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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, 2014
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: 001-36225

KINDRED BIOSCIENCES, INC.

(Exact name of registrant as specified in its charter)

Delaware	**46-1160142**
(State of incorporation)	**(I.R.S. Employer Identification No.)**

1499 Bayshore Highway, Suite 226
Burlingame, California 94010
(Address of principal executive office) (Zip code)
Registrant's telephone number: (650) 701-7901

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 and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter time that the registrant was required to submit and post such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer	☐	Accelerated filer	☐
Non-accelerated filer	☒ (Do not check if a smaller reporting company)	Smaller reporting company	☐

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

As of April 30, 2014, Kindred Biosciences, Inc. had outstanding 19,677,120 shares of common stock, $0.0001 par value.

Kindred Biosciences, Inc.

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PART I

ITEM 1. FINANCIAL STATEMENTS

Kindred Biosciences, Inc.
(A Development Stage Company)
Condensed Balance Sheets
(In thousands, except share and per share amounts)

	March 31, 2014 (Unaudited)	December 31, 2013
ASSETS		
Current assets:		
Cash and cash equivalents	$ 36,513	$ 65,329
Short-term investments	24,015	—
Prepaid expenses and other	565	148
Total current assets	61,093	65,477
Property and equipment, net	27	12
Total assets	$ 61,120	$ 65,489
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 1,671	$ 689
Accrued liabilities	958	1,521
Total liabilities	2,629	2,210
Commitments and contingencies (Note 6)		
Stockholders' equity:		
Common stock, $0.0001 par value; 100,000,000 shares authorized; 16,227,120 and 16,214,620 shares issued and outstanding at March 31, 2014 and December 31, 2013, respectively	2	2
Additional paid-in capital	68,990	67,610
Deficit accumulated during the development stage	(10,501)	(4,333)
Total stockholders' equity	58,491	63,279
Total liabilities and stockholders' equity	$ 61,120	$ 65,489

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

Kindred Biosciences, Inc.
(A Development Stage Company)
Condensed Statements of Operations and Comprehensive Loss
(In thousands, except per share amounts)
(Unaudited)

	Three Months Ended March 31,		Cumulative Period From September 25, 2012 (Inception) Through March 31,
	2014	2013	2014
Operating expenses:			
Research and development	$ 4,498	$ 141	$ 7,713
General and administrative	1,679	83	2,803
Total operating expenses	6,177	224	10,516
Loss from operations	(6,177)	(224)	(10,516)
Interest income	9	—	15
Net loss and comprehensive loss	$ (6,168)	$ (224)	$ (10,501)
Net loss per share attributable to common stockholders, basic and diluted	$ (0.38)	$ (0.07)	
Weighted-average common shares outstanding, basic and diluted	16,222	3,000	

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

Kindred Biosciences, Inc.
(A Development Stage Company)
Condensed Statements of Cash Flows
(In thousands)
(Unaudited)

	Three Months Ended March 31,		Cumulative Period From September 25, 2012 (Inception) Through March 31,
	2014	2013	2014
Cash Flows from Operating Activities			
Net loss	$ (6,168)	$ (224)	$ (10,501)
Adjustments to reconcile net loss to net cash used in operating activities:			
Stock-based compensation expense	1,077	39	2,010
Depreciation expense	4	—	7
Changes in operating assets and liabilities:			
Prepaid expenses and other	(425)	—	(572)
Accounts payable	982	(4)	1,670
Due to related party	—	21	—
Accrued liabilities	(263)	17	957
Net cash used in operating activities	(4,793)	(151)	(6,429)
Cash Flows from Investing Activities			
Purchase of short-term investments	(24,008)	—	(24,008)
Purchase of property and equipment	(19)	—	(34)
Net cash used in investing activities	(24,027)	—	(24,042)
Cash Flows from Financing Activities			
Exercise of stock options	4	—	15
Net proceeds from issuance of Series AA convertible preferred stock	—	—	990
Net proceeds from issuance of Series A-1 convertible preferred stock	—	—	5,865
Net proceeds from issuance of Series A-1A convertible preferred stock	—	—	5,232
Net proceeds from note payable to related party	—	—	10
Net proceeds from sale of common stock in initial public offering	—	—	56,149
Payment of initial public offering costs	—	—	(1,277)
Net cash provided by financing activities	4	—	66,984
Net increase (decrease) in cash and cash equivalents	(28,816)	(151)	36,513
Cash and cash equivalents at the beginning of period	65,329	938	—
Cash and cash equivalents at end of period	$ 36,513	$ 787	$ 36,513

Supplemental disclosure of cash flow information:			
Cash paid for income taxes during the period	$ —	$ —	$ 1
Supplemental disclosure of non-cash financing activities:			
Conversion of note payable into Series AA convertible preferred stock	$ —	$ —	$ 10
Offering costs in connection with Series AA convertible preferred stock	$ —	$ —	$ 13
Issuance of common stock and stock options for accrued consulting expenses	$ 303	$ —	$ 838
Issuance of Series A-1A convertible preferred stock for settlement of offering costs	$ —	$ —	$ 78
Issuance of Series A-1 convertible preferred stock for settlement of legal fees and other offering costs	$ —	$ —	$ 32
Issuance of Series AA convertible preferred stock for settlement of offering costs	$ —	$ —	$ 15
Conversion of Series AA, Series A-1 and Series A-1A preferred stock into shares of common stock	$ —	$ —	$ 12,099

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

Kindred Biosciences, Inc.
(A Development Stage Company)

Notes to Condensed Financial Statements

(Unaudited)

1. Description of Business, Basis of Presentation and Summary of Significant Accounting Policies

Kindred Biosciences, Inc. ("we", "us" or "our") was incorporated on September 25, 2012 (inception) in the State of Delaware. We are a development stage biopharmaceutical company focused on saving and improving the lives of pets. Our activities since inception have consisted principally of raising capital, establishing facilities, recruiting management and technical staff and performing research and development and advancing our product candidates seeking regulatory approval. Our headquarters are in Burlingame, California.

We are subject to risks common to companies in the biotechnology and pharmaceutical industries. There can be no assurance that our research and development will be successfully completed, that adequate patent or other intellectual property protection for our technology will be obtained, that any products developed will obtain necessary government regulatory approval or that any approved products will be commercially viable. We operate in an environment of substantial competition from other animal health companies. In addition, we are dependent upon the services of our employees and consultants, as well as third-party contract research organizations and manufacturers.

The accompanying unaudited interim condensed financial statements have been prepared pursuant to the rules and regulations of the Securities and Exchange Commission (SEC). Accordingly, they do not include all of the information and footnotes required by accounting principles generally accepted in the United States ("U.S. GAAP") for complete financial statements. These unaudited interim condensed financial statements should be read in conjunction with the audited financial statements and notes thereto for the year ended December 31, 2013 included in our Form 10-K as filed with the SEC on March 14, 2014, as amended. In the opinion of management, all adjustments, consisting of a normal and recurring nature, considered necessary for a fair presentation, have been included in these unaudited interim condensed financial statements.

Liquidity

We have incurred losses and negative cash flows from operations and have not generated any revenue since our inception in September 2012 through March 31, 2014. We expect to continue to incur losses and negative cash flows, which will increase significantly from historical levels as we expand our product development activities, seek regulatory approvals for our product candidates, establish a biologics manufacturing capability, and begin to commercialize any approved products. To date, we have been funded primarily through sales of our former convertible preferred stock and the sale of common stock in our initial public offering in December 2013. On April 8, 2014, we completed another public offering of our shares of common stock resulting in net proceeds of approximately $58,100,000. We believe that our cash, cash equivalents and short-term investments as of March 31, 2014, together with the net proceeds from our April 2014 public offering, are sufficient to fund our planned operations for at least the next 24 months.

If we require additional funding for operations, we may seek such funding through public or private equity or debt financings or other sources, such as corporate collaborations and licensing arrangements. We may not be able to obtain financing on acceptable terms, or at all, and we may not be able to enter into corporate collaborations or licensing arrangements. The terms of any financing may result in dilution or other adversely affect the holding or the rights of our stockholders.

Use of Estimates

The preparation of financial statements and related disclosures in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting periods. Significant estimates and assumptions reflected in these financial statements include, but are not limited to, the valuation of common stock and stock-based awards, the realization of deferred tax assets and the accrual of research and development expenses. Estimates are periodically reviewed in light of changes in circumstances, facts and experience. Actual results could differ from those estimates.

Recently Issued Accounting Pronouncements

We believe recently issued standards that are not yet effective will not have a material impact on our financial statements when the standards become effective.

2. Fair Value Measurements

Certain assets and liabilities are carried at fair value. Fair value is defined as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. Valuation techniques used to measure fair value must maximize the use of observable inputs and minimize the use of unobservable inputs. A fair value hierarchy based on three levels of inputs, of which the first two are considered observable and the last is considered unobservable, is used to measure fair value:

Level 1: Quoted prices in active markets for identical assets or liabilities.

Level 2: Observable inputs (other than Level 1 quoted prices) such as quoted prices in active markets for similar assets or liabilities, quoted prices in markets that are not active for identical or similar assets or liabilities, or other inputs that are observable or can be corroborated by observable market data.

Level 3: Unobservable inputs that are supported by little or no market activity and that are significant to determining the fair value of the assets or liabilities, including pricing models, discounted cash flow methodologies and similar techniques.

The carrying amount of financial instruments, including cash and cash equivalents, accounts payable and accrued expenses approximate fair value due to the short maturities of these financial instruments.

Financial assets, which consist of money market funds and available-for-sale securities, are measured at fair value on a recurring basis and are summarized as follows (in thousands):

	Fair Value Measurements as of December 31, 2013			
Description	**Total**	**Quoted Prices in Active Markets (Level 1)**	**Significant Other Observable Inputs (Level 2)**	**Unobservable Inputs (Level 3)**
Cash equivalents:				
Money market funds	$ 65,310	$ 65,310	$ —	$ —
	$ 65,310	$ 65,310	$ —	$ —

	Fair Value Measurements as of March 31, 2014			
Description	**Total**	**Quoted Prices in Active Markets (Level 1)**	**Significant Other Observable Inputs (Level 2)**	**Unobservable Inputs (Level 3)**
Cash equivalents:				
Money market funds	$ 30,472	$ 30,472	$ —	$ —
Short-term investments:				
Treasury bills	5,999	—	5,999	—
U.S. federal agency notes	6,000	—	6,000	—
U.S. treasury bonds and notes	12,016	—	12,016	—
	$ 54,487	$ 30,472	$ 24,015	$ —

There were no transfers of assets between Level 1, Level 2 or Level 3 of the fair value hierarchy at March 31, 2014 or December 31, 2013.

At March 31, 2014 and December 31, 2013, we did not have any financial liabilities which were measured at fair value on a recurring basis.

3. Short-Term Investments

We classify all highly-liquid investments with stated maturities of greater than three months from the date of purchase and remaining maturities of less than one year as short-term investments. Investments with maturities beyond one year may be classified as short-term based on their highly liquid nature and because such investments are viewed as being available to support current operations. We classify and account for short-term investments as available-for-sale and reflect realized gains and losses using the specific identification method. Changes in market value if any, excluding other-than-temporary impairments, are reflected in other comprehensive income. At March 31, 2014, the carrying value of our short-term investments approximated their fair value.

The fair value of available-for-sale short-term investments by type of security at March 31, 2014 were as follows (in thousands):

	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
U.S. treasury bills	$ 5,999	$ —	$ —	$ 5,999
U.S. government agency notes	6,000	—	—	6,000
U.S. treasury bonds and notes	12,016	—	—	12,016
	$ 24,015	$ —	$ —	$ 24,015

At March 31, 2014 short-term investments with maturities beyond one year consisted of U.S. government bonds with carrying values of $3,001,000 and $3,011,000 that mature on April 30, 2015 and June 15, 2015, respectively. These investments are classified as current assets since they are viewed as available to support current operations. We held no short-term investments at December 31, 2013.

4. Accrued Liabilities

Accrued liabilities consisted of the following (in thousands):

	March 31, 2014	December 31, 2014
Accrued payroll and related expenses	$ 322	$ 635
Accrued consulting expenses	4	304
Accrued research and development costs	548	159
Accrued offering costs	—	381
Accrued other expenses	84	42
	$ 958	$ 1,521

5. Stock-Based Awards and Common Stock

The table below shows the number of shares of common stock underlying options granted to employees and directors, the assumptions used in the Black-Scholes option pricing model used to value those options and the resulting weighted-average grant date fair value per share:

	Three Months Ended March 31,	
	2014	2013
Shares underlying options granted	731,500	540,000
Weighted-average exercise price	$15.94	$0.35
Risk- free interest rate	1.44%-1.46%	0.62%-0.85%
Expected term (years)	5.3 - 6.1	5.0
Expected volatility	90%	90%
Expected dividend yield	—	—
Weighted-average grant date fair value per share	$11.73	$0.22

The table below shows the number of shares of common stock underlying options granted to consultants, the assumptions used in the Black-Scholes option pricing model used to value those options and the resulting weighted-average grant date fair value per share:

	Three Months Ended March 31,	
	2014	2013
Shares underlying options granted	32,713	36,525
Weighted-average exercise price	$15.41	$0.32
Risk- free interest rate	2.61%	0.62%
Expected term (years)	10.0	10.0
Expected volatility	90%	90%
Expected dividend yield	—	—
Weighted-average grant date fair value per share	$13.32	$0.27

In February 2014, we issued 12,500 shares of common stock with an intrinsic value of $202,000 upon exercise of stock options by a board member at a price of $0.32 per share, for total proceeds of $4,000.

We recorded stock-based compensation expense for the three months ended March 31, 2014 and 2013, respectively, as follows (in thousands):

	Three Months Ended March 31,	
	2014	2013
Research and development	$ 328	$ 33
General and administrative	749	6
	$ 1,077	$ 39

We had an aggregate of approximately $8,874,000 of unrecognized stock-based compensation expense for options outstanding as of March 31, 2014 which is expected to be recognized over a weighted-average period of 3.3 years.

6. Commitments and Contingencies

In March 2014 we entered into a license agreement under which we made an up-front payment and are obligated to make annual payments and, subject to certain terms and conditions, milestone payments upon achievement of development milestones and a royalty based on sales of products developed under the agreement.

7. Net Loss Per Share

Basic and diluted net loss per share was calculated as follows (in thousands, except per share amounts):

	Three Months Ended March 31,	
	2014	2013
Basic and diluted net loss per share attributable to common stockholders:		
Numerator:		
Net loss attributable to common stockholders	$ (6,168)	$ (224)
Denominator:		
Weighted-average common shares outstanding, basic and diluted	16,222	3,000
Net loss per common share attributable to common shareholders, basic and diluted	$ (0.38)	$ (0.07)

Stock options to purchase of 2,127,627 shares of common stock were excluded from the computation of diluted net loss per share attributable to common stockholders for the three months ended March 31, 2014, because they were anti-dilutive.

Stock options to purchase of 576,525 shares of common stock and 1,000,000 shares of common stock issuable upon the conversion of preferred stock were excluded from the computation of diluted net loss per share attributable to common stockholders for the three months ended March 31, 2013, because they were anti-dilutive.

8. Subsequent Events

On April 8, 2014, we completed a public offering of 3,450,000 shares of common stock at a price of $18.00 per share, for net proceeds of approximately $58,100,000, after deducting underwriting discounts, commissions and offering expenses.

In April 2014 we entered into a lease for laboratory space under which we are obligated to make lease payments of approximately $5,000 per month. The initial lease term is for a period of 36 months, and we have an option to renew the lease for one additional year at a market rate.

ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

In this section,"Kindred," "we," "our," "ours," "us," and the "Company" refer to Kindred Biosciences, Inc.

This management's discussion and analysis of financial condition as of March 31, 2014 and results of operations for the three months ended March 31, 2014 and 2013 should be read in conjunction with our Annual Report on Form 10-K for the year ended December 31, 2013 which was filed with the SEC on March 14, 2014,as amended March 18, 2014 and April 24, 2014, and our condensed financial statements and notes to condensed financial statements in this Form 10-Q.

The discussion and analysis below includes certain forward-looking statements related to our research and development and commercialization of our products in the U.S., our future financial condition and results of operations and potential for profitability, the sufficiency of our cash resources, our ability to obtain additional equity or debt financing, if needed, possible partnering or other strategic opportunities for the development of our products, as well as other statements related to the progress and timing of product development, present or future licensing, collaborative or financing arrangements or that otherwise relate to future periods, which are all forward-looking statements as defined by the Private Securities Litigation Reform Act of 1995. These statements represent, among other things, the expectations, beliefs, plans and objectives of management and/or assumptions underlying or judgments concerning the future financial performance and other matters discussed in this document. The words "may," "will," "should," "plan," "believe," "estimate," "intend," "anticipate," "project," and "expect" and similar expressions are intended to connote forward-looking statements. All forward-looking statements involve certain risks, uncertainties and other factors described in Part II. Item 1.A of this report and in our Annual Report on Form 10-K for the year ended December 31, 2013, that could cause our actual commercialization efforts, financial condition and results of operations, and business prospects and opportunities to differ materially from these expressed in, or implied by, those forward-looking statements. We caution investors not to place significant reliance on the forward-looking statements contained in this report. These statements, like all statements in this report, speak only as of the date of this report (unless another date is indicated), and we undertake no obligation to update or revise forward-looking statements.

Overview

We are a development stage biopharmaceutical company focused on saving and improving the lives of pets. Our mission is to bring to our pets the same kinds of safe and effective medicines that our human family members enjoy. Our core strategy is to identify compounds and targets that have already demonstrated safety and efficacy in humans and to develop therapeutics based on these validated compounds and targets for pets, primarily dogs, cats and horses. We believe this approach will lead to shorter development times and higher approval rates than pursuing new, non-validated compounds and targets. We have three product candidates that are in pivotal field efficacy trials, or pivotal trials, and expect approval of one or more of these product candidates in 2015. In addition, we have multiple other product candidates, including several biologics, in various stages of development. We believe there are significant unmet medical needs for pets, and that the pet therapeutics segment of the animal health industry is likely to grow substantially as new therapeutics are identified, developed and marketed specifically for pets.

Our lead product candidates are CereKin™ (diacerein) for the treatment of osteoarthritis pain and inflammation in dogs, AtoKin™ (fexofenadine) for the treatment of atopic dermatitis in dogs and SentiKin™ (flupirtine) for the treatment of post-operative pain in dogs. All of these product candidates, if approved, would be first-in-class drugs in the pet therapeutic market.

In August 2013, we initiated the pivotal trial for CereKin. In February 2014 we initiated the pivotal trial for AtoKin, and in March 2014 we initiated the pivotal trial for SentiKin. Assuming positive results from these trials, we intend to submit all the technical sections of New Animal Drug Applications, or NADAs, for marketing approval of CereKin, AtoKin, and SentiKin in the United States in 2014, and anticipate potential marketing approvals and product launches in the second half of 2015. If approved in the United States, we plan to make similar regulatory filings for these products with the European Medicines Agency, or EMA for marketing approval in the European Union, or EU.

We are currently developing product candidates for multiple additional indications, with the potential to launch two or more products annually for several years starting in the second half of 2015. We plan to commercialize our

products in the United States through a direct sales force complemented by selected distributor relationships, and in the EU through distributors and other third parties. Because we seek to identify product candidates that are not protected by third-party patents, we typically do not need to obtain licenses or make any upfront, milestone or royalty payments in connection with our product candidates.

We are a development stage company with no products approved for marketing and sale, and we have not generated any revenue. We have incurred significant net losses since our inception. We incurred net losses of $10,501,000 for the period from September 25, 2012 (inception) through March 31, 2014 and $6,168,000 for the three months ended March 31, 2014. These losses have resulted principally from costs incurred in connection with investigating and developing our product candidates, research and development activities and general and administrative costs associated with our operations. As of March 31, 2014, we had a deficit accumulated during the development stage of $10,501,000 and cash, cash equivalents and short-term investments of $60,528,000.

For the foreseeable future, we expect to continue to incur losses, which will increase significantly from historical levels as we expand our product development activities, seek regulatory approvals for our product candidates and begin to commercialize them if they are approved by the Center for Veterinary Medicine branch of the U.S. Food and Drug Administration, or FDA, the U.S. Department of Agriculture, or USDA, or the European Medicines Agency, or EMA. If we are required to further fund our operations, we expect to do so through public or private equity offerings, debt financings, corporate collaborations and licensing arrangements. We cannot assure you that such funds will be available on terms favorable to us, if at all. Arrangements with collaborators or others may require us to relinquish rights to certain of our technologies or product candidates. In addition, we may never successfully complete development of, obtain adequate patent protection for, obtain necessary regulatory approval, or achieve commercial viability for any product candidate. If we are not able to raise additional capital on terms acceptable to us, or at all, as and when needed, we may be required to curtail our operations, and we may be unable to continue as a going concern.

Recent Developments

On April 8, 2014, we completed a public offering of 3,450,000 shares of our common stock at a price of $18.00 per share, for net proceeds of approximately $58,100,000, after deducting underwriting discounts, commissions and offering expenses.

Critical Accounting Policies and Significant Judgments and Estimates

Our management's discussion and analysis of financial condition and results of operations is based on our condensed financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States, or U.S. GAAP. The preparation of our condensed financial statements and related disclosures requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities, and revenue, costs and expenses and related disclosures during the reporting periods. On an ongoing basis, we evaluate our estimates and judgments, including those described below. We base our estimates on historical experience and on various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

There have been no significant changes to our critical accounting policies since the beginning of our fiscal year. Our critical accounting policies are described in the "Management's Discussion and Analysis of Financial Condition and Result of Operations" section of our Annual Report on Form 10-K for the year ended December 31, 2013, which was filed with SEC on March 14, 2014, as amended.

Results of Operations

The following table summarizes the results of our operations for the periods indicated:

	Three Months Ended March 31,	
	2014	2013
	(In thousands, except per share amounts)	
Operating expenses:		
Research and development	$ 4,498	$ 141
General and administrative	1,679	83
Total operating expenses	6,177	224
Loss from operations	(6,177)	(224)
Interest income	9	—
Net loss and comprehensive loss	$ (6,168)	$ (224)
Net loss per share attributable to common stockholders, basic and diluted	$ (0.38)	$ (0.07)
Weighted-average common shares outstanding, basic and diluted	16,222	3,000

Revenue

We do not have any products approved for sale, have not generated any revenue since our inception and do not expect to generate any material revenue in the near future. If our development efforts result in clinical success and regulatory approval or collaboration agreements with third parties for any of our product candidates, we may generate revenue from those product candidates.

Research and Development Expense

All costs of research and development are expensed in the period incurred. Research and development costs consist primarily of salaries and related expenses for personnel, stock-based compensation expense, fees paid to consultants, outside service providers, professional services, travel costs and materials used in clinical trials and research and development.

We are currently pursuing multiple product candidates for over a dozen indications. We typically use our employee and infrastructure resources across multiple development programs. We track outsourced development costs by development compound, but do not allocate personnel or other internal costs related to development to specific programs or development compounds.

Research and development expense was as follows for the periods indicated:

	Three Months Ended March 31,	
	2014	2013
	(In thousands)	
Payroll and related	$ 623	$ 87
Consulting	498	1
Field trial costs, including materials	2,634	16
Stock-based compensation	328	33
Other	415	4
	$ 4,498	$ 141

During the three months ended March 31, 2014, research and development expense related primarily to advancing the development of our lead product candidates. During this period the CereKin field trial continued to meet its enrollment goals and we began a Target Animal Safety Study. We also initiated our field trials for Atokin and SentiKin and sourced the manufacture of material necessary for regulatory approval. During the quarter, we initiated additional manufacturing work in preparation for commercialization of our first product candidates. We also continue to advance additional product candidates in our small candidate programs as well as continue to advance our biologics program by building an in-house team to focus on setting-up a manufacturing process for our potential biologic candidates. Outsourced research and development expense related to our product development programs for CereKin, AtoKin and SentiKin for the three months ended March 31, 2014 were $1,140,000, $1,044,000, $908,000, respectively, and $534,000 for our other product development programs. Outsourced research and development expense consist primarily of costs related to manufacturing supplies, field trials, studies and consulting.

During the three months ended March 31, 2013, research and development expense primarily related to advancing the development of our lead product candidates. During this period we developed the protocols for CereKin and AtoKin, received Protocol Concurrences from the FDA for both compounds and increased our staffing to support the planning for initiation of the pivotal trials of CereKin and AtoKin. Outsourced research and development expense were $31,000 for the three months ended March 31, 2013 and related primarily to CereKin.

We expect research and development expense to increase for the foreseeable future as we continue to increase our headcount, commence pivotal studies and further develop our small molecule compounds and biologics development programs. Due to the inherently unpredictable nature of our development, we cannot reasonably estimate or predict the nature, specific timing or estimated costs of the efforts that will be necessary to complete the development of our product candidates.

General and Administrative Expense

General and administrative expense was as follows for the periods indicated:

	Three Months Ended March 31,	
	2014	2013
	(In thousands)	
Payroll and related	$ 368	$ 64
Consulting and legal fees	311	7
Stock-based compensation	749	6
Other	251	6
Total	$ 1,679	$ 83

During the three months ended March 31, 2014, general and administrative expense related primarily to additional financing activities, salaries, rent and other facilities costs, professional and consulting fees for legal, accounting and tax services, costs of being a public company and other general business services. We expect general and administrative expense to increase significantly as we continue to increase our headcount and build our corporate infrastructure.

During the three months ended March 31, 2013, general and administrative expense related primarily to salaries and related expense.

Income Taxes

We have historically incurred operating losses and maintain a full valuation allowance against our net deferred tax assets. Our management has evaluated the factors bearing upon the realizability of our deferred tax assets, which are comprised principally of net operating loss carryforwards and concluded that, due to the uncertainty of realizing any tax benefits as of March 31, 2014, a valuation allowance was necessary to fully offset our deferred tax assets.

Liquidity and Capital Resources

We have incurred losses and negative cash flows from operations and have not generated any revenue since our inception in September 2012 through March 31, 2014. As of March 31, 2014, we had a deficit accumulated during the development stage of $10,501,000. During the year ended December 31, 2013, we raised a total of $65,959,000, net of offering costs, primarily in connection with our initial public offering and through the sale of preferred stock (subsequently converted to common stock at the time of our initial public offering). On April 8, 2014, we completed a public offering of common stock, resulting in net proceeds of approximately $58,100,000. We believe that our cash, cash equivalents and short-term investments balance as of March 31, 2014, together with the net proceeds from our April 2014 public offering, are sufficient to fund our planned operations for at least the next 24 months.

Cash Flows

The following table summarizes our cash flows for the periods set forth below:

	Three Months Ended March 31,	
	2014	2013
	(In thousands)	
Net cash used in operating activities	$ (4,793)	$ (151)
Net cash used in investing activities	$ (24,027)	$ —
Net cash provided by financing activities	$ 4	$ —

Net cash used in operating activities

During the three months ended March 31, 2014, net cash used in operating activities was $4,793,000. Net cash used in operating activities resulted primarily from our net loss of $6,168,000 and changes in operating assets and liabilities of $294,000, which were partially offset by non-cash, stock-based compensation of $1,077,000.

During the three months ended March 31, 2013, net cash used in operating activities was $151,000. Net cash used in operating activities resulted primarily from our net loss of $224,000, which was partially offset by non-cash, stock-based compensation of $39,000 and changes in operating assets and liabilities of $34,000.

Net cash used investing activities

During the three months ended March 31, 2014, net cash used in investing activities was $24,027,000, of which $24,008,000 related to the purchase of marketable securities and $19,000 related to purchases of property and equipment.

During the three months ended March 31, 2013, no cash was used in investing activities.

Net cash provided by financing activities

During the three months ended March 31, 2014, net cash provided by financing activities consisted of $4,000 resulting from the exercise of stock options.

During the three months ended March 31, 2013, there was no net cash provided by financing activities.

Future Funding Requirements

We anticipate that we will continue to incur losses for the next several years due to expenses relating to:

- pivotal trials of our product candidates;
- toxicology studies for our product candidates;
- establishment of biologics manufacturing capability; and

- commercialization of one or more of our product candidates, if approved.

We believe our existing cash, cash equivalents and short-term investments including the net proceeds from our April 2014 public offering, will be sufficient to fund our operating plan through at least the next 24 months and the anticipated approval and launch of one or more of our lead product candidates, CereKin, AtoKin and SentiKin. However, our operating plan may change as a result of many factors currently unknown to us, and we may need to seek additional funds sooner than planned, through public or private equity or debt financings or other sources, such as strategic collaborations. Such financing may result in dilution to stockholders, imposition of debt covenants and repayment obligations or other restrictions that may affect our business. In addition, we may seek additional capital in connection with possible strategic acquisitions even if we believe we have sufficient funds for our current or future operating plans.

Our future capital requirements depend on many factors, including, but not limited to:

- the scope, progress, results and costs of researching and developing our current or future product candidates;
- the timing of, and the costs involved in, obtaining regulatory approvals for any of our current or future product candidates;
- the number and characteristics of the product candidates we pursue;
- the cost of manufacturing our current and future product candidates and any products we successfully commercialize;
- the cost of commercialization activities if any of our current or future product candidates are approved for sale, including marketing, sales and distribution costs;
- the expenses needed to attract and retain skilled personnel;
- the costs associated with being a public company;
- our ability to establish and maintain strategic collaborations, licensing or other arrangements and the financial terms of such agreements; and
- the costs involved in preparing, filing, prosecuting, maintaining, defending and enforcing possible patent claims, including litigation costs and the outcome of any such litigation.

Since inception, we have not engaged in the use of any off-balance sheet arrangements, such as structured finance entities, special purpose entities or variable interest entities.

Contractual Obligations

In March 2014 we entered into a license agreement under which we made an up-front payment and are obligated to make annual payments and, subject to certain terms and conditions, milestone payments upon achievement of development milestones and a royalty based on sales of products developed under the agreement.

In April 2014 we entered into a lease for laboratory space under which we are obligated to make lease payments of approximately $5,000 per month. The initial lease term is for a period of 36 months, and we have an option to renew the lease for one additional year at a market rate.

Off-Balance Sheet Arrangements

As of March 31, 2014, we did not have any material off-balance sheet arrangements as defined in Item 303(a)(4)(ii) of SEC Regulation S-K.

Recently Issued Accounting Pronouncements

We believe the impact of recently issued standards that are not yet effective will not have a material impact on our financial statements when the standards become effective.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK.

The primary objective of our investment activities is to preserve capital. We do not utilize hedging contracts or similar instruments.

We are exposed to certain market risks relating primarily to (1) interest rate risk on our cash and cash equivalents, (2) market price risk on our short-term investments, and (3) risks relating to the financial viability of the institutions which hold our capital and through which we have invested our funds. We manage such risks by investing in short-term, liquid, highly-rated instruments. As of March 31, 2014, our cash equivalents and short-term investments are invested in money market funds, U.S. treasury notes, U.S treasury bonds and obligations of U.S. federal agencies. We do not believe we have any material exposure to interest rate risk due to the extremely low interest rate environment, the short duration of the securities we hold and our ability to hold our investments to maturity if necessary. Declines in interest rates would reduce investment income, but would not have a material effect on our financial condition or results of operations.

We do not currently have exposure to foreign currency risk.

ITEM 4. CONTROLS AND PROCEDURES

Disclosure Controls and Procedures

As of the end of the period covered by this quarterly report on Form 10-Q, our Chief Executive Officer and Chief Financial Officer (the "**Certifying Officers**") evaluated the effectiveness of our disclosure controls and procedures. Disclosure controls and procedures are controls and procedures designed to reasonably assure that information required to be disclosed in our reports filed under the Securities Exchange Act of 1934 (the "**Exchange Act**"), such as this report, is recorded, processed, summarized and reported within the time periods specified in the SEC rules and forms. Disclosure controls and procedures are also designed to reasonably assure that such information is accumulated and communicated to our management, including the Certifying Officers, as appropriate to allow timely decisions regarding required disclosure. Based on these evaluations, the Certifying Officers have concluded, that, as of the end of the period covered by this report:

(a) our disclosure controls and procedures were effective to provide reasonable assurance that information required to be disclosed by us in the reports we file or submit under the Exchange Act was recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms; and

(b) our disclosure controls and procedures were effective to provide reasonable assurance that material information required to be disclosed by us in the reports we file or submit under the Exchange Act was accumulated and communicated to our management, including the Certifying Officers, as appropriate to allow timely decisions regarding required disclosure.

Changes in Internal Control over Financial Reporting

There has not been any change in our internal control over financial reporting that occurred during the period ended March 31, 2014 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II — OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

None.

ITEM 1A. RISK FACTORS

You should consider the "Risk Factors" included under Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2013 filed with the SEC on March 14, 2014,as amended March 18, 2014 and April 24, 2014.

ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

Unregistered Sales of Equity Securities

None.

Use of Proceeds from the Sale of Registered Securities

On December 11, 2013, our registration statement on Form S-1 (File No. 333-192242) was declared effective by the Securities and Exchange Commission (SEC) for our initial public offering pursuant to which we sold an aggregate of 8,625,000 shares of our common stock at a price to the public of $7.00 per share. There has been no material change in the planned use of proceeds from our initial public offering as described in our final prospectus filed with the SEC on December 12, 2013 pursuant to Rule 424(b).

ITEM 3. DEFAULTS UPON SENIOR SECURITIES

None.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

ITEM 5. OTHER INFORMATION

None.

ITEM 6. EXHIBITS

EXHIBIT INDEX

Exhibit Number	Description
10.1	Restricted Stock Agreement under 2012 Equity Incentive Plan †
10.2	Employment Agreement dated February 25, 2014 between Kindred Biosciences, Inc. and Blake Hawley(1)†
31.1	Sarbanes-Oxley Act Section 302 Certification of Chief Executive Officer.
31.2	Sarbanes-Oxley Act Section 302 Certification of Chief Financial Officer.
32.1	Sarbanes-Oxley Act Section 906 Certification of Chief Executive Officer.
32.2	Sarbanes-Oxley Act Section 906 Certification of Chief Financial Officer.
101.INS++	XBRL Instance Document
101.SCH++	XBRL Taxonomy Extension Schema Document
101.CAL++	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF++	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB++	XBRL Taxonomy Extension Labels Linkbase Document
101.PRE++	XBRL Taxonomy Extension Presentation Linkbase Document

† Indicates a management contract or compensatory plan or arrangement.

++ Pursuant to applicable securities laws and regulations, the Registrant is deemed to have complied with the reporting obligation relating to the submission of interactive data files in such exhibits and is not subject to liability under any anti-fraud provisions of the federal securities laws as long as the Registrant has made a good faith attempt to comply with the submission requirements and promptly amends the interactive data files after becoming aware that the interactive data files fails to comply with the submission requirements. These interactive data files are deemed not filed or part of a registration statement or prospectus for purposes of Sections 11 or 12 of the Securities Act of 1933, as amended, are deemed not filed for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, and otherwise are not subject to liability under these sections.

(1) Previously filed on March 31, 2014 as an exhibit to Registrant's Amendment No. 1 to Registration Statement on Form S-1 (File No. 333-194660) and incorporated herein by reference.

SIGNATURES

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

Date: May 14, 2014

Kindred Biosciences, Inc.

By: /s/ Richard Chin

Richard Chin, M.D.
President and Chief Executive Officer

/s/ Stephen S. Galliker

Stephen S. Galliker
Chief Financial Officer

Exhibit 10.1

KINDRED BIOSCIENCES

2012 EQUITY INCENTIVE PLAN

RESTRICTED STOCK AGREEMENT

Unless otherwise defined herein, capitalized terms used in this Agreement (this "Agreement") shall have the meanings ascribed to them in the Kindred Biosciences, Inc. 2012 Equity Incentive Plan.

I. NOTICE OF RESTRICTED STOCK GRANT

[*Participant's Name and Address*]

The Company is pleased to inform you that, subject to the terms and conditions of this Agreement, you have been granted restricted shares, or the right to acquire restricted shares, of Common Stock ("Restricted Shares"), as follows:

Grant Number: _____

Date of Grant: _____

Purchase Price per Share, if applicable: _____

Number of Restricted Shares: _____

Total Purchase Price, if applicable: _____

Other consideration, if any _____

Vesting Schedule: The Restricted Shares shall become vested, and no longer subject to forfeiture, in accordance with the following schedule:

As to all of the Restricted Shares on _____, 20__, but only if the Participant remains in the Company's continuous employ through such date.

II. AGREEMENT

A. Grant of Restricted Shares.

Upon the execution and delivery by the Participant to the Company of this Agreement, the Company shall grant and issue to the Participant named in the Notice of Grant contained in Part I of this Agreement (the "Notice of Grant") the right to acquire the number of restricted shares of Common Stock (the "Restricted Shares") set forth in the Notice of Grant, at the purchase price, if any, or other consideration, if any, set forth in the Notice of Grant (the

"Purchase Price"), and subject to the terms and conditions of this Agreement. Subject to Section 12 of the Plan, in the event of a conflict between the terms and conditions of the Plan and the terms and conditions of this Agreement, the terms and conditions of the Plan shall prevail.

If applicable, payment of the aggregate Purchase Price at the time of grant and issuance of the Restricted Shares shall be paid by the Participant's delivery to the Company of cash or the Participant's check payable to "Kindred Biosciences, Inc."

B. Vesting of Restricted Shares.

(a) Vesting Schedule. The Restricted Shares that shall have vested at any time in accordance with the terms of the Vesting Schedule set forth in the Notice of Grant are referred to as "Vested Shares," and the Restricted Shares that shall not have vested are referred to as "Unvested Shares."

(b) Accelerated Vesting Upon a Corporate Transaction. Notwithstanding paragraph (a) of this Section B, in the event of the completion of a Corporate Transaction, all Unvested Shares shall automatically vest and become Vested Shares immediately prior to the completion of the Corporate Transaction.

(c) Forfeiture of Unvested Shares upon Early Termination of Service. If the Participant ceases to remain in continuous employ of the Company through the date the Restricted Shares shall have become Vested Shares, (i) all of the Restricted Shares that are Unvested Shares as of the date of termination of employment of the Participant shall immediately and automatically be forfeited and reconveyed to the Company and shall be cancelled on the Company's stock books, (ii) the Company promptly thereafter shall pay to the Participant the Purchase Price, if any, paid hereunder by the Participant for the Restricted Shares, and (iii) the Participant shall immediately and automatically cease to have any ownership right in any and all Shares that constitute Unvested Shares as of such employment termination date. In such event, this Agreement shall remain in full force and effect with respect to any Vested Shares.

(d) Shareholder Rights. From the Grant Date and continuing for so long as the Unvested Shares shall not have been forfeited as provided in Part II(B)(c), above, the Participant shall have the right to receive with respect to the Restricted Shares any dividends that the Company may declare regarding the Common Stock; provided, however, that any dividend payable in stock also shall be deemed to be Restricted Shares under this Agreement.

C. No Transfer Permitted of Unvested Shares.

(a) The Participant shall not, and shall not purport to, sell, assign or otherwise transfer any Unvested Shares, or any interest therein. The Participant is permitted to sell, assign or otherwise transfer the Restricted Shares only if and when they become Vested Shares pursuant to Section B, above.

(b) The Participant acknowledges and agrees that all certificates evidencing Unvested Shares shall bear substantially the following legend:

> THE SHARES REPRESENTED BY THIS CERTIFICATE ARE SUBJECT TO CERTAIN VESTING AND FORFEITURE PROVISIONS AS SET FORTH IN A RESTRICTED STOCK AGREEMENT BETWEEN THE CORPORATION AND THE REGISTERED HOLDER, A COPY OF WHICH IS ON FILE AT THE PRINCIPAL OFFICE OF THE CORPORATION.

In addition, the Company shall make a notation regarding the restrictions on transfer of the Restricted Shares in its stock books, and shares of the Restricted Shares shall be transferred on the books of the Company only if transferred or sold in accordance with this Agreement.

D. Stock Certificates.

(c) Concurrently herewith, the Company shall issue one or more stock certificates in the Participant's name evidencing the Restricted Shares. The Company shall retain the same and any other stock certificate or certificates that evidence Unvested Shares at any time. The Participant agrees to execute such further instruments and to take such further actions as the Board may deem necessary or advisable for purposes of facilitating the enforcement of this Agreement.

(d) Upon the Participant's request at any time, the Company shall deliver to the Participant a stock certificate in the Participant's name evidencing Vested Shares.

E. Tax Obligations.

(e) In connection with the receipt of the Restricted Shares, the Participant hereby represents and warrants that the Company previously advised the Participant to consult with the Participant's own tax advisor regarding whether an election under Section 83(b) of the Internal Revenue Code of 1986, as amended, should be made by the Participant within thirty days after the Grant Date. The Participant shall be solely responsible for the payment of any and all federal, state and other taxes that may be imposed on the Participant by reason of the acquisition of the Restricted Shares and any vesting and subsequent sale of the Vested Shares.

(f) The Participant agrees to make appropriate arrangements with the Company for the satisfaction of federal, state, local and foreign income and employment tax withholding requirements, if any, applicable to the receipt or vesting of the Restricted Shares. The Participant acknowledges and agrees that the Company may refuse to issue the Restricted Shares if such withholding amounts any, are not delivered.

F. Entire Agreement; Governing Law.

This Agreement, including the Plan, which is incorporated herein by reference, constitutes the entire agreement of the parties with respect to the subject matter hereof and supersede in their entirety all prior undertakings and agreements of the Company and the Participant with respect to the subject matter hereof, and may not be modified adversely to the Participant's interest except by means of a writing signed by the Company and the Participant. This Agreement is governed by the internal substantive laws, but not the choice of law rules, of Delaware.

G. NO GUARANTEE OF CONTINUED SERVICE.

THE PARTICIPANT ACKNOWLEDGES AND AGREES THAT THE VESTING OF RESTRICTED SHARES PURSUANT TO THE VESTING SCHEDULE HEREOF IS EARNED ONLY BY CONTINUING IN SERVICE AT THE WILL OF THE COMPANY (AND NOT THROUGH THE ACT OF BEING HIRED, BEING GRANTED OR ACQUIRING RESTRICTED SHARES HEREUNDER). THE PARTICIPANT FURTHER ACKNOWLEDGES AND AGREES THAT THIS RESTRICTED STOCK AGREEMENT, THE TRANSACTIONS CONTEMPLATED HEREUNDER AND THE VESTING SCHEDULE SET FORTH HEREIN DO NOT CONSTITUTE AN EXPRESS OR IMPLIED PROMISE OF CONTINUED ENGAGEMENT AS A SERVICE PROVIDER FOR THE VESTING PERIOD, FOR ANY PERIOD, OR AT ALL, AND SHALL NOT INTERFERE WITH THE PARTICIPANT'S RIGHT OR THE COMPANY'S RIGHT TO TERMINATE THE PARTICIPANT'S SERVICE AT ANY TIME, WITH OR WITHOUT CAUSE.

By your signature and the signature of the Company's representative below, you and the Company agree that the Restricted Shares are granted under and governed by the terms and conditions of the Plan and this Agreement. By your signature below, you accept the offer to acquire the Restricted Shares, acknowledge and agree that you have reviewed the Plan and this Agreement in their entirety, have had an opportunity to obtain the advice of counsel prior to executing this Agreement and fully understand all provisions of the Plan and this Agreement. You hereby agree to accept as binding, conclusive and final all decisions or interpretations of the Board upon any questions relating to the Plan and this Agreement. You further agree to notify the Company upon any change in the address indicated below.

[*Signature page follows*]

This Agreement may be executed by facsimile and in counterparts, each of which shall be deemed an original, but both of which shall constitute one and the same instrument.

PARTICIPANT:

_____
Signature

_____
Print Name

Address:

_____
_____
_____

KINDRED BIOSCIENCES, INC.

By:_____
Name:
Title:

Exhibit 31.1

Certification of the Principal Executive Officer Under Section 302 of the Sarbanes-Oxley Act

I, Richard Chin, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Kindred Biosciences, Inc.

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

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

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a- 15(e) and 15d- 15(e)) 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.

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

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

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

Date: May 14, 2014

By: /s/ Richard Chin

Name: Richard Chin, MD
Title: Chief Executive Officer

Exhibit 31.2

Certification of the Principal Financial Officer Under Section 302 of the Sarbanes-Oxley Act

I, Stephen S. Galliker, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Kindred Biosciences, Inc.

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

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

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a- 15(e) and 15d- 15(e)) 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.

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

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

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

Date: May 14, 2014

By: /s/ Stephen S. Galliker

Name: Stephen S. Galliker
Title: Chief Financial Officer

Exhibit 32.1

CERTIFICATION OF THE PRINCIPAL EXECUTIVE OFFICER

Pursuant to 18 U.S.C. § 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, the undersigned officer of Kindred Biosciences, Inc. (the "Company") hereby certifies that, to his knowledge:

(i) The quarterly report on Form 10-Q for the period ended March 31, 2014 (the "Report") fully complies with the requirements of Section 13(a) or Section 15(d), as applicable, of the Securities Exchange Act of 1934, as amended; and

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

Date: May 14, 2014

By: /s/ Richard Chin

Name: Richard Chin, MD
Title: Chief Executive Officer

Exhibit 32.2

CERTIFICATION OF THE PRINCIPAL FINANCIAL OFFICER

Pursuant to 18 U.S.C. § 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, the undersigned officer of Kindred Biosciences, Inc. (the "Company") hereby certifies that, to his knowledge:

(i) The quarterly report on Form 10-Q for the period ended March 31, 2014 (the "Report") fully complies with the requirements of Section 13(a) or Section 15(d), as applicable, of the Securities Exchange Act of 1934, as amended; and

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

Date: May 14, 2014

By: /s/ Stephen S. Galliker

Name: Stephen S. Galliker
Title: Chief Financial Officer