.0 million.

In April 2017, we entered into an exclusive commercial supply agreement with Endoceutics pursuant to which Endoceutics, itself or through affiliates or contract manufacturers, agreed to manufacture and supply Intrarosa to us (the "Endoceutics Supply Agreement") and is our exclusive supplier of Intrarosa in the U.S., subject to certain rights for us to manufacture and supply Intrarosa in the event of a cessation notice or supply failure (as such terms are defined in the Endoceutics Supply Agreement). The Endoceutics Supply Agreement will generally remain in effect until the termination of the Endoceutics License Agreement.

The Endoceutics License Agreement expires on the date of expiration of all royalty obligations due thereunder unless earlier terminated in accordance with the Endoceutics License Agreement.

Palatin

In January 2017, we entered into a license agreement with Palatin Technologies, Inc. ("Palatin") under which we acquired (a) an exclusive license in all countries of North America (the "Palatin Territory"), with the right to grant sub-licenses, to research, develop and commercialize the Vyleesi Products, (b) a worldwide non-exclusive license, with the right to grant sub-licenses, to manufacture the Vyleesi Products, and (c) a non-exclusive license in all countries outside the Palatin Territory, with the right to grant sub-licenses, to research and develop (but not commercialize) the Vyleesi Products (the "Palatin License Agreement"). The transaction closed in February 2017 and was accounted for as an asset acquisition under ASU 2017-01.

Under the terms of the Palatin License Agreement, in February 2017 we paid Palatin $60.0 million as a one-time upfront payment and subject to agreed-upon deductions reimbursed Palatin approximately $25.0 million for reasonable, documented, out-of-pocket expenses incurred by Palatin in connection with the development and regulatory activities necessary to submit an NDA in the U.S. for Vyleesi for the treatment of HSDD in pre-menopausal women. The $60.0 million upfront payment made in February 2017 to Palatin was recorded as IPR&D expense as the product candidate had not received regulatory approval. In June 2018, our NDA submission to the FDA for Vyleesi was accepted, which triggered a $20.0 million milestone payment, which we paid in the second quarter of 2018 and recorded as an IPR&D expense in the first quarter of 2018 when acceptance

was deemed probable. In June 2019, the FDA approval of Vyleesi triggered a $60.0 million milestone payment to Palatin, which we paid in July 2019 and recorded as a developed technology intangible asset in the second quarter of 2019. During the fourth quarter of 2019, we recorded impairment charges of $39.0 million to reduce the carrying value of the asset group containing the Vyleesi developed technology intangible asset to its estimated fair value based on our intention to divest Vyleesi in 2020.

In addition, the Palatin License Agreement requires us to make contingent payments of up to $300.0 million of aggregate sales milestone payments upon the achievement of certain annual net sales milestones over the course of the license. The first sales milestone payment of $25.0 million will be triggered when Vyleesi annual net sales exceed $250.0 million. We are also obligated to pay Palatin tiered royalties on annual net sales of the Vyleesi Products, on a product-by-product basis, in the Palatin Territory ranging from the high-single digits to the low double-digits. After the expiration of the applicable royalties for any Vyleesi Product in a given country, the license for such Vyleesi Product in such country would become a fully paid-up, royalty-free, perpetual and irrevocable license. The Palatin License Agreement expires on the date of expiration of all royalty obligations due thereunder, unless earlier terminated in accordance with the Palatin License Agreement.

Q. DEBT

Our outstanding debt obligations as of March 31, 2020 and December 31, 2019 consisted of the following (in thousands):

	March 31, 2020	December 31, 2019
2022 Convertible Notes	$ 281,038	$ 277,034
Total long-term debt	281,038	277,034
Less: current maturities	—	—
Long-term debt, net of current maturities	$ 281,038	$ 277,034

Convertible Notes

The outstanding balance of our 2022 Convertible Notes as of March 31, 2020 consisted of the following (in thousands):

	2022 Convertible Notes
Liability component:	
Principal	$ 320,000
Less: debt discount and issuance costs, net	38,962
Net carrying amount	$ 281,038
Gross equity component	$ 72,576

In accordance with accounting guidance for debt with conversion and other options, we separately account for the liability and equity components of our 2022 Convertible Notes by allocating the proceeds between the liability component and the embedded conversion option (the “Equity Component”) due to our ability to settle the 2022 Convertible Notes in cash, common stock or a combination of cash and common stock, at our option. The carrying amount of the liability component was calculated by measuring the fair value of a similar liability that does not have an associated convertible feature. The allocation was performed in a manner that reflected our non-convertible debt borrowing rate for similar debt. The Equity Component of the 2022 Convertible Notes was recognized as a debt discount and represents the difference between the proceeds from the issuance of the 2022 Convertible Notes and the fair value of the liability of the 2022 Convertible Notes on the date of issuance. The excess of the principal amount of the liability component over its carrying amount is amortized to interest expense using the effective interest method over five years. The Equity Component is not remeasured as long as it continues to meet the conditions for equity classification.

2022 Convertible Notes

In the second quarter of 2017, we issued $320.0 million aggregate principal amount of convertible senior notes due in 2022 (the "2022 Convertible Notes") and received net proceeds of $310.4 million from the sale of the 2022 Convertible Notes, after deducting fees and expenses of $9.6 million. The approximate $9.6 million of debt issuance costs primarily consisted of underwriting, legal and other professional fees, and we allocated these costs to the liability and equity components based on the allocation of the proceeds. Of the total $9.6 million of debt issuance costs, $2.2 million was allocated to the Equity Component and recorded as a reduction to additional paid-in capital and $7.4 million was allocated to the liability component and is now recorded as a reduction of the 2022 Convertible Notes on our condensed consolidated balance sheets. The portion allocated to the liability component is amortized to interest expense using the effective interest method over five years.

The 2022 Convertible Notes are governed by the terms of an indenture between us, as issuer, and Wilmington Trust, National Association, as the trustee. The 2022 Convertible Notes are senior unsecured obligations and bear interest at a rate of 3.25% per year, payable semi-annually in arrears on June 1 and December 1 of each year, beginning on December 1, 2017. The 2022 Convertible Notes will mature on June 1, 2022, unless earlier repurchased or converted. Upon conversion of the 2022 Convertible Notes, such 2022 Convertible Notes will be convertible into, at our election, cash, shares of our common stock, or a combination thereof, at a conversion rate of 36.5464 shares of common stock per $1,000 principal amount of the 2022 Convertible Notes, which corresponds to an initial conversion price of approximately $27.36 per share of our common stock.

The conversion rate is subject to adjustment from time to time upon the occurrence of certain events, including, but not limited to, the issuance of stock dividends and payment of cash dividends. At any time prior to the close of business on the business day immediately preceding March 1, 2022, holders may convert their 2022 Convertible Notes at their option only under the following circumstances:

1) during any calendar quarter (and only during such calendar quarter), if the last reported sale price of our common stock for at least 20 trading days (whether or not consecutive) during a period of 30 consecutive trading days ending on the last trading day of the immediately preceding calendar quarter is greater than or equal to 130% of the conversion price on each applicable trading day;

2) during the five business day period after any five consecutive trading day period (the "measurement period") in which the trading price per $1,000 principal amount of the 2022 Convertible Notes for each trading day of the measurement period was less than 98% of the product of the last reported sale price of our common stock and the conversion rate on each such trading day; or

3) upon the occurrence of specified corporate events.

On or after March 1, 2022, until the close of business on the business day immediately preceding the maturity date, holders may convert all or any portion of their 2022 Convertible Notes, in multiples of $1,000 principal amount, at the option of the holder regardless of the foregoing circumstances. The 2022 Convertible Notes were not convertible as of March 31, 2020.

We determined the expected life of the debt was equal to the five-year term on the 2022 Convertible Notes. The effective interest rate on the liability component was 9.49% for the period from the date of issuance through March 31, 2020. As of March 31, 2020, the "if-converted value" did not exceed the remaining principal amount of the 2022 Convertible Notes.

2019 Convertible Notes

In February 2014, we issued $200.0 million aggregate principal amount of the 2019 Convertible Notes. During 2017, we entered into privately negotiated transactions with certain investors to repurchase approximately $178.5 million aggregate principal amount of the 2019 Convertible Notes for an aggregate repurchase price of approximately $192.7 million, including accrued interest. The remaining $21.4 million of 2019 Convertible Notes matured on February 15, 2019 and were settled with cash.

Convertible Notes Interest Expense

The following table sets forth total interest expense recognized related to the Convertible Notes during the three months ended March 31, 2020 and 2019 (in thousands):

	Three Months Ended March 31,	
	2020	2019
Contractual interest expense	$ 2,600	$ 2,667
Amortization of debt issuance costs	370	354
Amortization of debt discount	3,634	3,429
Total interest expense	$ 6,604	$ 6,450

Future Payments

Future annual principal payments on our long-term debt as of March 31, 2020 include $320.0 million due during the year ending December 31, 2022.

R. RESTRUCTURING EXPENSES

In February 2019, we completed a restructuring to combine our women's health and maternal health sales forces into one integrated sales team, which promotes Intrarosa, the Makena auto-injector and Vyleesi. Approximately 110 employees were displaced through this workforce reduction. We recorded one-time restructuring charges of $7.4 million primarily related to severance and related benefits on our condensed consolidated statement of operations during the first quarter of 2019. The remaining accrued restructuring charges incurred under this program will be paid in cash by the end of the first quarter of 2021.

The following table displays a rollforward of the changes to the accrued balances as of March 31, 2020 (in thousands):

	Workforce reduction	Contract termination	Other	Total
Balance accrued at December 31, 2019	$ 797	$ —	$ —	$ 797
Payments	(329)	—	—	(329)
Balance accrued at March 31, 2020	$ 468	$ —	$ —	$ 468

S. RECENTLY ISSUED AND PROPOSED ACCOUNTING PRONOUNCEMENTS

From time to time, new accounting pronouncements are issued by FASB or other standard setting bodies that are adopted by us as of the specified effective date. There were no applicable accounting pronouncements issued but not adopted as of March 31, 2020.

T. RECENTLY ADOPTED ACCOUNTING PRONOUNCEMENTS

In June 2016, the FASB issued ASU No. 2016-13, *Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments* ("ASU 2016-13"). This standard requires entities to measure all expected credit losses for financial assets held at the reporting date based on historical experience, current conditions and reasonable and supportable forecasts. We adopted ASU 2016-13 effective January 1, 2020. The adoption of ASU 2016-13 did not have a material impact on our condensed consolidated financial statements.

In December 2019, the FASB issued ASU No. 2019-12, *Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes* ("ASU 2019-12") as part of its Simplification Initiative to reduce the cost and complexity in accounting for income taxes. ASU 2019-12 removes certain exceptions related to the approach for intraperiod tax allocation, the methodology for calculating income taxes in an interim period and the recognition of deferred tax liabilities for outside basis differences. ASU 2019-12 also amends other aspects of the guidance to help simplify and promote consistent application of GAAP. The guidance is effective for interim and annual periods beginning after December 15, 2020, with early adoption permitted. We adopted ASU 2019-12 effective January 1, 2020. The adoption of ASU 2019-12 did not have a material impact on our condensed consolidated financial statements.

U. SUBSEQUENT EVENTS

In May 2020, we announced a restructuring to reduce the size of our organization in conjunction with the divestiture of Intrarosa and Vyleesi and expected declines in our revenue due to the COVID-19 pandemic. Approximately 30 percent of the workforce is being displaced through this workforce reduction. We expect to record a one-time restructuring charge of approximately $8.0 million primarily related to severance and related benefits in the second quarter of 2020 and expect the workforce reduction to be substantially completed by the end of the second quarter of 2020.

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

The following information should be read in conjunction with the unaudited financial information and the notes thereto included in this Quarterly Report on Form 10-Q and the audited financial information and the notes thereto included in our Annual Report on Form 10-K for the year ended December 31, 2018 (our "Annual Report"). Except for the historical information contained herein, the matters discussed in this Quarterly Report on Form 10-Q may be deemed to be forward-looking statements that involve risks and uncertainties. We make such forward-looking statements pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995 and other federal securities laws. In this Quarterly Report on Form 10-Q terminology such as "may," "will," "could," "should," "would," "expect," "anticipate," "continue," "believe," "plan," "estimate," "intend" or other similar words and expressions (as well as other words or expressions referencing future events, conditions or circumstances) are intended to identify forward-looking statements.

Examples of forward-looking statements contained in this report include, without limitation, statements regarding the following:

- *our plans regarding our business and our portfolio, including plans to divest the women's health business;*
- *beliefs regarding the expenses, challenges and timing of our preclinical studies and clinical trials, including expectations regarding the clinical trial timing for and results of ciraparantag and AMAG-423;*
- *beliefs regarding our commercial strategies and efforts, including the recent commercial launch of Vyleesi and the impact of our efforts to promote prescriptions of the Makena auto-injector;*
- *our estimates and beliefs regarding the market opportunities for each of our products and product candidates;*
- *beliefs about and expectations for our commercialization, marketing and manufacturing of our products and product candidates, if approved, (which may be conducted by third parties);*
- *expectations related to potential FDA regulatory actions for Makena following the recent meeting of its Advisory Committee;*
- *beliefs about health care provider behaviors and reactions;*
- *plans to work with the FDA and beliefs that there may be a path forward for continued commercialization of Makena;*
- *expectations and plans with respect to litigation matters and contract disputes, including the merits thereof;*
- *the timing and amounts of milestone and royalty payments;*
- *expectations related to development milestone payments from a development partner in light of such partner's notice of intent to terminate the related agreement;*
- *expectations and plans as to recent and upcoming regulatory and commercial developments and activities, including requirements, initiatives and timelines for clinical trials and post-approval commitments for our products and product candidates, and their impact on our business and competition;*
- *expectations for our intellectual property rights covering our product candidates and technology and the impact of generics and other competition could have on each of our products and our business generally, including the timing and number of generic entrants;*
- *developments relating to our competitors and our industry, including the impact of government regulation;*
- *expectations regarding third-party reimbursement and the behaviors of payers, healthcare providers, patients and other industry participants, including with respect to product price increases and volume-based and other rebates and incentives;*
- *expectations regarding the contribution of revenues from our products to the funding of our on-going operations and costs to be incurred in connection with revenue sources to fund our future operations;*
- *expectations regarding customer returns and other revenue-related reserves and accruals;*
- *expectations as to the manufacture of drug substances, drug and biological products and key materials for our products and product candidates;*
- *expectations as to our effective tax rate and our ability to realize our net operating loss carryforwards and other tax attributes;*
- *the impact of accounting pronouncements;*
- *expectations regarding our financial performance and our ability to implement our strategic plans for our business;*
- *estimates and beliefs related to our 2022 Convertible Notes and the manner in which we intend or are required to settle the 2022 Convertible Notes;*

- *estimates, beliefs and judgments related to the valuation of certain intangible assets, goodwill, contingent consideration, debt and other assets and liabilities, including our impairment analysis and our methodology and assumptions regarding fair value measurements;*
- *beliefs regarding the impact of our February 2019 restructuring initiative, including the impact of the combination of our women's and maternal health sales forces and the related reduction in head count; and*
- *the impact of the COVID-19 pandemic on the above.*

Any forward-looking statement should be considered in light of the factors discussed in Part II, Item 1A below under "Risk Factors" in this Quarterly Report on Form 10-Q and in Part I, Item 1A in our Annual Report. We caution readers not to place undue reliance on any such forward-looking statements, which speak only as of the date they are made. We disclaim any obligation, except as specifically required by law and the rules of the U.S. Securities and Exchange Commission, to publicly update or revise any such statements to reflect any change in company expectations or in events, conditions or circumstances on which any such statements may be based, or that may affect the likelihood that actual results will differ from those set forth in the forward-looking statements.

AMAG Pharmaceuticals®, the logo and designs, Feraheme® and Vyleesi® are registered trademarks of AMAG Pharmaceuticals, Inc. Makena® is a registered trademark of AMAG Pharma USA, Inc. Intrarosa® is a registered trademark of Endoceutics, Inc. Other trademarks referenced in this report are the property of their respective owners.

Overview

AMAG Pharmaceuticals, Inc., a Delaware corporation, was founded in 1981. We are a pharmaceutical company focused on bringing innovative products to patients with unmet medical needs by leveraging our development and commercial expertise to invest in and grow our pharmaceutical products and product candidates across a range of therapeutic areas. Our currently marketed products support the health of patients in the areas of hematology and maternal and women's health, including Feraheme® (ferumoxytol injection) for intravenous use, Makena® (hydroxyprogesterone caproate injection) auto-injector, Intrarosa® (prasterone) vaginal inserts and Vyleesi® (bremelanotide injection). In addition to our approved products, our portfolio includes two product candidates, AMAG-423 (digoxin immune fab (ovine)), which is being studied for the treatment of severe preeclampsia, and ciraparantag, which is being studied as an anticoagulant reversal agent.

In January 2020, we announced that we had recently completed a review of our product portfolio and strategy with the objective of driving near- and long-term profitability and enhancing shareholder value. Based on this strategic review, we are currently pursuing options to divest Intrarosa and Vyleesi, and we expect to provide further details on the divestiture by the end of the second quarter of this year. In addition, as announced on and effective as of April 28, 2020, Scott D. Myers was appointed President and Chief Executive Officer of AMAG.

We intend to continue to expand the impact of our current and future products for patients by delivering on our business strategy, which includes collaborating on and acquiring promising therapies at various stages of development, and advancing them through the clinical and regulatory process to deliver new treatment options to patients. Our primary sources of revenue are currently from sales of Feraheme and the Makena auto-injector.

AMAG's Portfolio of Products and Product Candidates

Feraheme

Feraheme received approval from the U.S. Food and Drug Administration (the "FDA") in June 2009 for use as an IV iron replacement therapy for the treatment of iron deficiency anemia ("IDA") in adult patients with chronic kidney disease ("CKD"). In February 2018, the FDA approved the supplemental New Drug Application to expand the Feraheme label to include all eligible adult IDA patients who have intolerance to oral iron or have had unsatisfactory response to oral iron in addition to patients who have CKD. IDA is prevalent in many different patient populations, such as patients with CKD, gastrointestinal diseases or disorders, inflammatory diseases and chemotherapy-induced anemia. For many of these patients, treatment with oral iron is unsatisfactory or is not tolerated. It is estimated that approximately five million people in the U.S. have IDA and we estimate that a small fraction of the patients who are diagnosed with IDA regardless of the underlying cause are currently being treated with IV iron.

The expanded Feraheme label was supported by two positive pivotal Phase 3 trials, which evaluated Feraheme versus iron sucrose or placebo in a broad population of patients with IDA and positive results from a third Phase 3 randomized, double-blind non-inferiority trial that evaluated the incidence of moderate-to-severe hypersensitivity reactions (including anaphylaxis) and moderate-to-severe hypotension with Feraheme compared to Injectafer® (ferric carboxymaltose injection) (the "Feraheme comparator trial"). The Feraheme comparator trial demonstrated comparability to Injectafer® based on the primary composite endpoint of the incidence of moderate-to-severe hypersensitivity reactions (including anaphylaxis) and moderate-to-severe

hypotension (Feraheme incidence 0.6%; Injectafer® incidence 0.7%). Adverse event rates were similar across both treatment groups; however, the incidence of severe hypophosphatemia (defined by blood phosphorous of <0.2 mg/dl at week 2) was less in the patients receiving Feraheme (0.4% of patients) compared to those receiving Injectafer® (38.7% of patients).

Makena

Makena is indicated to reduce the risk of preterm birth in women pregnant with a single baby who have a history of singleton spontaneous preterm birth. We acquired the rights to Makena in connection with our acquisition of Lumara Health Inc. ("Lumara Health") in November 2014.

Makena was approved by the FDA in February 2011 as an intramuscular ("IM") injection (the "Makena IM product") packaged in a multi-dose vial and in February 2016 as a single-dose preservative-free vial. In February 2018, the Makena auto-injector was approved by the FDA for administration via a pre-filled subcutaneous auto-injector, a drug-device combination product (the "Makena auto-injector").

In March 2019, we announced topline results from the Progestin's Role in Optimizing Neonatal Gestation clinical trial ("PROLONG Trial"), a randomized, double-blinded, placebo-controlled clinical trial evaluating Makena in patients with a history of a prior spontaneous singleton preterm delivery. The PROLONG Trial was conducted under the FDA's "Subpart H" accelerated approval process and, in October 2019, we announced that full results of the PROLONG Trial were published online in the *American Journal of Perinatology.* The PROLONG Trial, in contrast to a previously conducted Phase 3 trial (the Meis trial) on which Makena's approval was primarily based, did not demonstrate a statistically significant difference between the treatment and placebo arms for the co-primary endpoints. The adverse event profile between the two arms was comparable. On October 29, 2019, the Bone, Reproductive and Urologic Drugs Advisory Committee (the "Advisory Committee") met to discuss the results of the PROLONG Trial to inform the FDA's regulatory decision for Makena and voted, among other things, nine to seven that the FDA should pursue withdrawal of approval for Makena. The FDA is not required to follow the recommendations of its Advisory Committees, but will take them into consideration in deciding what regulatory steps to take with respect to Makena.

This complex and unique situation has no clear precedent and it is therefore difficult to predict outcomes or timing of any FDA actions with respect to Makena. In response to our request to the FDA for a meeting to discuss the clinical benefit of the product, the FDA indicated that it was premature to meet at this time as it was still reviewing the matter. We remain committed to working collaboratively with the FDA to seek a path forward to ensure eligible pregnant women continue to have access to Makena and the currently approved generics that rely on Makena as an innovator drug.

AMAG-423

In September 2018, we acquired the global rights to AMAG-423 for the treatment of preeclampsia and eclampsia in antepartum and postpartum women pursuant to an option agreement we entered into in July 2015 (the "Velo Agreement") with Velo Bio, LLC, a privately-held life sciences company ("Velo"). AMAG-423 is an antibody fragment currently in development for the treatment of severe preeclampsia in pregnant women and has been granted both orphan drug and Fast Track designations by the FDA. AMAG-423 is intended to bind to endogenous digitalis-like factors ("EDLFs") and remove them from the circulation. EDLFs appear to be elevated in preeclampsia and may play an important role in the pathogenesis of preeclampsia though their inhibitory actions on Na+/K+-ATPase (the sodium pump). By decreasing circulating EDLFs, AMAG-423 is believed to improve vascular endothelial function and lead to better post-delivery outcomes in affected mothers and their babies.

We are currently conducting a multi-center, randomized, double-blind, placebo-controlled, parallel-group Phase 2b/3a study in which we expect to enroll approximately 200 antepartum women with severe preeclampsia between 23 weeks and 0 days and 31 weeks and six days gestation. We initiated the trial at sites both within the U.S. and outside of the U.S. Participants in the study receive either AMAG-423 or placebo intravenously four times a day over a maximum of four days. The study's primary endpoint is to demonstrate a reduction in the percentage of babies who develop severe intraventricular hemorrhage (bleeding in the brain), necrotizing enterocolitis (severe inflammation of the infant bowels) or death by 36 weeks corrected gestational age between the AMAG-423 and placebo arms. Secondary endpoints include the change from baseline in maternal creatinine clearance, maternal incidence of pulmonary edema during treatment and the period of time between treatment and delivery. In addition to these endpoints, information on both maternal as well as neonatal outcomes and complications related to preeclampsia and/or prematurity will be collected and analyzed. Severe preeclampsia presents challenges to enrollment as it is an extremely complex and dynamic condition; oftentimes, the patient needs be scheduled for immediate delivery, and, accordingly, enrollment of patients in the study has been slower than expected. Due to the spread of COVID-19, all sites have paused new patient enrollment and we have paused initiation of new sites. The impacts and uncertainties caused by COVID-19, as well as the serious nature of preeclampsia in pregnant women and the characteristics of the patient population, will affect the timing of completion of the study and may affect our ability to complete the study in a reasonable timeframe or at all.

Ciraparantag

In January 2019, we acquired ciraparantag with our acquisition of Perosphere Pharmaceuticals Inc. ("Perosphere"), a privately-held biopharmaceutical company pursuant to an Agreement and Plan of Merger (the "Perosphere Agreement"). Ciraparantag is a small molecule anticoagulant reversal agent in development as a single dose solution that is delivered intravenously to reverse the effects of certain novel oral anticoagulants ("NOACs") (Xarelto®(rivaroxaban), Eliquis®(apixaban), and Savaysa®(edoxaban) as well as Lovenox® (enoxaparin sodium injection), a low molecular weight heparin when reversal of the anticoagulant effect of these products is needed for emergency surgery, urgent procedures or due to life-threatening or uncontrolled bleeding. Ciraparantag has been granted Fast Track designation by the FDA.

Ciraparantag has been evaluated in more than 250 healthy volunteers across seven clinical trials. A first in human Phase 1 study evaluated the safety, tolerability, pharmacokinetic, and pharmacodynamic effects of ciraparantag alone and following a single dose of Savaysa®, and another Phase 1 study evaluated the overall metabolism of the drug. Two Phase 2a studies evaluated the safety, tolerability, pharmacokinetic, and pharmacodynamic effects related to the reversal of unfractionated heparin and Lovenox® and three Phase 2b randomized, single-blind, placebo-controlled dose-ranging studies evaluated the reversal of Savaysa®, Eliquis®, and Xarelto® to assess the safety and efficacy of ciraparantag, each of which included 12 subjects dosed with ciraparantag. In these Phase 2b clinical trials, ciraparantag or placebo was administered to healthy volunteers in a blinded fashion after achieving steady blood concentrations of the respective anticoagulant. Pharmacodynamic assessments of whole blood clotting time ("WBCT"), an important laboratory measure of clotting capacity, were sampled frequently for the first hour post study drug dose, and then periodically thereafter out to 24 hours post administration of study drug. Key endpoints in the Phase 2 trials included mean change from baseline in WBCT and the proportion of subjects that returned to within 10% of their baseline WBCT. Subjects in these studies experienced a rapid and statistically significant ($p<0.001$) reduction in WBCT compared to placebo as early as 15 minutes after the administration of ciraparantag in each of the four studies and the effect was sustained for 24 hours. Moreover, in both the Eliquis® and Xarelto® studies, 100% of subjects in the highest dose cohorts (180 mg of ciraparantag) were responders, as defined by a return to within 10% of baseline WBCT within 30 minutes and sustained for at least six hours. Ciraparantag has been well tolerated in clinical trials, with the most common related adverse events to date being mild sensations of coolness, warmth or tingling, skin flushing, and alterations in taste. There have been no drug-related serious adverse events to date.

We are planning to conduct a clinical study in healthy volunteers to confirm the proposed dose of ciraparantag to be used in the Phase 3 program, after reaching peak steady state blood concentrations of certain NOAC drugs. The Phase 2b study will utilize an automated coagulometer developed by Perosphere Technologies, Inc. ("Perosphere Technologies"), an independent

company, to measure WBCT and based on feedback from the FDA, we will also measure WBCT manually. An investigational device exemption, which Perosphere Technologies will submit once it completes the additional required analytical study, is required for use of the coagulometer in clinical studies. Following the completion of the Phase 2b study, we plan to schedule an End of Phase 2 meeting with the FDA to discuss the design of the Phase 3 program to evaluate the safety and efficacy of ciraparantag in the target patient population. Due to the COVID-19 pandemic, we are currently unable to initiate our planned clinical trial sites and, accordingly, are unable to enroll subjects. The impacts and uncertainties caused by COVID-19 and the additional requirement of manual WBCT testing, will delay the Phase 2b study initiation for an indeterminable period of time. We are therefore unable to estimate when the study might be completed. Even once we can proceed with initiation and enrollment, COVID-19 might present further challenges if study candidates are hesitant to enroll and increase their inter-personal exposure because of concerns over the contagiousness of COVID-19.

Products to be Divested

As announced in January 2020, we are pursuing options to divest Intrarosa and Vyleesi from our product portfolio.

Intrarosa

In February 2017, we entered into a license agreement (the "Endoceutics License Agreement") with Endoceutics, Inc. ("Endoceutics") pursuant to which Endoceutics granted us the U.S. rights to Intrarosa, an FDA-approved product for the treatment of moderate to severe dyspareunia (pain during sexual intercourse), a symptom of vulvar and vaginal atrophy ("VVA"), due to menopause. Intrarosa was approved by the FDA in November 2016 and was launched commercially in July 2017. Intrarosa is the only FDA-approved vaginal non-estrogen treatment indicated for the treatment of moderate to severe dyspareunia, a symptom of VVA, due to menopause. Intrarosa contains prasterone, a synthetic form of dehydroepiandrosterone, which is an inactive endogenous (i.e. occurring in the body) sex steroid. The mechanism of action of Intrarosa is not fully established. Intrarosa is contraindicated in women with undiagnosed abnormal genital bleeding and its label contains a precaution that it has not been studied in women with a history of breast cancer.

Vyleesi

We acquired the exclusive rights to commercialize Vyleesi in certain territories in January 2017 pursuant to a license agreement (the "Palatin License Agreement") entered into with Palatin Technologies, Inc. ("Palatin"). On June 21, 2019, the FDA approved Vyleesi for the treatment of acquired, generalized HSDD in premenopausal women, and which became commercially available in September 2019 through two specialty pharmacies. Vyleesi, a melanocortin receptor agonist, is an "as needed" therapy used in anticipation of sexual activity and self-administered by premenopausal women with HSDD in the thigh or abdomen via a single-use subcutaneous auto-injector. The most common adverse events are nausea, flushing, injection site reactions, headache and vomiting. Vyleesi is contraindicated in women with uncontrolled hypertension or known cardiovascular disease. In addition, the Vyleesi label includes precautions that it may cause (i) small, transient increases in blood pressure with a corresponding decrease in heart rate; (ii) focal hyperpigmentation (darkening of the skin on certain parts of the body), including the face, gums (gingiva) and breasts; and (iii) nausea.

Impact of COVID-19 on our business

We continue to evaluate the impact of COVID-19 on patients, healthcare providers and our employees, as well as on our operations and the operations of our business partners and healthcare communities. Given the importance of supporting our patients, we are diligently working with our suppliers, healthcare providers and partners to provide patients with access to Feraheme, Makena, Intrarosa and Vyleesi while taking into account regulatory, institutional, and government guidance, policies and protocols. The COVID-19 pandemic did not significantly impact net product sales or our financial results for the three months ended March 31, 2020. However, COVID-19 protocols have restricted or discouraged patient access to hospitals, clinics, physicians' offices and other sites where Feraheme and Makena are typically administered and caused a re-prioritization of healthcare services. While the impact of the COVID-19 pandemic on our net product sales is uncertain, we have observed a decline in demand for Feraheme and Makena, and we expect this will result in an adverse impact to our financial performance for 2020. We have paused new patient enrollment and initiation of new sites for the AMAG-423 Phase 2b/3a clinical trial, and we are currently unable to initiate the planned ciraparantag Phase 2b trial. Further, we are working with our CROs to understand the duration and scope of disruptions at clinical trial sites and on enrollment for our ongoing AMAG-423 Phase 2b/3a clinical trial and our planned ciraparantag Phase 2b trial. To date, we and our suppliers have been able to continue to supply our products and our product candidates, and currently do not anticipate any interruptions in supply. Given the uncertainties regarding the duration and scope of the COVID-19 pandemic, the impacts on our sales, supply, research and development efforts and operations are currently unknown, but will likely impact our performance in 2020 and could continue to represent a risk to our future performance. We are actively monitoring the situation and may take precautionary and preemptive actions that we determine are in the best interests of our business. We cannot predict the effects that such actions

may have on our business or on our financial results, in particular with respect to demand for or access to our products. Please refer to our Risk Factors in Part II, Item IA of this Quarterly Report on Form 10-Q for further discussion of COVID-19 risks.

Critical Accounting Policies

Our management's discussion and analysis of our financial condition and results of operations is based on our consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the U.S. The preparation of these financial statements requires management to make certain estimates and assumptions that affect the reported amount of assets, liabilities, revenues and expenses, and the related disclosure of contingent liabilities. Actual results could differ materially from those estimates. Management employs the following critical accounting policies affecting our most significant estimates and assumptions: revenue recognition and related sales allowances and accruals; valuation of marketable securities; valuation of inventory; business combinations and asset acquisitions, including acquisition-related contingent consideration; goodwill; intangible assets; equity-based compensation; and income taxes.

Except as described in Note B, "*Basis of Presentation and Summary of Significant Accounting Policies*," to our condensed consolidated financial statements included in this Quarterly Report on Form 10-Q, with respect to changes in our accounting policy related to our adoption of the requirements of Accounting Standards Codification ("ASC") Topic 326, *Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments*, there have been no significant changes to our critical accounting policies and estimates during the three months ended March 31, 2020, compared to the critical accounting policies and estimates disclosed in Part II, Item 7, of our Annual Report.

Results of Operations - Three Months Ended March 31, 2020 and 2019

Revenues

Total net product sales for the three months ended March 31, 2020 and 2019 consisted of the following (in thousands except for percentages):

	Three Months Ended March 31,		2020 to 2019	
	2020	2019	$ Change	% Change
Product sales, net				
Feraheme	$ 44,433	$ 40,015	$ 4,418	11 %
Makena	21,777	31,257	(9,480)	(30)%
Intrarosa	3,169	4,414	(1,245)	(28)%
Other	(751)	43	(794)	<(100 %)
Total product sales, net	$ 68,628	$ 75,729	$ (7,101)	(9)%

Our total net product sales for the three months ended March 31, 2020 decreased by $7.1 million as compared to the same period in 2019, due primarily to a decrease in Makena net sales. We believe that the decrease in Makena net sales during the quarter was driven by confusion or concern amongst health care providers caused by the unfavorable FDA Advisory Committee recommendation for Makena during the fourth quarter of 2019. These decreases were partially offset by an increase in Feraheme net sales.

The COVID-19 pandemic did not significantly impact net product sales for the three months ended March 31, 2020. However, COVID-19 protocols have restricted or discouraged patient access to hospitals, clinics, physicians' offices and other sites where Feraheme and Makena are typically administered and caused a re-prioritization of healthcare services. While the impact of the COVID-19 pandemic on our net product sales is uncertain, we have observed a decline in demand for Feraheme and Makena, and we expect this will result in an adverse impact to our financial performance for 2020. The full impact to our business cannot be estimated at this time because such an estimate is highly dependent on the severity and duration of the COVID-19 pandemic.

Product Sales Allowances and Accruals

Total gross product sales were offset by product sales allowances and accruals for the three months ended March 31, 2020 and 2019 as follows (in thousands, except for percentages):

	Three Months Ended March 31,				2020 to 2019	
	2020	Percent of gross product sales	2019	Percent of gross product sales	$ Change	% Change
Gross product sales	$ 232,741		$ 211,718		$ 21,023	10 %
Provision for product sales allowances and accruals:						
Contractual adjustments	143,175	62 %	108,884	51 %	34,291	31 %
Governmental rebates	20,938	9 %	27,105	13 %	(6,167)	(23)%
Total	164,113	71 %	135,989	64 %	28,124	21 %
Product sales, net	$ 68,628		$ 75,729		$ (7,101)	(9)%

The increase in contractual adjustments as a percentage of gross product sales primarily related to a higher mix of business through commercial reimbursement channels and additional discounts offered to commercial entities. The decrease in governmental rebates as a percentage of gross product sales primarily related to a shift in overall product mix for our total net product sales.

We may refine our estimated revenue reserves as we continue to obtain additional experience or as our customer mix changes. If we determine in future periods that our actual experience is not indicative of our expectations, if our actual experience changes, or if other factors affect our estimates, we may be required to adjust our allowances and accruals estimates, which would affect our net product sales in the period of the adjustment and could be significant.

Costs and Expenses

Cost of Product Sales

Cost of product sales for the three months ended March 31, 2020 and 2019 were as follows (in thousands except for percentages):

	Three Months Ended March 31,		2020 to 2019	
	2020	2019	$ Change	% Change
Direct cost of product sales	$ 14,522	$ 14,535	$ (13)	— %
Amortization of intangible assets	9,837	3,942	5,895	>100 %
	$ 24,359	$ 18,477	$ 5,882	32 %
Direct cost of product sales as a percentage of net product sales	21 %	19 %		

Direct cost of product sales as a percentage of net product sales was relatively consistent during the three months ended March 31, 2020 and March 31, 2019. We expect this percentage to remain consistent for the remainder of 2020.

Amortization of intangible assets increased by $5.9 million from March 31, 2019 to March 31, 2020 due to accelerated amortization resulting from our reassessment and prospective adjustment of the useful lives of the Makena AI developed technology, Intrarosa developed technology and Vyleesi developed technology intangible assets during the fourth quarter of 2019.

Research and Development Expenses

Research and development expenses for the three months ended March 31, 2020 and 2019 consisted of the following (in thousands except for percentages):

	Three Months Ended March 31,		2020 to 2019	
	2020	2019	$ Change	% Change
External research and development expenses	$ 6,052	$ 12,499	$ (6,447)	(52)%
Internal research and development expenses	5,128	5,567	(439)	(8)%
Total research and development expenses	$ 11,180	$ 18,066	$ (6,886)	(38)%

The $6.9 million decrease in research and development expenses incurred in the three months ended March 31, 2020, as compared to the three months ended March 31, 2019, was primarily related to lower costs for Vyleesi following FDA approval in 2019.

We have a number of ongoing research and development programs that we are conducting independently or in collaboration with third parties. We have experienced delays in our ongoing AMAG-423 Phase 2b/3a clinical trial and our planned ciraparantag Phase 2b trial due to factors including the COVID-19 pandemic. Although the potential impacts of the COVID-19 pandemic are evolving daily and cannot be predicted, we expect these delays to continue to impact trial site initiation and patient enrollment for these trials. Therefore, we expect our external research and development expenses to be lower on a quarterly basis for the remaining three quarters of 2020 as compared to the first quarter of 2020. This expectation is dependent on the duration and extent of the impacts of COVID-19 on our ability to execute our clinical trials. Please refer to our Risk Factors in Part II, Item IA of this Quarterly Report on Form 10-Q for further discussion of COVID-19 risks. Regardless of the COVID-19 pandemic, we cannot determine with certainty the duration and completion costs of our current or future clinical trials of our products or product candidates as the duration, costs and timing of clinical trials depends on a variety of factors including the uncertainties of future clinical and preclinical studies, uncertainties in clinical trial enrollment rates and significant and changing government regulation.

Acquired In-Process Research and Development

During the three months ended March 31, 2019, we recorded $74.9 million for acquired in-process research and development (“IPR&D”) related to the acquisition of ciraparantag from Perosphere.

Selling, General and Administrative Expenses

Selling, general and administrative expenses for the three months ended March 31, 2020 and 2019 consisted of the following (in thousands except for percentages):

	Three Months Ended March 31,		2020 to 2019	
	2020	2019	$ Change	% Change
Compensation, payroll taxes and benefits	$ 29,227	$ 30,350	$ (1,123)	(4)%
Professional, consulting and other outside services	19,958	41,013	(21,055)	(51)%
Fair value of contingent consideration liability	—	(6)	6	(100)%
Equity-based compensation expense	3,512	3,325	187	6 %
Total selling, general and administrative expenses	$ 52,697	$ 74,682	$ (21,985)	(29)%

Selling, general and administrative expenses decreased by $22.0 million in the three months ended March 31, 2020 as compared to the same period in 2019, the majority of which related to decreases in marketing spend related to our women’s health products.

We expect that total selling, general and administrative expenses for future quarters of 2020 will decline compared to the first quarter of 2020 due to our planned women’s health divestiture and related corporate restructuring.

Restructuring Expenses

In February 2019, we completed a restructuring to combine our women's health and maternal health sales forces into one integrated sales team. Approximately 110 employees were displaced through this workforce reduction. We recorded a one-time restructuring charge of $7.4 million primarily related to severance and related benefits in the first quarter of 2019. These restructuring charges were substantially paid in cash as of the end of the first quarter of 2020 and will be fully paid in cash by the end of the first quarter of 2021. For additional information on restructuring expenses, see Note R, "*Restructuring Expenses*" to our condensed consolidated financial statements included in this Quarterly Report on Form 10-Q.

In May 2020, we announced a restructuring to reduce the size of our organization in conjunction with the divestiture of Intrarosa and Vyleesi and expected declines in our revenue due to the COVID-19 pandemic. Approximately 30 percent of the workforce is being displaced through this workforce reduction. We expect to record a one-time restructuring charge of approximately $8.0 million million primarily related to severance and related benefits in the second quarter of 2020 and expect the workforce reduction to be substantially completed by the end of the second quarter of 2020. For additional information on this event, see Note U, "*Subsequent Events*" to our condensed consolidated financial statements included in this Quarterly Report on Form 10-Q.

Other Expense, Net

Other expense, net for the three months ended March 31, 2020 increased by $0.3 million compared to the same period in 2019, primarily due to an increase in interest expense.

Income Tax Expense (Benefit)

The following table summarizes our effective tax rate and income tax expense (benefit) for the three months ended March 31, 2020 and 2019 (in thousands except for percentages):

	Three Months Ended March 31,	
	2020	2019
Effective tax rate	— %	— %
Income tax expense (benefit)	$ 100	$ (137)

For the three months ended March 31, 2020, we recognized an immaterial income tax expense, representing an effective tax rate of 0%. The difference between the statutory federal tax rate of 21% and the 0% effective tax rate for the three months ended March 31, 2020 was primarily attributable to the valuation allowance established against our current period losses generated. We have established a valuation allowance on our deferred tax assets to the extent that our existing taxable temporary differences would not be available as a source of income to realize the benefits of those deferred tax assets. The income tax expense for the three months ended March 31, 2020 primarily related to state income taxes.

For the three months ended March 31, 2019, we recognized an immaterial income tax benefit, representing an effective tax rate of 0%. The difference between the statutory federal tax rate of 21% and the 0% effective tax rate for the three months ended March 31, 2019, was primarily attributable to the valuation allowance established against our current period losses generated and the non-deductible IPR&D expense related to the Perosphere acquisition.

Liquidity and Capital Resources

General

We currently finance our operations primarily from cash generated from our operating activities, including sales of our commercialized products. Cash, cash equivalents, marketable securities and certain financial obligations as of March 31, 2020 and December 31, 2019 consisted of the following (in thousands except for percentages):

	March 31, 2020	December 31, 2019	$ Change	% Change
Cash and cash equivalents	$ 54,455	$ 113,009	$ (58,554)	(52)%
Marketable securities	70,288	58,742	11,546	20 %
Total	$ 124,743	$ 171,751	$ (47,008)	(27)%
Outstanding principal on 2022 Convertible Notes	$ 320,000	$ 320,000	$ —	— %
Total	$ 320,000	$ 320,000	$ —	— %

Cash Flows

The following table presents a summary of the primary sources and uses of cash for the three months ended March 31, 2020 and 2019 (in thousands):

	March 31, 2020	March 31, 2019	$ Change
Net cash used in operating activities	$ (46,609)	$ (89,908)	$ 43,299
Net cash (used in) provided by investing activities	(10,718)	11,336	(22,054)
Net cash used in financing activities	(1,227)	(36,767)	35,540
Net decrease in cash, cash equivalents, and restricted cash	$ (58,554)	$ (115,339)	$ 56,785

Operating Activities

Cash flows from operating activities represented the cash receipts and disbursements related to all of our activities other than investing and financing activities. We have historically financed our operating and capital expenditures primarily through cash flows earned through our operations. We expect cash provided by operating activities, in addition to our cash, cash equivalents and marketable securities, will continue to be a primary source of funds to finance operating needs and capital expenditures.

Operating cash flow is derived by adjusting our net income (loss) for:

- Non-cash operating items, such as depreciation and amortization and equity-based compensation; and
- Changes in operating assets and liabilities, which reflect timing differences between the receipt and payment of cash associated with transactions and when they are recognized in results of operations.

For the period ended March 31, 2020 compared to March 31, 2019, net cash flows used in operating activities decreased by $43.3 million, driven primarily by a decrease in net loss as adjusted for non-cash charges of $84.8 million, partially offset by a $41.5 million increase due to changes in operating assets and liabilities. Included within net loss for the period ended March 31, 2019 was $74.9 million of acquired IPR&D expense related to the Perosphere asset acquisition, of which $60.8 million was paid in cash during the first quarter of 2019.

Investing Activities

Cash flows used in investing activities was $10.7 million for the three months ended March 31, 2020 due primarily to net purchases of marketable securities of $12.1 million, partially offset by proceeds of $1.4 million from the sale of assets. Cash provided by investing activities for the three months ended March 31, 2019 was $11.3 million due net proceeds from sales of marketable securities of $13.1 million offset by capital expenditures of $1.8 million.

Financing Activities

Cash used in financing activities was $1.2 million for the three months ended March 31, 2020 due to payments of employee tax withholdings related to equity based compensation. Cash used in financing activities for the three months ended March 31, 2019 was $36.8 million primarily due to the repayment of the $21.4 million balance of our 2019 convertible notes, $13.7 million for common stock repurchases and $1.6 million for payments of employee tax withholdings related to equity based compensation.

Future Liquidity Considerations

We believe that our cash, cash equivalents and marketable securities as of March 31, 2020, and the cash we expect to receive from sales of our products, will be sufficient to fund our current operating plans and capital expenditure requirements for at least twelve months from the date of issuance of these financial statements.

We generated negative cash flows from operations during the three months ended March 31, 2020 and during the year ended December 31, 2019. Our expected cash flows from operations between now and June 1, 2022, the maturity date of our 2022 Convertible Notes will be insufficient to settle these Convertible Notes. We therefore expect that we will need to issue new securities, in the form of debt, equity or equity-linked, or some combination thereof, and it may be challenging for us to do so on favorable terms in light of the impact of COVID-19 on the global economy and financial markets. We may also utilize proceeds from a potential strategic collaboration or other transaction to manage our existing obligations.

Notwithstanding the above, given the uncertainties around the severity and duration of COVID-19, our forecasted cash flows for the remainder of 2020 could be adversely impacted if actual events differ from our estimates.

For a detailed discussion regarding the risks and uncertainties related to our liquidity and capital resources and to the potential impact of the COVID-19 pandemic, please refer to our Risk Factors in Part I, Item 1A of our Annual Report and in Part II, Item IA of this Quarterly Report on Form 10-Q.

Borrowings and Other Liabilities

In the second quarter of 2017, we issued $320.0 million aggregate principal amount of convertible senior notes due 2022 (the "2022 Convertible Notes"), as discussed in more detail in Note Q, "*Debt*," to our condensed consolidated financial statements included in this Quarterly Report on Form 10-Q. The 2022 Convertible Notes are senior unsecured obligations and bear interest at a rate of 3.25% per year, payable semi-annually in arrears on June 1 and December 1 of each year, beginning on December 1, 2017. The 2022 Convertible Notes will mature on June 1, 2022, unless earlier repurchased or converted. Upon conversion of the 2022 Convertible Notes, such 2022 Convertible Notes will be convertible into, at our election, cash, shares of our common stock, or a combination thereof, at a conversion rate of 36.5464 shares of common stock per $1,000 principal amount of the 2022 Convertible Notes, which corresponds to an initial conversion price of approximately $27.36 per share of our common stock. The conversion rate is subject to adjustment from time to time. The 2022 Convertible Notes were not convertible as of March 31, 2020.

Share Repurchase Program

As of January 1, 2020, we had $26.8 million available under the share repurchase program initially approved by our Board of Directors in January 2016, which was updated in March 2019 to permit the repurchase of up to an aggregate of $80.0 million in shares of our common stock. During the three months ended March 31, 2020, we did not repurchase shares of common stock under this program. As of March 31, 2020, $26.8 million remained available for future repurchases under this program.

Off-Balance Sheet Arrangements

As of March 31, 2020, we did not have any off-balance sheet arrangements as defined in Regulation S-K, Item 303(a)(4)(ii).

Impact of Recently Issued and Proposed Accounting Pronouncements

See Note S, "*Recently Issued and Proposed Accounting Pronouncements*," and Note T, "*Recently Adopted Accounting Pronouncements*," to our condensed consolidated financial statements included in this Quarterly Report on Form 10-Q for information regarding new accounting pronouncements.

Item 3. Quantitative and Qualitative Disclosures About Market Risk:

There have been no material changes with respect to the information appearing in Part II, Item 7A, "Quantitative and Qualitative Disclosures About Market Risk," in our Annual Report.

Item 4. Controls and Procedures:

Managements' Evaluation of our Disclosure Controls and Procedures

Our principal executive officer and principal financial officer, after evaluating the effectiveness of our "disclosure controls and procedures" (as defined in the Exchange Act Rule 13a-15(e), or Rule 15d-15(e)), with the participation of our management, have each concluded that, as of the end of the period covered by this Quarterly Report on Form 10-Q, our disclosure controls and procedures were effective and were designed to ensure that information we are required to disclose in the reports that we file or submit under the Securities Exchange Act of 1934, as amended, is accumulated and communicated to management, including our principal executive officer and principal financial officer, as appropriate, to allow timely decisions regarding required disclosure, and is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission rules and forms. It should be noted that any system of controls is designed to provide reasonable, but not absolute, assurances that the system will achieve its stated goals under all reasonably foreseeable circumstances. Our principal executive officer and principal financial officer have each concluded that our disclosure controls and procedures as of the end of the period covered by this report are effective at a level that provides such reasonable assurances.

Changes in Internal Control Over Financial Reporting

There were no changes in our internal control over financial reporting (as such term is defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) that occurred during the three months ended March 31, 2020 that have materially affected, or that are reasonably likely to materially affect, our internal control over financial reporting.

PART II. OTHER INFORMATION

Item 1. Legal Proceedings:

See Note O, "*Commitments and Contingencies*," to our condensed consolidated financial statements included in this Quarterly Report on Form 10-Q for information regarding our legal proceedings, including how we accrue liabilities for legal contingencies.

Item 1A. Risk Factors:

With the exception of the risk factors below, there have been no material changes from the Risk Factors disclosed in Part I, Item 1A, of our Annual Report.

The scale and scope of the novel coronavirus ("COVID-19") pandemic is unknown and continues to rapidly evolve. It has caused unprecedented disruption to global economies and poses a significant threat to the healthcare industry and infrastructure throughout the world, which has had and could continue to have a negative impact on our business.

The global spread of COVID-19 has created significant volatility, uncertainty and economic disruption on a global scale, including in the United States, where we market Feraheme and Makena, where our operations and employees reside and where we conduct clinical trials, as well as in Europe and other countries where we are conducting our AMAG-423 Phase 2b/3a study. The extent to which the COVID-19 pandemic impacts our business, operations and financial results will depend on numerous evolving factors that we may not be able to accurately predict, including:

- the duration and scope of the pandemic;
- governmental, business and individuals' protocols and actions that have been and continue to be taken in response to the pandemic;
- the impact of the pandemic on economic activity and actions taken in response;
- the effect on patients, healthcare providers and business partners;
- demand for our products, including as a result of reduced patient visits to healthcare providers, travel restrictions, social distancing, quarantines and other containment measures;
- uncertainty as to when we will be able to resume or initiate our clinical trials, particularly at clinical trial sites located in highly impacted geographies and as a result of disruptions with our CROs;
- the ability to obtain or deliver sufficient and timely supplies if the production capabilities of manufacturers and suppliers or transportation is disrupted;
- our access to the debt and equity markets, including our ability to enter into a restructuring transaction for our 2022 Convertible Notes, on satisfactory terms, or at all;

- our ability to successfully complete the divestiture of our women's health business in a timely manner, or at all, or that any transaction will be on terms that are favorable to us or that yield any value for shareholders in light of disruptions to our sales efforts and decreased sales of Intrarosa and Vyleesi, and industry participants' experiencing disruptions in their businesses or seeking to conserve cash, delays with any required regulatory approvals, difficulty conducting diligence and other M&A activities in light of social distancing and travel restrictions, and limitations and volatility in the financial markets;

- disruptions in regulatory oversight and actions if regulators and industry professionals are expending significant and unexpected resources addressing COVID-19;

- any impact on our rebate payment liability, including as a result of any changes in the terms or mix of coverage and reimbursement from government and health administration authorities, private health insurers and other third-party payors; and

- any closures of our and our partners' offices, operations and facilities.

For example, we have observed a decline in Feraheme and Makena sales, as COVID-19 protocols have restricted or discouraged patient access to hospitals, clinics, physicians' offices and other sites where Feraheme and Makena are typically administered and caused a re-prioritization of healthcare services. Further, although we have implemented remote selling tactics, such initiatives may not be as successful as traditional, in-person interactions.

In addition, as a result of COVID-19, we have paused new patient enrollment and initiation of new sites for the AMAG-423 Phase 2b/3a clinical trial, and we are currently unable to initiate the planned ciraparantag Phase 2b trial. Given site shutdowns and an inability to enroll while COVID-19 protocols are in place, we expect delays to both of our clinical programs, but due to the uncertainties caused by COVID-19, the scope of the delay is presently unknown.

Although we have taken steps to mitigate risks related to the COVID-19 pandemic on our employees, including by implementing a work from home policy for all employees, such efforts are vulnerable to disruptions that may occur if the digital infrastructures are insufficient to accommodate the increased usage as social distancing is implemented on a global scale.

The scope and scale of COVID-19 is unprecedented and its duration and impact cannot be predicted with any certainty. Its impact could have a material and adverse impact on our revenues and operations, which could cause a decline in our stock price. To the extent the COVID-19 pandemic adversely affects our business and financial results, it may also have the effect of heightening many of the other risks described in this "Risk Factors" section and in the "Risk Factors" section of our Annual Report on Form 10-K, including, in particular, risks related to the timelines for our development programs, risks related to our ability to successfully complete the divestiture of our women's health business, risks related to our ability to achieve and/or maintain profitability, and risks related to our complete dependence on third parties for the manufacture of our products.

Actions that we are taking to streamline our business, including in response to COVID-19 and our efforts to divest Intrarosa® (prasterone) and Vyleesi® (bremelanotide injection), may be costly and may not be as effective as anticipated.

Our focus on streamlining our business, including through the divestiture of Intrarosa and Vyleesi and in response to the impacts of COVID-19, it has become difficult, costly and, in some cases, impossible, to conduct our business in the ordinary course, or to commercialize our products in an effective and efficient manner. As a result, we are implementing a workforce reduction to reduce the size of our organization, in an effort to reduce expenses and conserve cash.

The diversion of healthcare resources to the handling the COVID-19 pandemic, combined with social distancing protocols, has led to a significant decrease in the ability of our commercial team to actively and effectively engage with healthcare providers, pharmacies and patients. This workforce reduction may be disruptive to our operations, including by distracting management from our core business, exposing us to employment-related lawsuits and affecting employee productivity and morale, and could impact our ability to hire or retain key personnel, any of which could, in turn, materially and adversely impact our operations.

Further, there can be no assurance that our previously announced strategic review will result in a successful transaction or transactions for the divestiture of Intrarosa and Vyleesi, or that any such transaction will be favorable to us or create any shareholder value. Although discussions and negotiations around the divestiture remain ongoing and are progressing, certain of those risks attendant to the divestiture identified in our Annual Report on Form 10-K, could be exacerbated by the continued impact of COVID-19 on our business and the businesses of licensing partners and potential buyers, as well as on global economic and financial markets and on the healthcare industry more generally. For example, we are subject to minimum commitments, some of which are significant, with certain of our vendors, who may be less willing or unable to accommodate modifications to our contracts given their own business constraints in light of COVID-19, and which minimum commitment obligations potential buyers or licensing partners may be unwilling to assume. Further, discussions and diligence efforts have been somewhat protracted as parties adjust to remote workstreams and procedures, and in light of general distractions caused by

COVID-19. Such factors may make it more difficult for us to divest Intrarosa and Vyleesi efficiently, on favorable terms, if at all, and in a manner that does not impose burdensome obligations on us.

If our workforce reduction does not produce the expected cost and cash savings or if it results in unintended consequences, or if we fail to consummate a transaction to sell or otherwise divest Intrarosa and Vyleesi (or if any such transaction is significantly delayed or not on favorable terms), or if we are faced with disputes, lawsuits or burdensome contract terms in connection with such activities, our results of operations may be adversely affected, or we may not be able to adequately fund our clinical development programs on the anticipated timelines, or at all.

We have limited experience with development stage products and cannot ensure that we will be successful in gaining approval of our product candidates, AMAG-423 and ciraparantag, or any product candidates that may be added to our pipeline, on a timely basis, or at all, and even if approved, we may not be successful in commercializing such products. Additionally, any approvals that we do obtain may contain unexpected FDA-imposed restrictions on the use or distribution of such products, which could adversely and materially affect our long-term success.

Our long-term success and ability to sustain and grow revenue depends upon our ability to continue to successfully develop our product candidates. Drug development is inherently risky, time consuming, unpredictable and costly. The FDA imposes substantial requirements on the development of such candidates to become eligible for marketing approval and has substantial discretion in the approval process.

We currently have two product candidates in our pipeline: AMAG-423, which is in development for the treatment of severe preeclampsia, and ciraparantag, which is in development for patients treated with novel oral anticoagulants or low molecular weight heparin when reversal of the anticoagulant effect of these products is needed for emergency surgery, urgent procedures or due to life-threatening or uncontrolled bleeding.

The approval of our current or future product candidates for commercial sale in the U.S. could be delayed, limited or denied or we may be required to conduct additional studies for a number of reasons, including, but not limited to, that:

- The FDA may determine that our product candidates do not demonstrate safety and efficacy in accordance with regulatory agency standards based on a number of considerations, including adverse medical events that are reported during the trials;
- The FDA could analyze and/or interpret data from clinical trials and preclinical testing in different ways than we or our partners interpret them and determine that our data is insufficient for approval;
- The FDA may require more information, including additional preclinical or clinical data or trials, to support approval;
- Devices we may use in combination with our products may not be adequate or may not be considered adequate by the FDA, such as the coagulometer we intend to use in the Phase 2 and Phase 3 clinical programs for ciraparantag;
- The FDA could determine that our manufacturing processes are not properly designed, are not conducted in accordance with federal laws or otherwise not properly managed and we may be unable to establish, and obtain FDA approval for, a commercially viable manufacturing process for our product candidates in a timely manner, or at all;
- The supply or quality of our product candidates for our clinical trials may be insufficient, inadequate or delayed, particularly with respect to AMAG-423, which is a biologic and involves a time intensive, complex manufacturing process;
- The size of the patient population required to establish the efficacy of our product candidates to the satisfaction of the FDA may be larger than we anticipated;
- The failure of clinical investigational sites and the records kept at such sites, including the clinical trial data, to be in compliance with the FDA's current good clinical practices regulations ("cGCP"), including the failure to pass FDA inspections of clinical trial sites;
- The FDA may change their approval policies or adopt new regulations;
- The FDA may not be able to undertake reviews or approval processes in a timely fashion;

- The results of the earlier clinical trials may not be representative of our future, larger trials, particularly since the presumed mechanism of action for certain of our products is not known or understood; for instance ciraparantag has only been studied in a small number of healthy volunteers;

- The FDA may not agree with our regulatory approval strategies or components of our regulatory filings, such as the design or implementation of our clinical trials; for instance, we are relying on precedent to estimate the number of patients required in our Phase 3b ciraparantag trial prior to filing the New Drug Application ("NDA"), and the FDA may not agree with our approach and our other expectations for these clinical trials may not ultimately be approved by the FDA; or

- A product may not be approved for the indications that we request.

Further, we have identified the following risks, which are specific to a particular development program:

AMAG-423

- Difficulties in enrolling the Phase 2b/3a trial, including due to the spread of COVID-19 and challenges in enrolling a sufficient number of patients with severe preeclampsia, will affect the timing of completion of the study and may affect our ability to complete the study in a reasonable timeframe or at all, thereby jeopardizing the viability of the 423 Program. For instance, all active sites have paused new patient enrollment, and we have paused new site initiation, due to the spread of COVID-19. Due to this disruption, it is unclear when we will be able to restart enrollment. Even if and when we are able to restart enrollment, it is likely to continue to be a slow process as severe preeclampsia can be a difficult patient population to enroll. Moreover, enrollment may be further protracted due to delays in initiating new trial sites once the COVID-19 pandemic is resolved, failure of our third-party vendors (such as our CROs) to effectively perform their obligations to us in a timely manner, a lack of patients who meet the enrollment criteria, our inability to establish sufficient trial sites (including outside of the U.S. due to regulatory requirements), in a timely manner, or our inability to secure sufficient supply of drug product to meet the clinical timeline due to the large number of global sites (including, in each case, as a result of the impacts of the COVID-19 pandemic, the scope of which is presently unknown and difficult to predict);

- AMAG-423 is produced through a time intensive, complex process and there is currently only one third-party that can manufacture it, as further discussed below;

- The Phase 2b/3a trial may produce negative or inconclusive results or may not demonstrate to the FDA's satisfaction that AMAG-423 is safe and effective, particularly in light of the limited amount of data to date demonstrating that AMAG-423 effectively treats severe preeclampsia in this patient population;

- Under our agreement with BTG plc, we are required to differentiate our product from their product DigiFab® including without limitation, via labeling, dosage and/or formulation and if we are unable to show differentiation, we may be in breach of the agreement, which could give BTG the right to terminate the agreement and subject us to penalties; and

- There is no FDA-approved treatment for severe preeclampsia and accordingly, there is not an established regulatory pathway, which may require us to conduct additional trials or otherwise delay the approval of AMAG-423.

Ciraparantag

- The timing and/or complexity of our upcoming Phase 2b study could be negatively impacted for a number of reasons, including (i) due to the FDA requirement that we use a manual whole blood clotting time ("WBCT") in addition to the automated coagulometer, which is a difficult and time-consuming process; (ii) if the FDA requires us to explore additional dosing; (iii) if we do not get agreement from the Center for Drug Evaluation and Research ("CDER") on our Phase 2b protocol in a timely manner, which would delay the Investigational Device Exception ("IDE") submission timeline; or (iv) if the validation study required by the Center for Devices and Radiological Health ("CDRH") to obtain the IDE for the coagulometer takes longer than anticipated;

- Due to the continuing impact of the COVID-19 pandemic, the scope of which is presently unknown and difficult to predict, Perosphere Technologies may be unable to complete the validation study required by CDRH to obtain the IDE approval for the coagulometer and we are unable to initiate our planned clinical trial sites for the Phase 2b study and, accordingly, will be unable to commence enrollment of patients;

- The coagulometer that we intend to use in the ciraparantag Phase 2 and Phase 3 trials has not yet received IDE approval or been used in clinical trials and therefore, the FDA may (i) determine that the device is not effective in measuring WBCT, and/or (ii) not grant the IDE, which is necessary prior to the use of the coagulometer in our clinical trials; in such circumstances, ciraparantag may not receive regulatory approval or its approval would be delayed. Moreover, the FDA may only approve ciraparantag in conjunction with the use of the coagulometer (i.e. as a companion diagnostic), which could affect the commercial viability of ciraparantag;

- Our NDA filing for ciraparantag could be delayed if (i) we are not able to gain agreement with the FDA on CMC, clinical pharmacology or our pre-clinical program at our End of Phase 2 meeting, including having to conduct potential additional trials prior to commencing the Phase 3 program; (ii) if we are not eligible for the accelerated approval pathway or the FDA requires more patient data before filing than anticipated; or (iii) if the FDA requires additional Phase 3 trials; and

- Even if approved, ciraparantag may not be approved with all three novel oral anticoagulants ("NOACs") as well as Lovenox® (enoxaparin sodium injection), a low molecular weight heparin ("LMWH"), which could affect market acceptance and revenue.

In addition, AMAG-423 has received orphan drug designation from the FDA and we are pursuing orphan drug designation for ciraparantag. Under the Orphan Drug Act of 1983, the FDA may designate a product candidate as an orphan drug if it is intended to treat a rare disease or condition, defined, in part, as a patient population of fewer than 200,000. The company that first obtains FDA approval for a designated orphan drug for the specified rare disease or condition receives orphan drug marketing exclusivity for that drug for a period of seven years. We cannot guarantee that our clinical data or other information that we generate or submit will be adequate for AMAG-423 or ciraparantag to receive orphan drug exclusivity. For example, we received a letter from the FDA in April 2020 indicating that the 'non-rare disease' or condition for the purposes of our request for orphan drug exclusivity for ciraparantag should be for ciraparantag's use as an anticoagulant reversal agent to any FDA approved anticoagulant drug, and not a subset thereof, unless justified and, as a result, the FDA may not conclude that the patient population qualifies for orphan drug exclusivity. We are considering our options for responding to the FDA. Even after an orphan drug is approved and granted exclusivity as such, the FDA may subsequently approve another drug for the same condition if the FDA concludes that such other drug is not the same drug or is clinically superior in that it is shown to be safer, more effective or makes a major contribution to patient care. In addition, orphan drug exclusivity marketing rights may be lost if the FDA later determines that the request for designation was materially defective or if the manufacturer is unable to assure sufficient quantity of the drug to meet the needs of patients with the rare disease or condition.

Any failure, delay or setback in obtaining regulatory approval for our product candidates, or setback resulting from our inability to sufficiently fund or otherwise support our pipeline through approval, including as a result of the COVID-19 pandemic, could adversely affect our ability to grow our business and leverage our product portfolio, and the future prospects of our business could be materially adversely affected. In addition, share prices have declined significantly in certain instances where companies have failed to obtain FDA approval of a product or where the timing of FDA approval is delayed. If we are required to conduct additional studies or our studies take longer than anticipated, our share price could decline significantly. Further, the market for products that address unmet medical needs is highly speculative and if we have over-estimated the market opportunity for any of our products or product candidates, or if we are unsuccessful in gaining market share, then our business and results of operations could be materially and adversely affected.

Even if regulatory approval is granted by the FDA to market our current or future product candidates, the FDA may impose limitations on the indicated use for which the drug product may be marketed or require additional post-approval clinical trials or other requirements with which we would need to comply in order to maintain approval of these products. The occurrence of any of these scenarios could materially harm the commercial prospects of our product candidates and our business could be seriously harmed.

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

The following table provides certain information with respect to our purchases of shares of our stock during the three months ended March 31, 2020.

Period	Total Number of Shares Purchased [1]	Average Price Paid Per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs [2]	Maximum Number of Shares (or approximate dollar value) That May Yet Be Purchased Under the Plans or Programs [2]
January 1, 2020 through January 31, 2020	2,754	$ 12.33	—	3,019,737
February 1, 2020 through February 29, 2020	99,032	9.03	—	3,452,241
March 1, 2020 through March 31, 2020	36,399	7.74	—	4,329,267
Total	138,185	$ 8.76	—	

(1) Includes the surrender of shares of our common stock withheld by us to satisfy the minimum tax withholding obligations in connection with the vesting of restricted stock units held by our employees.

(2) We did not repurchase shares of our common stock during the first quarter of 2020. We have repurchased and retired $53.2 million of our common stock under our share repurchase program through March 31, 2020. These shares were purchased pursuant to a repurchase program initially approved by our Board of Directors in January 2016, which was updated in March 2019 to permit the repurchase of up to $80.0 million of our common stock, of which $26.8 million remained authorized for repurchase as of March 31, 2020. The repurchase program does not have an expiration date and may be suspended for periods or discontinued at any time.

Item 6. Exhibits:

Exhibit Number	Description
10.1	Separation Letter between William Heiden and AMAG Pharmaceuticals, Inc., dated January 7, 2020 (incorporated herein by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed January 9, 2020)
10.2	Employment Agreement by and between AMAG Pharmaceuticals, Inc. and Scott Myers effective as of April 28, 2020 (incorporated herein by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed April 28, 2020)
10.3+	Separation Letter between Julie Krop and AMAG Pharmaceuticals, Inc., dated March 3, 2020
10.4+	Form of Non-Qualified Stock Option Agreement - Non-Plan Inducement Grant
10.5+	Form of Restricted Stock Unit Agreement - Non-Plan Inducement Grant
31.1+	Certification Pursuant to Rule 13a-14(a)/15d-14(a) of the Exchange Act, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2+	Certification Pursuant to Rule 13a-14(a)/15d-14(a) of the Exchange Act, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32.1++	Certification Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
32.2++	Certification Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
101.SCH+	Inline XBRL Taxonomy Extension Schema Document
101.CAL+	Inline XBRL Taxonomy Extension Calculation Linkbase Document
101.LAB+	Inline XBRL Taxonomy Extension Label Linkbase Document
101.PRE+	Inline XBRL Taxonomy Extension Presentation Linkbase Document
101.DEF+	Inline XBRL Taxonomy Extension Definition Linkbase Document
104+	Cover Page Interactive Data File (formatted as inline XBRL with applicable taxonomy extension information contained in Exhibits 101.*)

\+ Exhibits marked with a plus sign ("+") are filed herewith.

++ Exhibits marked with a double plus sign ("++") are furnished herewith.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) 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.

AMAG PHARMACEUTICALS, INC.

By: /s/ Scott D. Myers

Scott D. Myers

President and Chief Executive Officer
(Principal Executive Officer)

Date: May 11, 2020

AMAG PHARMACEUTICALS, INC.

By: /s/ Edward Myles

Edward Myles

Executive Vice President of Finance, Chief Financial Officer, Chief Operating Officer and Treasurer (Principal Financial and Accounting Officer)

Date: May 11, 2020

Exhibit 10.3

March 3, 2020

Dear Julie:

Thank you for being candid and forthright with me about your desire to voluntarily resign from AMAG Pharmaceuticals, Inc. ("AMAG"), as well as for your willingness to remain at AMAG for a designated period of time prior to your departure. We appreciate your efforts on behalf of AMAG in recent years and your commitment to make the transition smooth and professional.

As a sign of our appreciation, we are willing to offer you a retention bonus in exchange for your continued commitment to the organization through March 31, 2020. In particular, if you remain actively employed with AMAG through March 31, 2020 (the "Separation Date"), comply with company rules and policies throughout that date, and engage in best efforts to perform your job duties through that date and otherwise assist with transitional matters, AMAG will provide you with a lump sum retention bonus in the amount of Two Hundred and Eighty Eight Thousand Dollars ($288,000.00), less lawful deductions (the "Retention Bonus"). The Retention Bonus shall be contingent on you signing and complying with (and not revoking your acceptance) of a separation agreement and general release in a form prepared by and acceptable to the Company (the "Release Agreement). You will be provided at least 21 days to consider the Release Agreement, which must be signed and returned to AMAG no later than April 6, 2020. The Retention Bonus will be payable within five (5) business days of the Effective Release Date (as defined in the Release Agreement).

Provided that you remain actively employed, you will continue to receive your regular pay and benefits through the Separation Date, including your annual bonus for fiscal year 2019 in the amount of $148,500.00, less lawful deductions. If the Company chooses in its discretion to accelerate your Separation Date, you will be paid through March 31, 2020 and you will remain eligible for the Retention Bonus described above.

You agree to keep the terms of this letter, as well as the fact of your departure, strictly confidential until the Company chooses to communicate your resignation prior to March 31, 2020.

This letter replaces, supersedes and extinguishes any rights you may have to retention payments/awards, severance pay/benefits and/or other termination pay/benefits under your Employment Agreement, your letter dated October 4, 2019 relating certain Retention Awards, as well any other applicable agreement, policy or plan. For the avoidance of doubt, you will not be eligible to receive any other severance payments/benefits (including without limitation as set forth in Section 5(b), 5(c) and 5(d) of your Employment Agreement) or retention payments/awards, other than the Retention Bonus set forth herein.

To accept the terms of this letter, please sign below where indicated and return the original to me by March 3, 2020.

Again, thank you for your continuing commitment to AMAG through the Separation Date.

Sincerely,

/s/ William Heiden

William Heiden
Chief Executive Officer & President

AGREED TO:

/s/ Julie Krop 3/3/2020
Julie Krop Date

AMAG PHARMACEUTICALS, INC.
NON-QUALIFIED STOCK OPTION AGREEMENT
NON-PLAN INDUCEMENT GRANT

Name of Optionee: _____

No. of Option Shares: _____

Option Exercise Price per Share: $_____
[FMV on Grant Date]

Grant Date: _____

Expiration Date: _____

AMAG Pharmaceuticals, Inc. (the "Company") hereby grants to the Optionee named above an option (the "Stock Option") to purchase on or prior to the Expiration Date specified above all or part of the number of shares of Common Stock, par value $0.01 per share (the "Stock") of the Company specified above at the Option Exercise Price per Share specified above, as an inducement grant made pursuant to Rule 5635(c)(4) of the NASDAQ Listing Rules subject to the terms and conditions set forth herein and in the Plan. For the avoidance of doubt, this Stock Option is not issued under the Company's [*insert name of current plan*] (the "Plan") and does not reduce the share reserve under the Plan. However, for purposes of interpreting the applicable provisions of this Stock Option, the terms and conditions of the Plan (other than those applicable to the share reserve) shall govern and apply to this Stock Option as if such Stock Option had actually been issued under the Plan. This Stock Option is not intended to be an "incentive stock option" under Section 422 of the Internal Revenue Code of 1986, as amended.

1. Exercisability Schedule. No portion of this Stock Option may be exercised until such portion shall have become exercisable. Except as set forth below, and subject to the discretion of the Administrator (as defined in Section 2 of the Plan) to accelerate the exercisability schedule hereunder, this Stock Option shall be exercisable with respect to the following number of Option Shares on the dates indicated so long as the Optionee remains in a Business Relationship (as defined in Section 3 below) on such dates:

Incremental Number of Option Shares Exercisable	Exercisability Date
_____ (___%)	_____
_____ (___%)	_____
_____ (___%)	_____
_____ (___%)	_____

Once exercisable, this Stock Option shall continue to be exercisable at any time or times prior to the close of business on the Expiration Date, subject to the provisions hereof and of the Plan.

2. Manner of Exercise.

(a) The Optionee may exercise this Stock Option only in the following manner: from time to time on or prior to the Expiration Date of this Stock Option, the Optionee may give written or electronic notice to the Company to the attention of the Company's Treasurer or his or her designee of his or her election to purchase some or all of the Option Shares purchasable at the time of such notice. This notice shall specify the number of Option Shares to be purchased.

Payment of the purchase price for the Option Shares may be made by one or more of the following methods: (i) in cash, by certified or bank check or other instrument acceptable to the Company; (ii) subject to the Company's approval, through the delivery (or attestation to the ownership) of shares of Stock that have been purchased by the Optionee on the open market or that are beneficially owned by the Optionee and are not then subject to any restrictions under any Company plan and that otherwise satisfy any holding periods as may be required by the Administrator; (iii) by the Optionee delivering to the Company a properly executed exercise notice together with irrevocable instructions to a broker to promptly deliver to the Company cash or a check payable and acceptable to the Company to pay the option purchase price, provided that in the event the Optionee chooses to pay the option purchase price as so provided, the Optionee and the broker shall comply with such procedures and enter into such agreements of indemnity and other agreements as the Company shall prescribe as a condition of such payment procedure; or (iv) a combination of (i), (ii) and (iii) above. Payment instruments will be received subject to collection.

The transfer to the Optionee on the records of the Company or of the transfer agent of the Option Shares will be contingent upon (i) the Company's receipt from the Optionee of the full purchase price for the Option Shares, as set forth above, (ii) the fulfillment of any other requirements contained herein or in the Plan or in any other agreement or provision of laws, and (iii) the receipt by the Company of any agreement, statement or other evidence that the Company may require to satisfy itself that the issuance of Stock to be purchased pursuant to the exercise of Stock Options under the Plan and any subsequent resale of the shares of Stock will be in compliance with applicable laws and regulations. In the event the Optionee chooses to pay the purchase price by previously-owned shares of Stock through the attestation method, the number of shares of Stock transferred to the Optionee upon the exercise of the Stock Option shall be net of the Shares attested to.

(b) The shares of Stock purchased upon exercise of this Stock Option shall be transferred to the Optionee on the records of the Company or of the transfer agent upon compliance to the satisfaction of the Company with all requirements under applicable laws or regulations in connection with such transfer and with the requirements hereof and of the Plan. The determination of the Company as to such compliance shall be final and binding on the Optionee. The Optionee shall not be deemed to be the holder of, or to have any of the rights of a

holder with respect to, any shares of Stock subject to this Stock Option unless and until this Stock Option shall have been exercised pursuant to the terms hereof, the Company or the transfer agent shall have transferred the shares to the Optionee, and the Optionee's name shall have been entered as the stockholder of record on the books of the Company. Thereupon, the Optionee shall have full voting, dividend and other ownership rights with respect to such shares of Stock.

(c) Notwithstanding any other provision hereof or of the Plan, no portion of this Stock Option shall be exercisable after the Expiration Date hereof.

(d) Without derogating from the foregoing, "statutory option stock" (as defined below) may be tendered in payment of the exercise price of this Stock Option even if the stock to be so tendered has not, at the time of tender, been held by the Optionee for the applicable minimum statutory holding period required to receive the tax benefits afforded under Section 421(a) of the Code with respect to such stock. The Optionee acknowledges that the tender of such "statutory option stock" may have adverse tax consequences to the Optionee. As used above, the term "statutory option stock" means stock acquired through the exercise of an incentive stock option or an option granted under an employee stock purchase plan. The tender of statutory option stock in payment of the exercise price of this Option shall be accompanied by written representation (in form satisfactory to the Company) stating whether such stock has been held by the Optionee for the applicable minimum statutory holding period.

3. Termination of Business Relationship.

(a) If the Optionee's Business Relationship (as defined below) is terminated, the period within which to exercise the Stock Option may be subject to earlier termination as follows:

(i)If the Optionee's Business Relationship is terminated by reason of the Optionee's death or disability (as determined by the Company) or, if the Optionee dies or becomes disabled within the three-month period following the date the Optionee's Business Relationship terminates for any other reason, any portion of this Stock Option outstanding on the date of termination, may be exercised, to the extent exercisable on such date, for a period of twelve months from the date of death or disability or until the Expiration Date, if earlier. Any portion of this Stock Option that is not exercisable on the date the Optionee's Business Relationship is terminated shall terminate immediately and be of no further force or effect.

(ii)If the Optionee's Business Relationship is terminated for any reason other than death or disability, any portion of this Stock Option outstanding on such date may be exercised, to the extent exercisable on the date of termination, for a period of three months from the date of termination or until the Expiration Date, if earlier. Any portion of this Stock Option that is not exercisable on the date the Optionee's Business Relationship is terminated shall terminate immediately and be of no further force or effect.

(iii)Notwithstanding the foregoing, if the Optionee, prior to the termination date of this Stock Option, (i) violates any provision of any employment agreement or any confidentiality or other agreement between the Optionee and the Company, (ii) commits any felony or any crime involving moral turpitude under the laws of the United States or any state thereof, (iii) attempts to commit, or participate in, a fraud or act of dishonesty against the Company, or (iv) commits gross misconduct, the right to exercise this Stock Option shall terminate immediately upon written notice to the Optionee from the Company describing such violation or act.

The Company's determination of the reason for termination of the Optionee's Business Relationship shall be conclusive and binding on the Optionee and his or her representatives or legatees. Notwithstanding the foregoing, under certain circumstances set forth in the Employment Agreement dated as of _____ by and between the Company and the Optionee (the "Employment Agreement"), and subject to compliance by the Optionee with the requirements of the Employment Agreement related to such circumstances, the vesting of the unvested portion of this Stock Option may be accelerated as provided in and subject to the terms of the Employment Agreement.

(b) For purposes hereof, "Business Relationship" means service to the Company or any of its Subsidiaries, or its or their successors, in the capacity of an employee, officer, director, consultant or advisor. For purposes hereof, a Business Relationship shall not be considered as having terminated during any military leave, sick leave, or other leave of absence if approved in writing by the Company and if such written approval, or applicable law, contractually obligates the Company to continue the Business Relationship of the Optionee after the approved period of absence (an "Approved Leave of Absence"). For purposes hereof, a Business Relationship shall include a consulting arrangement between the Optionee and the Company that immediately follows termination of employment, but only if so stated in a written consulting agreement executed by the Company.

4. Incorporation of Plan. As stated above, this Stock Option is not granted pursuant to the Plan. Instead, this Stock Option is granted as an inducement grant pursuant to Rule 5635(c)(4) of the NASDAQ Listing Rules. However, for purposes of interpreting the application provisions of this Stock Option, the terms and conditions of the Plan (other than those applicable to the share reserve), including the powers of the Administrator set forth in Section 2(b), shall govern and apply to this Stock Option as if such Stock Option had actually been issued under the Plan. Capitalized terms in this Agreement shall have the meaning specified in the Plan, unless a different meaning is specified herein.

5. Transferability. This Agreement is personal to the Optionee, is non-assignable and is not transferable in any manner, by operation of law or otherwise, other than by will or the laws of descent and distribution. This Stock Option is exercisable, during the Optionee's lifetime, only by the Optionee, and thereafter, only by the Optionee's legal representative or legatee. Notwithstanding the foregoing, this Stock Option may be transferred pursuant to a domestic relations order.

6. Tax Withholding. The Optionee shall, not later than the date as of which the exercise of this Stock Option becomes a taxable event for Federal income tax purposes, pay to the Company or make arrangements satisfactory to the Company for payment of any Federal, state, and local taxes required by law to be withheld on account of such taxable event. The Company shall have the authority to cause the required tax withholding obligation to be satisfied, in whole or in part, by withholding from shares of Stock to be issued to the Optionee a number of shares of Stock with an aggregate Fair Market Value that would satisfy the withholding amount due; provided, however, that the amount withheld does not exceed the maximum tax rate, or such lesser amount as determined by the Administrator.

7. No Obligation to Continue Business Relationship. Neither the Company nor any Subsidiary is obligated by or as a result of the Plan or this Agreement to continue the Optionee's Business Relationship, and neither the Plan nor this Agreement shall interfere in any way with the right of the Company or any Subsidiary to terminate the Business Relationship of the Optionee at any time.

8. Integration. This Agreement constitutes the entire agreement between the parties with respect to this Stock Option and supersedes all prior agreements and discussions between the parties concerning such subject matter.

9. Data Privacy Consent. In order to administer the Plan and this Agreement and to implement or structure future equity grants, the Company, its subsidiaries and affiliates and certain agents thereof (together, the "Relevant Companies") may process any and all personal or professional data, including but not limited to Social Security or other identification number, home address and telephone number, date of birth and other information that is necessary or desirable for the administration of the Plan and/or this Agreement (the "Relevant Information"). By entering into this Agreement, the Optionee (i) authorizes the Company to collect, process, register and transfer to the Relevant Companies all Relevant Information; (ii) waives any privacy rights the Optionee may have with respect to the Relevant Information; (iii) authorizes the Relevant Companies to store and transmit such information in electronic form; and (iv) authorizes the transfer of the Relevant Information to any jurisdiction in which the Relevant Companies consider appropriate. The Optionee shall have access to, and the right to change, the Relevant Information. Relevant Information will only be used in accordance with applicable law.

10. Notices. Notices hereunder shall be mailed or delivered to the Company at its principal place of business to the attention of the Company's Treasurer and shall be mailed or delivered to the Optionee at the address on file with the Company or, in either case, at such other address as one party may subsequently furnish to the other party in writing.

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SIGNATURE PAGE TO AMAG PHARMACEUTICALS, INC.
NON-QUALIFIED STOCK OPTION AGREEMENT

AMAG PHARMACEUTICALS, INC.

By: _____
Name: Scott D. Myers
Title: President and Chief Executive Officer

The foregoing Agreement is hereby accepted and the terms and conditions thereof hereby agreed to by the undersigned, and the undersigned acknowledges receipt of a copy of this entire Agreement, a copy of the Plan, and a copy of the Plan's related prospectus. Electronic acceptance of this Agreement pursuant to the Company's instructions to the Optionee (including through an online acceptance process) is acceptable.

Dated: _____ _____
Optionee's Signature

Optionee's name and address:

_____
_____
_____

AMAG PHARMACEUTICALS, INC.
RESTRICTED STOCK UNIT AWARD AGREEMENT
NON-PLAN INDUCEMENT GRANT

Name of Grantee: _____

No. of Restricted Stock Units: _____

Grant Date: _____,

AMAG Pharmaceuticals, Inc. (the "Company") hereby grants an award of the number of Restricted Stock Units listed above (an "Award") to the Grantee named above, as an inducement grant made pursuant to Rule 5635(c)(4) of the NASDAQ Listing Rules. Each Restricted Stock Unit shall relate to one share of Common Stock, par value $0.01 per share (the "Stock") of the Company. For the avoidance of doubt, this Award is not issued under the Company's [*insert name of current plan*] (the "Plan") and does not reduce the share reserve under the Plan. However, for purposes of interpreting the applicable provisions of this Award, the terms and conditions of the Plan (other than those applicable to the share reserve) shall govern and apply to this Award as if such Award had actually been issued under the Plan.

1. Restrictions on Transfer of Award. This Award may not be sold, transferred, pledged, assigned or otherwise encumbered or disposed of by the Grantee, and any shares of Stock issuable with respect to the Award may not be sold, transferred, pledged, assigned or otherwise encumbered or disposed of until (i) the Restricted Stock Units have vested as provided in Section 2 of this Agreement and (ii) shares of Stock have been issued to the Grantee in accordance with the terms of the Plan and this Agreement.

2. Vesting of Restricted Stock Units. The restrictions and conditions of Section 1 of this Agreement shall lapse on the Vesting Date or Dates specified in the following schedule so long as the Grantee remains in a Business Relationship (as defined in Section 3 below) on such Dates. If a series of Vesting Dates is specified, then the restrictions and conditions in Section 1 shall lapse only with respect to the number of Restricted Stock Units specified as vested on such date.

Incremental Number of Restricted Stock Units Vested	Vesting Date
_____ (___%)	_____
_____ (___%)	_____
_____ (___%)	_____

The Administrator may at any time accelerate the vesting schedule specified in this Section 2.

3. Termination of Business Relationship.

(a) If the Grantee's Business Relationship terminates for any reason (including death or disability) prior to the satisfaction of the vesting conditions set forth in Section 2 above, any Restricted Stock Units that have not vested as of such date shall automatically and without notice terminate and be forfeited, and neither the Grantee nor any of his or her successors, heirs, assigns, or personal representatives will thereafter have any further rights or interests in such unvested Restricted Stock Units. Notwithstanding the foregoing, under certain circumstances set forth in the Employment Agreement dated as of _____ by and between the Company and the Grantee (the "Employment Agreement"), and subject to compliance by the Grantee with the requirements of the Employment Agreement related to such circumstances, the vesting of unvested Restricted Stock Units may be accelerated as provided in and subject to the terms of the Employment Agreement.

(b) "Business Relationship" means service to the Company or any of its Subsidiaries, or its or their successors, in the capacity of an employee, officer, director, consultant or advisor. For purposes hereof, a Business Relationship shall not be considered as having terminated during any military leave, sick leave, or other leave of absence if approved in writing by the Company and if such written approval, or applicable law, contractually obligates the Company to continue the Business Relationship of the Grantee after the approved period of absence (an "Approved Leave of Absence"). For purposes hereof, a Business Relationship shall include a consulting arrangement between the Grantee and the Company that immediately follows termination of employment, but only if so stated in a written consulting agreement executed by the Company.

4. Issuance of Shares of Stock. As soon as practicable following each Vesting Date (but in no event later than two and one-half months after the end of the year in which the Vesting Date occurs), the Company shall issue to the Grantee the number of shares of Stock equal to the aggregate number of Restricted Stock Units that have vested pursuant to Section 2 of this Agreement on such date and the Grantee shall thereafter have all the rights of a stockholder of the Company with respect to such shares.

5. Incorporation of Plan. As stated above, this Award is not granted pursuant to the Plan. Instead, this Award is granted as an inducement grant pursuant to Rule 5635(c)(4) of the NASDAQ Listing Rules. However, for purposes of interpreting the application provisions of this Award, the terms and conditions of the Plan (other than those applicable to the share reserve), including the powers of the Administrator set forth in Section 2(b), shall govern and apply to this Award as if such Award had actually been issued under the Plan. Capitalized terms in this Agreement shall have the meaning specified in the Plan, unless a different meaning is specified herein.

6. Tax Withholding. The Grantee shall, not later than the date as of which the receipt of this Award becomes a taxable event for Federal income tax purposes, pay to the Company or make arrangements satisfactory to the Company for payment of any Federal, state, and local taxes required by law to be withheld on account of such taxable event. The Company shall satisfy the required tax withholding obligation by withholding from shares of Stock to be issued to the Grantee a number of shares of Stock with an aggregate Fair Market Value that would satisfy the withholding amount due; provided, however, that the amount withheld does not

exceed the maximum tax rate. In addition, by acceptance of this Award, the Grantee agrees that for all outstanding restricted stock unit awards of the Company that the Grantee holds that have not yet vested, the Company shall satisfy any required tax withholding obligation by withholding from shares of Stock to be issued under such awards a number of shares of Stock with an aggregate Fair Market Value that would satisfy the withholding amount due; provided however, that the amount withheld does not exceed the maximum tax rate.

7. Section 409A of the Code. This Agreement shall be interpreted in such a manner that all provisions relating to the settlement of the Award are exempt from the requirements of Section 409A of the Code as "short-term deferrals" as described in Section 409A of the Code.

8. No Obligation to Continue Business Relationship. Neither the Company nor any Subsidiary is obligated by or as a result of the Plan or this Agreement to continue the Grantee's Business Relationship, and neither the Plan nor this Agreement shall interfere in any way with the right of the Company or any Subsidiary to terminate the Business Relationship of the Grantee at any time.

9. Integration. This Agreement constitutes the entire agreement between the parties with respect to this Award and supersedes all prior agreements and discussions between the parties concerning such subject matter.

10. Data Privacy Consent. In order to administer the Plan and this Agreement and to implement or structure future equity grants, the Company, its subsidiaries and affiliates and certain agents thereof (together, the "Relevant Companies") may process any and all personal or professional data, including but not limited to Social Security or other identification number, home address and telephone number, date of birth and other information that is necessary or desirable for the administration of the Plan and/or this Agreement (the "Relevant Information"). By entering into this Agreement, the Grantee (i) authorizes the Company to collect, process, register and transfer to the Relevant Companies all Relevant Information; (ii) waives any privacy rights the Grantee may have with respect to the Relevant Information; (iii) authorizes the Relevant Companies to store and transmit such information in electronic form; and (iv) authorizes the transfer of the Relevant Information to any jurisdiction in which the Relevant Companies consider appropriate. The Grantee shall have access to, and the right to change, the Relevant Information. Relevant Information will only be used in accordance with applicable law.

11. Notices. Notices hereunder shall be mailed or delivered to the Company at its principal place of business to the attention of the Company's Treasurer and shall be mailed or delivered to the Grantee at the address on file with the Company or, in either case, at such other address as one party may subsequently furnish to the other party in writing.

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SIGNATURE PAGE TO AMAG PHARMACEUTICALS, INC.
RESTRICTED STOCK UNIT AWARD AGREEMENT

AMAG PHARMACEUTICALS, INC.

By: _____

Name: Scott D. Myers

Title: President and Chief Executive Officer

The foregoing Agreement is hereby accepted and the terms and conditions thereof hereby agreed to by the undersigned, and the undersigned acknowledges receipt of a copy of this entire Agreement, a copy of the Plan, and a copy of the Plan's related prospectus. Electronic acceptance of this Agreement pursuant to the Company's instructions to the Grantee (including through an online acceptance process) is acceptable.

Dated: _____ _____

Grantee's Signature

Grantee's name and address:

_____

_____

_____

Exhibit 31.1

CERTIFICATIONS

I, Scott D. Myers, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of AMAG Pharmaceuticals, 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(s) 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(s) 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 11, 2020

/s/ Scott D. Myers

Scott D. Myers

President and Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

CERTIFICATIONS

I, Edward Myles, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of AMAG Pharmaceuticals, 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(s) 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(s) 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 11, 2020

/s/ Edward Myles

Edward Myles

Executive Vice President of Finance, Chief Financial Officer and Treasurer
(Principal Financial Officer)

Exhibit 32.1

CERTIFICATION 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 AMAG Pharmaceuticals, Inc. (the "Company") on Form 10-Q for the period ended March 31, 2020 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Scott D. Myers, President and Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to §906 of the Sarbanes-Oxley Act of 2002, that, to the best of my 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/ Scott D. Myers

Scott D. Myers
President and Chief Executive Officer
(Principal Executive Officer)

May 11, 2020

Exhibit 32.2

CERTIFICATION 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 AMAG Pharmaceuticals, Inc. (the "Company") on Form 10-Q for the period ended March 31, 2020 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Edward Myles, Executive Vice President of Finance, Chief Financial Officer and Treasurer of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that, to the best of my 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/ Edward Myles
Edward Myles
Executive Vice President of Finance, Chief Financial Officer and Treasurer
(Principal Financial Officer)

May 11, 2020