

REPLIDYNE INC
Form S-4/A
January 23, 2009

Table of Contents

As filed with the U.S. Securities and Exchange Commission on January 23, 2009

Registration No. 333-155887

**SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549**

**Amendment No. 2
to
Form S-4
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933**

Replidyne, Inc.

(Exact name of registrant as specified in its charter)

Delaware

*(State or other jurisdiction of
incorporation or organization)*

2834

*(Primary Standard Industrial
Classification Code Number)*

84-1568247

*(I.R.S. Employer
Identification No.)*

**1450 Infinite Dr.
Louisville, CO 80027
(303) 996-5500**

(Address, including zip code, and telephone number, including area code, of Registrant's principal executive offices)

**Kenneth J. Collins
President and Chief Executive Officer
Replidyne, Inc.
1450 Infinite Dr.
Louisville, CO 80027
(303) 996-5500**

(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

**James C. T. Linfield, Esq.
Laura M. Medina, Esq.
Cooley Godward Kronish LLP
380 Interlocken Crescent, Suite 900
Broomfield, CO 80021
(720) 566-4000**

**David L. Martin
President and Chief Executive
Officer
Cardiovascular Systems, Inc.
651 Campus Drive
St. Paul, MN 55112
(651) 259-2800**

**Robert K. Ranum, Esq.
Alexander Rosenstein, Esq.
Fredrikson & Byron, P.A.
200 South Sixth Street, Suite 4000
Minneapolis, MN 55402
(612) 492-7000**

Approximate date of commencement of proposed sale to the public: As soon as practicable after the effectiveness of this registration statement and the satisfaction or waiver of all other conditions under the merger agreement described herein.

If the securities being registered on this form are being offered in connection with the formation of a holding company and there is compliance with General Instruction G, check the following box.

If this form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

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 Smaller reporting company
(Do not check if a smaller reporting company)

The registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment that specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until the registration statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

Table of Contents

The information in this proxy statement/prospectus is not complete and may be changed. Replidyne may not sell its securities pursuant to the proposed transactions until the Registration Statement filed with the Securities and Exchange Commission is effective. This proxy statement/prospectus is not an offer to sell these securities and is not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

SUBJECT TO COMPLETION, DATED JANUARY 23, 2009

We are furnishing this proxy statement/prospectus to the holders of Replidyne, Inc.'s common stock and to holders of Cardiovascular Systems, Inc.'s common stock, Series A convertible preferred stock, Series A-1 convertible preferred stock and Series B convertible preferred stock.

Replidyne, Inc., or Replidyne, and Cardiovascular Systems, Inc., or CSI, have entered into a merger agreement pursuant to which a wholly owned subsidiary of Replidyne will merge with and into CSI, with CSI continuing as a wholly owned subsidiary of Replidyne. Immediately prior to the effective time of the merger, each share of CSI preferred stock will be converted into shares of CSI common stock at a ratio determined in accordance with the CSI articles of incorporation. At the effective time of the merger, each share of CSI common stock will convert into the right to receive that number of shares of Replidyne common stock as determined pursuant to the conversion factor described in the merger agreement. Replidyne will assume outstanding and unexercised options and warrants to purchase CSI common stock, and they will be converted into warrants and options, as applicable, to purchase Replidyne common stock in accordance with the same conversion factor. Replidyne stockholders, optionholders and warrant holders will continue to own and hold, respectively, their existing shares of and options and warrants for Replidyne common stock. Immediately after the merger, current stockholders of Replidyne, together with holders of Replidyne options and warrants, are expected to own or have the right to acquire between 16.3% and 17.0% of the combined company, and current CSI stockholders, together with holders of CSI options and warrants, are expected to own or have the right to acquire between 83.0% and 83.7% of the combined company, in each case assuming that Replidyne's net assets at closing are between \$35.0 and \$37.0 million as calculated in accordance with the terms of the merger agreement, on a fully diluted basis using the treasury stock method of accounting for options and warrants.

Shares of Replidyne common stock are currently listed on the Nasdaq Global Market under the symbol RDYN. After completion of the merger, Replidyne will be renamed Cardiovascular Systems, Inc. and expects to trade on the Nasdaq Global Market under the symbol CSII. On , 2009, the last trading day before the date of this proxy statement/prospectus, the closing sale price of Replidyne common stock was \$ per share.

Replidyne is holding a special meeting of stockholders in order to obtain the stockholder approvals necessary to complete the merger and related matters. At the Replidyne special meeting, which will be held at 9:00 a.m., local time, on February 24, 2009 at Cooley Godward Kronish LLP, 380 Interlocken Crescent, Suite 900, Broomfield, Colorado, unless postponed or adjourned to a later date, Replidyne will ask its stockholders to, among other things, approve the issuance of Replidyne common stock pursuant to the merger and approve amendments to the Replidyne certificate of incorporation effecting a reverse stock split of Replidyne common stock, which is referred to as the reverse stock split, and changing the Replidyne corporate name to Cardiovascular Systems, Inc., each as described in the accompanying proxy statement/prospectus.

CSI is holding a special meeting of stockholders in order to obtain the stockholder approvals necessary to complete the merger and related matters. At the CSI special meeting, which will be held at 9:00 a.m., local time, on

February 24, 2009 at Cardiovascular Systems, Inc., 651 Campus Drive, St. Paul, Minnesota, unless postponed or adjourned to a later date, CSI will ask its stockholders to, among other things, approve and adopt the merger agreement and the merger contemplated therein.

After careful consideration, the Replidyne and CSI boards of directors have approved the merger agreement and the respective proposals referred to above, and each of the Replidyne and CSI boards of directors has determined that it is advisable to enter into the merger. The board of directors of Replidyne and CSI each recommends that its stockholders vote **FOR** the proposals described in the accompanying proxy statement. Several CSI stockholders have agreed with Replidyne to vote shares representing approximately 20% of the outstanding capital stock of CSI in favor of the merger and the other actions contemplated by the merger agreement. In addition, several Replidyne stockholders have agreed with CSI to vote shares representing approximately 32% of the outstanding common stock of Replidyne in favor of the issuance of the shares of Replidyne common stock pursuant to the merger and the other actions contemplated by the merger agreement.

More information about Replidyne, CSI and the proposed transaction is contained in this proxy statement/prospectus. Replidyne and CSI urge you to read the accompanying proxy statement/prospectus carefully and in its entirety. **In particular, you should carefully consider the matters discussed under *Risk Factors* beginning on page 18.**

This proxy statement/prospectus refers to important business and financial information about Replidyne and CSI that is not included in or delivered with this proxy statement/prospectus. Such information is available without charge to stockholders of Replidyne and CSI upon written or oral request at the following addresses: For information concerning Replidyne, Replidyne, Inc., Attn: Investor Relations, 1450 Infinite Drive, Louisville, Colorado 80027, or by telephone at (303) 996-5500; and for information concerning CSI, Cardiovascular Systems, Inc., Attn: Investor Relations, 651 Campus Drive, St. Paul, Minnesota 55112, or by telephone at (651) 259-2800. **To obtain timely delivery, Replidyne stockholders must request the information no later than five business days before the date of the special meeting of Replidyne stockholders, or no later than February 17, 2009, and CSI stockholders must request the information no later than five business days before the date of the special meeting of CSI stockholders, or no later than February 17, 2009.**

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this proxy statement/prospectus. Any representation to the contrary is a criminal offense.

The accompanying proxy statement/prospectus is dated _____, 2009, and is first being mailed to Replidyne and CSI stockholders on or about _____, 2009.

Table of Contents

**Replidyne, Inc.
1450 Infinite Dr.
Louisville, CO 80027
(303) 996-5500**

**NOTICE OF SPECIAL MEETING OF STOCKHOLDERS
To Be Held On February 24, 2009**

To the Stockholders of Replidyne, Inc.:

On behalf of the board of directors of Replidyne, Inc., a Delaware corporation, we are pleased to deliver this proxy statement/prospectus for the proposed merger combining Replidyne, Inc., or Replidyne, and Cardiovascular Systems, Inc., or CSI, a Minnesota corporation. The special meeting of stockholders of Replidyne will be held on February 24, 2009 at 9:00 a.m. MST, at Cooley Godward Kronish LLP, 380 Interlocken Crescent, Suite 900, Broomfield, Colorado, for the following purposes:

1. To consider and vote upon a proposal to approve the issuance of Replidyne common stock pursuant to the Agreement and Plan of Merger and Reorganization, dated November 3, 2008, by and among Replidyne, Responder Merger Sub, Inc., and CSI as described in the attached proxy statement/prospectus.
2. To authorize Replidyne's board of directors to amend Replidyne's restated certificate of incorporation in order to effect a reverse stock split of the issued and outstanding shares of Replidyne common stock in a ratio of up to one for 50, if and as determined by Replidyne's board of directors.
3. To approve an amendment to Replidyne's restated certificate of incorporation to change the name Replidyne, Inc. to Cardiovascular Systems, Inc.
4. To approve Replidyne's assumption of the Cardiovascular Systems, Inc. 2007 Equity Incentive Plan to be used by Replidyne following the consummation of the merger, together with an increase in the number of shares of CSI common stock reserved for issuance under the plan from 3,379,397 to 3,879,397, which following the merger will be converted into shares of Replidyne common stock, subject to further adjustment for the reverse stock split anticipated before closing of the merger.
5. To approve an amendment to the Replidyne, Inc. 2006 Employee Stock Purchase Plan to (i) increase the number of shares of Replidyne common stock reserved under the plan from 305,872 to 1,920,872, subject to further adjustment for the reverse stock split anticipated before the closing of the merger and (ii) amend the evergreen provisions of the plan to provide that on July 1st of each year, beginning with July 1, 2009, the share reserve under the plan automatically will be increased by a number of shares equal to the lesser of (A) one percent (1.0%) of the total number of shares of Replidyne common stock outstanding on such date, or (B) 1,800,000 shares (subject to adjustment for the reverse stock split anticipated before the closing of the merger), unless Replidyne's board of directors designates a smaller number of shares.
6. To consider and vote upon an adjournment of the special meeting, if necessary, if a quorum is present, to solicit additional proxies if there are not sufficient votes in favor of Replidyne Proposal No. 1, 2, 3, 4 or 5.
7. To transact such other business as may properly come before the special meeting or any adjournment or postponement thereof.

The board of directors of Replidyne has fixed January 21, 2009 as the record date for the determination of stockholders entitled to notice of, and to vote at, the special meeting and any adjournment or postponement thereof. Only holders of record of shares of Replidyne common stock at the close of business on the record date are entitled to notice of, and to vote at, the special meeting. At the close of business on the record date, Replidyne had 27,114,677 shares of common stock outstanding and entitled to vote.

Your vote is important. The affirmative vote of the holders of a majority of the shares of Replidyne common stock casting votes in person or by proxy at the Replidyne special meeting is required for approval of Replidyne Proposal Nos. 1, 4, 5 and 6 and the affirmative vote of the holders of a majority of the shares of Replidyne common stock having voting power outstanding on the record date for the Replidyne special meeting is required for approval of Replidyne Proposal Nos. 2 and 3. Even if you plan to attend the special

Table of Contents

meeting in person, we request that you sign and return the enclosed proxy and thus ensure that your shares will be represented at the special meeting if you are unable to attend. If you sign, date and mail your proxy card without indicating how you wish to vote, your proxy will be counted as a vote in favor of Replidyne Proposal Nos. 1, 2, 3, 4, 5 and 6. If you fail to return your proxy card, the effect will be that your shares will not be counted for purposes of determining whether a quorum is present at the special meeting. You may revoke your proxy in the manner described in the proxy statement/prospectus before it has been voted at the special meeting. If you decide to attend the Replidyne special meeting, you may withdraw your proxy and vote in person.

By Order of the Board of Directors,

By:

Secretary

Louisville, Colorado
, 2009

THE REPLIDYNE BOARD OF DIRECTORS HAS DETERMINED AND BELIEVES THAT EACH OF THE REPLIDYNE PROPOSALS OUTLINED ABOVE IS ADVISABLE, AND IN THE BEST INTERESTS OF, REPLIDYNE AND ITS STOCKHOLDERS AND HAS APPROVED EACH SUCH PROPOSAL. THE REPLIDYNE BOARD OF DIRECTORS RECOMMENDS THAT REPLIDYNE STOCKHOLDERS VOTE FOR EACH SUCH PROPOSAL.

Table of Contents

**Cardiovascular Systems, Inc.
651 Campus Dr.
St. Paul, MN 55112
(651) 259-2800**

**NOTICE OF SPECIAL MEETING OF STOCKHOLDERS
To Be Held On February 24, 2009**

To the Stockholders of Cardiovascular Systems, Inc.:

On behalf of the board of directors of Cardiovascular Systems, Inc., a Minnesota corporation, we are pleased to deliver this proxy statement/prospectus for the proposed merger combining Replidyne, Inc., or Replidyne, a Delaware corporation, and Cardiovascular Systems, Inc., or CSI. The special meeting of stockholders of CSI will be held on February 24, 2009 at 9:00 a.m. CST, at Cardiovascular Systems Inc., 651 Campus Drive, St. Paul, Minnesota, for the following purposes:

1. To consider and vote upon a proposal to approve and adopt the Agreement and Plan of Merger and Reorganization, dated November 3, 2008, by and among Replidyne, Responder Merger Sub, Inc., and CSI and the merger contemplated therein, as described in the attached proxy statement/prospectus.
2. To authorize an increase in the number of shares of CSI common stock reserved under CSI's 2007 Equity Incentive Plan from 3,379,397 to 3,879,397.
3. To consider and vote upon an adjournment of the special meeting, if necessary, if a quorum is present, to solicit additional proxies if there are not sufficient votes in favor of CSI Proposal No. 1 or 2.
4. To transact such other business as may properly come before the special meeting or any adjournment or postponement thereof.

The board of directors of CSI has fixed January 26, 2009 as the record date for the determination of stockholders entitled to notice of, and to vote at, the special meeting and any adjournment or postponement thereof. Only holders of record of shares of CSI common stock or preferred stock at the close of business on the record date are entitled to notice of, and to vote at, the special meeting. At the close of business on the record date, CSI had _____ shares of common stock, _____ shares of Series A convertible preferred stock, _____ shares of Series A-1 convertible preferred stock and _____ shares of Series B convertible preferred stock outstanding and entitled to vote. Each holder of CSI preferred stock is entitled to such number of votes per share on each proposal to be voted upon as shall equal the number of shares of common stock into which each share of the preferred stock is then convertible, and in the event each share of the preferred stock is convertible into a number of shares of common stock including a fraction, each holder shall be entitled to vote the sum of fractions of a share to which the holder is entitled, rounded down to the nearest whole number. As of the record date, each share of Series A convertible preferred stock was convertible into 1.01 shares of common stock, each share of Series A-1 convertible preferred stock was convertible into 1.03 shares of common stock, and each share of Series B convertible preferred stock was convertible into 1.01 shares of common stock.

Your vote is important. The affirmative vote of (i) the holders of a majority of the voting power of CSI common stock and preferred stock outstanding on the record date, voting as a single class on an as-converted to common stock basis, and (ii) a majority of the shares of CSI preferred stock outstanding on the record date, voting as a single class on an as-converted to common stock basis and including the shares of CSI preferred stock held by affiliates of Easton Capital Investment Group and Maverick Capital, Ltd., is required for

approval of CSI Proposal No. 1. The affirmative vote of the holders of a majority of the voting power of CSI common stock and preferred stock, voting as a single class on an as-converted to common stock basis, casting votes in person or by proxy at the CSI special meeting is required for approval of CSI Proposal Nos. 2 and 3. Even if you plan to attend the special meeting in person, we request that you sign and return the enclosed proxy and thus ensure that your shares will be represented at the special meeting if you are unable to attend. If you sign, date and mail your proxy card without indicating how you wish to vote, your proxy will be counted as a vote in favor of CSI Proposal Nos. 1, 2 and 3. If you fail to return your proxy card, the effect will be that your shares will not be counted for purposes of determining whether a quorum is present at the special meeting. You may revoke your proxy in the manner described in the proxy statement/prospectus

Table of Contents

before it has been voted at the special meeting. If you decide to attend the CSI special meeting, you may withdraw your proxy and vote in person.

By Order of the Board of Directors,

By:

James E. Flaherty
Secretary

St. Paul, Minnesota
, 2009

THE CSI BOARD OF DIRECTORS HAS DETERMINED AND BELIEVES THAT EACH OF THE CSI PROPOSALS OUTLINED ABOVE IS ADVISABLE, AND IN THE BEST INTERESTS OF, CSI AND ITS STOCKHOLDERS AND HAS APPROVED EACH SUCH PROPOSAL. THE CSI BOARD OF DIRECTORS RECOMMENDS THAT CSI STOCKHOLDERS VOTE FOR EACH SUCH PROPOSAL.

Table of Contents**TABLE OF CONTENTS**

<u>QUESTIONS AND ANSWERS ABOUT THE MERGER, THE REPLIDYNE SPECIAL MEETING AND THE CSI SPECIAL MEETING</u>	vi
<u>SUMMARY</u>	1
<u>SELECTED HISTORICAL AND UNAUDITED PRO FORMA CONDENSED COMBINED FINANCIAL DATA</u>	10
<u>Selected Historical Financial Data of Replidyne</u>	10
<u>Selected Historical Financial Data of CSI</u>	12
<u>Selected Unaudited Pro Forma Condensed Combined Financial Data of Replidyne and CSI</u>	14
<u>Comparative Historical and Unaudited Pro Forma Per Share Data</u>	16
<u>MARKET PRICE AND DIVIDEND INFORMATION</u>	17
<u>RISK FACTORS</u>	18
<u>Risks Relating to the Proposed Merger</u>	18
<u>Risks Relating to Replidyne</u>	21
<u>Risks Relating to CSI and the Combined Company</u>	24
<u>Risks Relating to CSI's Business and Operations</u>	24
<u>Risks Related to Government Regulation</u>	34
<u>Risks Relating to CSI's Intellectual Property</u>	39
<u>Risks Relating to Ownership of Common Stock of the Combined Company</u>	41
<u>FORWARD-LOOKING INFORMATION</u>	44
<u>MARKET AND INDUSTRY DATA</u>	44
<u>THE SPECIAL MEETING OF REPLIDYNE STOCKHOLDERS</u>	45
<u>Date, Time and Place</u>	45
<u>Purposes of the Replidyne Special Meeting</u>	45
<u>Recommendation of the Replidyne Board of Directors</u>	45
<u>Record Date and Voting Power</u>	46
<u>Voting and Revocation of Proxies</u>	47
<u>Quorum and Required Vote</u>	48
<u>Solicitation of Proxies</u>	48
<u>Other Matters</u>	48
<u>REPLIDYNE PROPOSAL NO. 1 APPROVAL OF ISSUANCE OF SHARES OF REPLIDYNE COMMON STOCK IN THE MERGER</u>	49
<u>General Description of the Merger</u>	49
<u>Background of the Merger</u>	49
<u>Reasons for the Merger</u>	55
<u>Opinion of Replidyne's Financial Advisor</u>	60
<u>Officers and Directors of the Combined Company Following the Merger</u>	66
<u>Interests of Replidyne's Executive Officers and Directors in the Merger</u>	66
<u>Interests of CSI's Executive Officers and Directors in the Merger</u>	70
<u>CSI Stock Options</u>	72
<u>CSI Warrants</u>	72
<u>CSI Preferred Stock</u>	73
<u>Regulatory Approvals</u>	73
<u>Appraisal and Dissenters' Rights</u>	73
<u>Material U.S. Federal Income Tax Consequences of the Merger</u>	74

Table of Contents

<u>Anticipated Accounting Treatment</u>	76
<u>Effects on CSI's Exchange Act Registration</u>	76
<u>Vote Required; Recommendation of Replidyne Board of Directors</u>	76
<u>THE MERGER AGREEMENT</u>	78
<u>General</u>	78
<u>Closing of the Merger</u>	78
<u>Merger Consideration</u>	78
<u>Assumption of CSI Stock Options and Warrants</u>	80
<u>Fractional Shares</u>	81
<u>Exchange of CSI Stock Certificates</u>	81
<u>Certificate of Incorporation and Bylaws of Replidyne</u>	81
<u>Conditions to the Completion of the Merger</u>	82
<u>Conduct of Business Prior to the Merger</u>	83
<u>Limitation on Soliciting, Discussing or Negotiating Other Acquisition Proposals</u>	85
<u>Change in Recommendation</u>	86
<u>Meeting of Stockholders</u>	87
<u>Other Agreements</u>	87
<u>Representations and Warranties</u>	89
<u>Material Adverse Effect</u>	89
<u>Termination of the Merger Agreement</u>	91
<u>Termination Fees</u>	92
<u>Amendment and Waiver of the Merger Agreement</u>	93
<u>OTHER AGREEMENTS RELATED TO THE MERGER</u>	94
<u>Voting Agreements</u>	94
<u>Lock-up Agreements</u>	95
<u>CSI Preferred Stockholder Conversion Agreement</u>	95
<u>REPLIDYNE PROPOSAL NO. 2 – AMENDMENT TO RESTATED CERTIFICATE OF INCORPORATION TO EFFECT A REVERSE STOCK SPLIT</u>	96
<u>Overview</u>	96
<u>Reasons for the Reverse Stock Split</u>	96
<u>Effects of the Reverse Stock Split</u>	97
<u>Effective Date</u>	98
<u>Payment for Fractional Shares</u>	98
<u>Exchange of Stock Certificates</u>	98
<u>Accounting Consequences</u>	99
<u>Material U.S. Federal Income Tax Consequences of the Reverse Stock Split</u>	99
<u>No Appraisal Rights</u>	100
<u>Vote Required; Recommendation of Replidyne Board of Directors</u>	100
<u>REPLIDYNE PROPOSAL NO. 3 – NAME CHANGE</u>	102
<u>Vote Required; Recommendation of Replidyne Board of Directors</u>	102
<u>REPLIDYNE PROPOSAL NO. 4 – APPROVAL OF ASSUMPTION OF THE CARDIOVASCULAR SYSTEMS, INC. 2007 EQUITY INCENTIVE PLAN</u>	103
<u>Effect of Stockholder Vote on Replidyne's Existing Plans</u>	103
<u>Reasons for Increase in Authorized Shares</u>	103
<u>Overview of Cardiovascular Systems, Inc. 2007 Equity Incentive Plan</u>	103
<u>Vote Required; Recommendation of Replidyne Board of Directors</u>	106

Table of Contents

<u>REPLIDYNE PROPOSAL NO. 5 APPROVAL OF AMENDMENT TO THE REPLIDYNE 2006 EMPLOYEE STOCK PURCHASE PLAN</u>	107
<u>Overview</u>	107
<u>Reasons for Increase in Authorized Shares</u>	107
<u>Overview of Replidyne 2006 Employee Stock Purchase Plan</u>	107
<u>Specific Benefits</u>	109
<u>Material U.S. Federal Income Tax Consequences</u>	109
<u>Vote Required; Recommendation of Replidyne Board of Directors</u>	109
<u>REPLIDYNE PROPOSAL NO. 6 APPROVAL OF POSSIBLE ADJOURNMENT OF THE SPECIAL MEETING</u>	111
<u>Overview</u>	111
<u>Vote Required; Recommendation of Replidyne Board of Directors</u>	111
<u>THE SPECIAL MEETING OF CSI STOCKHOLDERS</u>	112
<u>Date, Time and Place</u>	112
<u>Purposes of the CSI Special Meeting</u>	112
<u>Recommendation of the CSI Board of Directors</u>	112
<u>Record Date and Voting Power</u>	113
<u>Voting and Revocation of Proxies</u>	113
<u>Quorum and Required Vote</u>	113
<u>Solicitation of Proxies</u>	114
<u>Other Matters</u>	114
<u>CSI PROPOSAL NO. 1 APPROVAL OF THE MERGER AGREEMENT AND THE MERGER</u>	115
<u>Vote Required; Recommendation of CSI Board of Directors</u>	115
<u>CSI PROPOSAL NO. 2 APPROVAL OF INCREASE IN RESERVED SHARES UNDER THE 2007 EQUITY INCENTIVE PLAN</u>	116
<u>Proposed Amendment</u>	116
<u>Reasons for the Amendment</u>	116
<u>Vote Required; Recommendation of CSI Board of Directors</u>	116
<u>CSI PROPOSAL NO. 3 APPROVAL OF POSSIBLE ADJOURNMENT OF THE SPECIAL MEETING</u>	117
<u>Overview</u>	117
<u>Vote Required; Recommendation of CSI Board of Directors</u>	117
<u>INFORMATION ABOUT REPLIDYNE S BUSINESS</u>	118
<u>Overview</u>	118
<u>Sales and Marketing</u>	118
<u>Intellectual Property</u>	118
<u>Competition</u>	119
<u>Manufacturing</u>	119
<u>Insurance</u>	119
<u>Employees</u>	119
<u>Facilities</u>	119
<u>Legal Proceedings</u>	119

Table of Contents

<u>INFORMATION ABOUT CSI S BUSINESS</u>	120
<u>Corporate Information</u>	120
<u>Business Overview</u>	120
<u>Market Overview</u>	121
<u>CSI s Solution</u>	122
<u>CSI s Strategy</u>	124
<u>CSI s Product</u>	125
<u>Clinical Trials and Studies for CSI s Products</u>	127
<u>Sales and Marketing</u>	129
<u>Research and Development</u>	130
<u>Manufacturing</u>	130
<u>Third-Party Reimbursement and Pricing</u>	130
<u>Competition</u>	131
<u>Patents and Intellectual Property</u>	131
<u>Government Regulation of Medical Devices</u>	132
<u>Employees</u>	136
<u>Properties</u>	136
<u>Legal Proceedings</u>	137
<u>MANAGEMENT S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS FOR REPLIDYNE</u>	141
<u>Overview</u>	141
<u>Results of Operations</u>	141
<u>Liquidity and Capital Resources</u>	145
<u>Critical Accounting Policies and Estimates</u>	147
<u>Recent Accounting Pronouncements</u>	150
<u>QUALITATIVE AND QUANTITATIVE DISCLOSURES ABOUT MARKET RISK FOR REPLIDYNE</u>	151
<u>MANAGEMENT S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS FOR CSI</u>	152
<u>Overview</u>	152
<u>Financial Overview</u>	153
<u>Critical Accounting Policies and Significant Judgments and Estimates</u>	154
<u>Results of Operations</u>	163
<u>Liquidity and Capital Resources</u>	168
<u>Related Party Transactions</u>	173
<u>Off-Balance Sheet Arrangements</u>	173
<u>Recent Accounting Pronouncements</u>	173
<u>Inflation</u>	174
<u>QUALITATIVE AND QUANTITATIVE DISCLOSURES ABOUT MARKET RISK FOR CSI</u>	175
<u>CSI CONTROLS AND PROCEDURES</u>	178
<u>MANAGEMENT OF THE COMBINED COMPANY AFTER THE MERGER</u>	179
<u>Executive Officers and Directors</u>	179
<u>Committees of the Board of Directors</u>	182
<u>Compensation Committee Interlocks and Insider Participation in Compensation Decisions</u>	183
<u>Compensation of Directors</u>	183

Table of Contents

<u>CSI EXECUTIVE COMPENSATION AND OTHER INFORMATION</u>	184
<u>Compensation Discussion and Analysis</u>	184
<u>Summary Compensation Table for Fiscal Year 2008</u>	193
<u>Grants of Plan-Based Awards in Fiscal Year 2008</u>	195
<u>Outstanding Equity Awards at Fiscal Year-end for Fiscal Year 2008</u>	197
<u>Option Exercises and Stock Vested for Fiscal Year 2008</u>	198
<u>Potential Payments Upon Termination or Change of Control</u>	199
<u>Compensation of Directors</u>	200
<u>REPLIDYNE SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT</u>	204
<u>CSI SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT</u>	208
<u>PRINCIPAL STOCKHOLDERS OF THE COMBINED COMPANY</u>	213
<u>DESCRIPTION OF REPLIDYNE S CAPITAL STOCK</u>	217
<u>Common Stock</u>	217
<u>Preferred Stock</u>	217
<u>Registration Rights</u>	218
<u>Delaware Anti-Takeover Law and Provisions of Replidyne s Restated Certificate of Incorporation and Bylaws</u>	218
<u>Transfer Agent and Registrar</u>	220
<u>Market Listing</u>	220
<u>RELATED PARTY TRANSACTIONS INVOLVING DIRECTORS AND OFFICERS OF THE COMBINED COMPANY</u>	221
<u>Replidyne Transactions</u>	221
<u>CSI Transactions</u>	221
<u>COMPARATIVE RIGHTS OF REPLIDYNE AND CSI STOCKHOLDERS</u>	224
<u>UNAUDITED PRO FORMA CONDENSED COMBINED FINANCIAL STATEMENTS</u>	239
<u>LEGAL MATTERS</u>	248
<u>EXPERTS</u>	248
<u>HOUSEHOLDING OF PROXY MATERIALS</u>	248
<u>WHERE YOU CAN FIND MORE INFORMATION</u>	248
<u>REPLIDYNE FINANCIAL STATEMENTS</u>	F-1
<u>CSI FINANCIAL STATEMENTS</u>	F-43
<u>ANNEXES:</u>	
<u>A Agreement and Plan of Merger and Reorganization</u>	A-1
<u>B Form of Replidyne Voting Agreement</u>	B-1
<u>C Form of CSI Voting Agreement</u>	C-1
<u>D Opinion of Morgan Stanley & Co. Incorporated</u>	D-1
<u>E Certificate of Amendment to the Restated Certificate of Incorporation of Replidyne</u>	E-1
<u>F Sections 302A.471 and 302A.473 of the Minnesota Business Corporation Act</u>	F-1
<u>G CSI 2007 Equity Incentive Plan</u>	G-1
<u>H Replidyne 2006 Employee Stock Purchase Plan</u>	H-1
<u>EX-5.1</u>	
<u>EX-8.1</u>	
<u>EX-8.2</u>	
<u>EX-23.1</u>	
<u>EX-23.2</u>	
<u>EX-23.3</u>	
<u>EX-99.1</u>	
<u>EX-99.2</u>	
<u>EX-99.4</u>	

Table of Contents

QUESTIONS AND ANSWERS ABOUT THE MERGER, THE REPLIDYNE SPECIAL MEETING AND THE CSI SPECIAL MEETING

The following section provides answers to frequently asked questions about the merger and the effect of the merger on holders of Replidyne common stock and CSI common stock and preferred stock, the Replidyne special meeting and the CSI special meeting. This section, however, only provides summary information. Replidyne and CSI urge you to read carefully the remainder of this proxy statement/prospectus, including the annexes to this proxy statement/prospectus, because the information in this section does not provide all the information that might be important to you regarding the merger and the other matters being considered at the Replidyne special meeting and the CSI special meeting.

As used in this proxy statement/prospectus, references to Replidyne refer collectively to Replidyne, Inc. and all of its subsidiaries unless the context requires otherwise, references to CSI refer to Cardiovascular Systems, Inc. and all of its subsidiaries unless the context requires otherwise, and references to the combined company refer to Replidyne following the proposed transaction described in this proxy statement/prospectus.

Q: What is the merger?

A: Replidyne, CSI, and Responder Merger Sub, Inc., a Minnesota corporation and wholly owned subsidiary of Replidyne, have entered into an Agreement and Plan of Merger dated as of November 3, 2008, which is referred to in this proxy statement/prospectus as the merger agreement, that contains the terms and conditions of the proposed business combination of Replidyne and CSI. Pursuant to the merger agreement, on the terms and conditions set forth therein, Responder Merger Sub, Inc. will be merged with and into CSI, with CSI surviving the merger as a wholly owned subsidiary of Replidyne.

Immediately prior to the effective time of the merger, each share of CSI preferred stock outstanding at such time will be converted into shares of CSI common stock at the conversion ratio determined pursuant to CSI's articles of incorporation. At the effective time of the merger, each share of CSI common stock outstanding immediately prior to the effective time of the merger (excluding certain shares to be canceled pursuant to the merger agreement, and shares held by stockholders who have exercised and perfected dissenters' rights) will be converted into the right to receive between 6,460 and 6,797 shares of Replidyne common stock, assuming that the net assets of Replidyne are between \$35.0 million and \$37.0 million as calculated in accordance with the terms of the merger agreement and that the number of shares of Replidyne and CSI common stock outstanding on a fully diluted basis using the treasury stock method of accounting for options and warrants immediately prior to the effective time of the merger has not changed from the number of such shares as of October 31, 2008, subject to adjustment to account for the effect of a reverse stock split of Replidyne common stock to be implemented prior to the consummation of the merger, which is referred to as the reverse stock split. As a result of the merger, holders of CSI stock, options and warrants are expected to own or have the right to acquire in the aggregate between 83.0% and 83.7% of the combined company and the holders of Replidyne stock, options and warrants are expected to own or have the right to acquire in the aggregate between 16.3% and 17.0% of the combined company. At the effective time of the merger, Replidyne will change its corporate name to Cardiovascular Systems, Inc. as required by the merger agreement.

Q: Why are the two companies proposing to merge?

A: The combined company that results from the merger will be a medical device company focused on developing and commercializing interventional treatment systems for vascular disease. The combined company will have several potential advantages, including a highly differentiated product, the Diamondback 360° Orbital

Atherectomy System, sufficient capital to fund its projected operating requirements for the foreseeable future, a product that targets a large, underserved market opportunity, and a proven and experienced management team.

Q: Why am I receiving this proxy statement/prospectus?

A: You are receiving this proxy statement/prospectus because you have been identified as a stockholder of Replidyne or CSI. If you are a stockholder of Replidyne, you are entitled to vote at Replidyne's special meeting. If you are a stockholder of CSI, you are entitled to vote at CSI's special meeting. This document serves as a proxy statement of Replidyne and CSI, used to solicit proxies for the special meetings of Replidyne and CSI,

Table of Contents

and as a prospectus of Replidyne, used to offer shares of Replidyne common stock to CSI stockholders in exchange for shares of CSI capital stock pursuant to the terms of the merger agreement. This document contains important information about the merger, the shares of Replidyne common stock to be issued in the merger and the special meetings of Replidyne and CSI stockholders, and you should read it carefully.

Q: What is required to consummate the merger?

A: To consummate the merger, Replidyne stockholders must approve the issuance of shares of Replidyne common stock in the merger and the certificate of amendment to the restated certificate of incorporation of Replidyne and CSI stockholders must approve and adopt the merger agreement and the merger contemplated therein.

The approval by the stockholders of Replidyne requires the affirmative vote of the holders of a majority of the shares of Replidyne common stock casting votes in person or by proxy at the Replidyne special meeting for the issuance of shares of Replidyne common stock in the merger, and the affirmative vote of the holders of a majority of shares of Replidyne common stock having voting power outstanding on the record date for the Replidyne special meeting for the amendment to Replidyne's restated certificate of incorporation.

The approval by the stockholders of CSI requires the affirmative votes of (i) the holders of a majority of the outstanding shares of CSI common stock and preferred stock, voting as a single class on an as-converted to common stock basis, and (ii) the holders of a majority of the outstanding shares of CSI preferred stock, voting as a single class on an as-converted to common stock basis and including the shares of CSI preferred stock held by affiliates of Easton Capital Investment Group and Maverick Capital, Ltd.

Several CSI stockholders have agreed with Replidyne to vote shares representing approximately 20% of the outstanding capital stock of CSI in favor of the merger and the other actions contemplated by the merger agreement. These stockholders represented the maximum number of the outstanding shares of CSI capital stock that could be made subject to these voting agreements under Minnesota corporate law. In addition, several Replidyne stockholders, who beneficially own approximately 48% of the outstanding common stock of Replidyne, have agreed with CSI to vote shares representing approximately 32% of the outstanding common stock of Replidyne in favor of the issuance of the shares of Replidyne common stock pursuant to the merger and the other actions contemplated by the merger agreement.

The stockholders of Replidyne and CSI are also being asked to approve certain other matters in connection with the consummation of the merger that are described more fully in this proxy statement/prospectus. While approval of these proposals is not required to consummate the merger, the board of directors of Replidyne or CSI, as the case may be, recommends that you vote for these proposals.

In addition to the requirement of obtaining such stockholder approvals and appropriate regulatory approvals, each of the other closing conditions set forth in the merger agreement must be satisfied or waived. For a more complete description of the closing conditions under the merger agreement, we urge you to read the section entitled "The Merger Agreement - Conditions to the Completion of the Merger" on page 82 of this proxy statement/prospectus.

Q: What is the reverse stock split and why is it necessary?

A: Immediately prior to the effective time of the merger, the outstanding shares of Replidyne common stock will be reclassified and combined into a lesser number of shares to be determined by Replidyne and CSI prior to the effective time of the merger and publicly announced by Replidyne. The merger constitutes a reverse merger under applicable marketplace rules established by Nasdaq, which requires the combined company to comply with

the initial listing standards of the applicable Nasdaq market to continue to be listed on such market following the merger. The Nasdaq Global Market's initial listing standards require a company to have, among other things, a \$4.00 per share minimum bid price. Because Replidyne common stock is required to be listed on the Nasdaq Global Market as a condition to closing the merger and the current price of Replidyne common stock is less than the minimum bid prices required by the Nasdaq Global Market, the reverse stock split is necessary to consummate the merger.

Table of Contents

Q: What will CSI stockholders receive in the merger?

A: Replidyne has agreed to issue, and holders of CSI capital stock will receive, shares of Replidyne common stock such that following the consummation of the transactions contemplated by the merger agreement, current stockholders of Replidyne, together with holders of Replidyne options and warrants, are expected to own or have the right to acquire between 16.3% and 17.0% of the common stock of the combined company, and current CSI stockholders, together with holders of CSI options and warrants, are expected to own or have the right to acquire between 83.0% and 83.7% of the combined company, in each case assuming that Replidyne's net assets are between \$35.0 million and \$37.0 million as calculated in accordance with the terms of the merger agreement, on a fully diluted basis using the treasury stock method of accounting for options and warrants. Immediately prior to the effective time of the merger, all outstanding shares of CSI preferred stock will convert automatically into shares of CSI common stock pursuant to the terms of CSI's articles of incorporation and a preferred stockholder conversion agreement. The number of shares of Replidyne common stock each CSI stockholder will receive will be determined using a conversion factor based on the number of outstanding shares of capital stock of Replidyne and CSI, any outstanding options and warrants to purchase shares of capital stock of Replidyne and CSI, and Replidyne's net assets, in each case calculated in accordance with the terms of the merger agreement as of immediately prior to the effective time of the merger.

Q: How will the merger affect stock options and warrants for CSI common stock?

A: Replidyne will assume options and warrants to purchase shares of CSI common stock which will become exercisable for shares of Replidyne common stock with the same terms, exercisability, vesting schedule and other provisions, but with the number of shares and exercise price being appropriately adjusted to reflect the conversion factor between Replidyne common stock and CSI common stock determined in accordance with the merger agreement and described above.

Q: What are the material U.S. federal income tax consequences of the merger to me?

A: The merger has been structured to qualify as a tax-free reorganization within the meaning of Section 368(a) of the Internal Revenue Code of 1986, as amended. As a result of the merger's qualification as a reorganization, it is anticipated that CSI stockholders will not recognize gain or loss for U.S. federal income tax purposes upon the exchange of shares of CSI common stock for shares of Replidyne common stock, except with respect to cash received in lieu of fractional shares of Replidyne common stock.

Q: Who will be the directors of the combined company following the merger?

A: Following the merger, the board of directors of the combined company will be comprised of nine directors, seven of whom are currently directors of CSI and two of whom are currently directors of Replidyne. The current directors of CSI that are expected to become directors of the combined company are Brent G. Blackey, John H. Friedman, Geoffrey O. Hartzler, Roger J. Howe, David L. Martin, Glen D. Nelson and Gary M. Petrucci. The current directors of Replidyne that are expected to become directors of the combined company are Edward Brown and Augustine Lawlor.

Table of Contents

Q: Who will be the executive officers of the combined company following the merger?

A: Following the merger, the executive management team of the combined company is expected to be composed of CSI's executive management team prior to the merger and is contemplated to include each of the following individuals serving in the position set forth opposite his name. Each of the following individuals currently serves in the same position with CSI:

Name	Position in the Combined Company
David L. Martin	President and Chief Executive Officer
Laurence L. Betterley	Chief Financial Officer
James E. Flaherty	Chief Administrative Officer and Secretary
John Borrell	Vice President of Sales
Brian Doughty	Vice President of Marketing
Robert J. Thatcher	Executive Vice President
Paul Tyska	Vice President of Business Development
Paul Koehn	Vice President of Manufacturing

Q: What risks should I consider in deciding whether to vote in favor of the proposals?

A: You should carefully review the section of this proxy statement/prospectus entitled "Risk Factors" beginning on page 18, which sets forth certain risks and uncertainties related to the merger, risks and uncertainties to which the combined company's business will be subject, and risks and uncertainties to which each of Replidyne and CSI, as an independent company, is subject.

Q: When do you expect the merger to be consummated?

A: We anticipate that the merger will occur in the first calendar quarter of 2009 and on or around February 25, 2009, shortly after the completion of both the Replidyne special meeting and the CSI special meeting, but we cannot predict the exact timing.

Q: What do I need to do now?

A: We urge you to read this proxy statement/prospectus carefully, including its annexes, and to consider how the merger affects you.

If you are a Replidyne stockholder, you may provide your proxy instructions in three different ways. First, you can mail your signed proxy card in the enclosed return envelope. Alternatively, you can provide your proxy instructions via the toll-free call center set up for this purpose at 1-800-Proxies (1-800-776-9437) in the United States or 1-718-921-8500 from foreign countries and follow the instructions. Please have your proxy card available when you call. Finally, you can provide your proxy instructions via the Internet at <http://www.voteproxy.com> and follow the on-screen instructions. Please have your proxy card available when you access the web page. Please provide your proxy instructions only once and as soon as possible so that your shares can be voted at the special meeting of Replidyne stockholders.

If you are a CSI stockholder, you may provide your proxy instructions in two different ways. First, you can mail your signed proxy card in the enclosed return envelope. Alternatively, you can provide your proxy instructions

via facsimile to 1-612-492-7077 to the attention of Bonnie Eichers of Fredrikson & Byron, P.A. Please provide your proxy instructions only once and as soon as possible so that your shares can be voted at the special meeting of CSI stockholders.

Q: As a Replidyne stockholder, how does Replidyne s board of directors recommend that I vote?

A: After careful consideration, Replidyne s board of directors has approved the merger agreement and each of the proposals described in this proxy statement/prospectus that the stockholders of Replidyne are being asked to consider, and has determined that they are advisable, fair to and in the best interests of Replidyne stockholders. Accordingly, Replidyne s board of directors recommends that Replidyne stockholders vote FOR each such proposal.

Table of Contents

Q: As a CSI stockholder, how does CSI's board of directors recommend that I vote?

A: After careful consideration, CSI's board of directors has approved the merger agreement and each of the proposals described in this proxy statement/prospectus that the stockholders of CSI are being asked to consider, and has determined that they are advisable, fair to and in the best interests of CSI stockholders. Accordingly, CSI's board of directors recommends that CSI stockholders vote **FOR** each such proposal.

Q: What happens if I do not return a proxy card or otherwise provide proxy instructions?

A: If you are a Replidyne stockholder and you do not submit a proxy card or vote at the Replidyne special meeting, your shares will not be counted as present for the purpose of determining the presence of a quorum and will have no effect on the approval of Replidyne Proposal Nos. 1, 4, 5 and 6, but would have the same effect as voting against Replidyne Proposal Nos. 2 and 3. Broker non-votes will similarly have no effect on the approval of Replidyne Proposal Nos. 1, 4, 5 and 6, but would have the same effect as voting against Replidyne Proposal Nos. 2 and 3. If you submit a proxy card and affirmatively elect to abstain from voting, your proxy will be counted as present for the purpose of determining the presence of a quorum but will not be voted at the meeting. As a result, your abstention will have no effect on the approval of Replidyne Proposal Nos. 1, 4, 5 and 6, but would have the same effect as voting against Replidyne Proposal Nos. 2 and 3.

If you are a CSI stockholder and you do not submit a proxy card or vote at the CSI special meeting, your shares will not be counted as present for the purpose of determining the presence of a quorum and would have the same effect as voting against CSI Proposal No. 1, but will have no effect on the approval of CSI Proposal Nos. 2 and 3. If you submit a proxy card and affirmatively elect to abstain from voting, your proxy will be counted as present for the purpose of determining the presence of a quorum but will not be voted at the meeting. As a result, your abstention would have the same effect as voting against CSI Proposal No. 1, but will have no effect on the approval of CSI Proposal Nos. 2 and 3.

Q: May I vote in person?

A: If your shares of Replidyne common stock are registered directly in your name with Replidyne's transfer agent you are considered, with respect to those shares, the stockholder of record, and the proxy materials and proxy card are being sent directly to you. If you are a Replidyne stockholder of record as of January 21, 2009, you may attend the special meeting of Replidyne stockholders to be held on February 24, 2009 and vote your shares in person, rather than signing and returning your proxy card or otherwise providing proxy instructions. However, we urge you to return your proxy card with your voting instructions in any event, just in case your plans should change.

If your shares of Replidyne common stock are held in a brokerage account or by another nominee, you are considered the beneficial owner of shares held in street name, and the proxy materials are being forwarded to you together with a voting instruction card. As the beneficial owner, you are also invited to attend the special meeting of Replidyne stockholders. Since a beneficial owner is not the stockholder of record, you may not vote these shares in person at the special meeting unless you obtain a legal proxy from the broker, trustee or nominee that holds your shares, giving you the right to vote the shares at the meeting.

If your shares of CSI common stock or preferred stock are registered directly in your name on the books of CSI you are considered, with respect to those shares, the stockholder of record, and the proxy materials and proxy card are being sent directly to you. If you are a CSI stockholder of record as of January 26, 2009, you may attend the special meeting of CSI stockholders to be held on February 24, 2009 and vote your shares in person, rather

than signing and returning your proxy card or otherwise providing proxy instructions. However, we urge you to return your proxy card with your voting instructions in any event, just in case your plans should change.

Q: If my Replidyne shares are held in street name by my broker, will my broker vote my shares for me?

A: Your broker will not be able to vote your shares of Replidyne common stock without instructions from you. You should instruct your broker to vote your shares, following the procedure provided by your broker.

x

Table of Contents

Q: May I change my vote after I have provided proxy instructions?

A: Replidyne stockholders of record, other than those Replidyne stockholders who have executed voting agreements, may change their vote at any time before their proxy is voted at the Replidyne special meeting in one of three ways. First, you can send a written notice stating that you would like to revoke your proxy. Second, you can submit new proxy instructions either on a new proxy card, by telephone or via the Internet. Third, you can attend the meeting and vote in person. Your attendance alone will not revoke your proxy. If you have instructed a broker to vote your shares, you must follow directions received from your broker to change those instructions.

CSI stockholders of record, other than those CSI stockholders who have executed voting agreements, may change their vote at any time before their proxy is voted at the CSI special meeting in one of three ways. First, you can send a written notice stating that you would like to revoke your proxy. Second, you can submit new proxy instructions either on a new proxy card, by mail or facsimile. Third, you can attend the CSI special meeting and vote in person. Your attendance alone will not revoke your proxy.

Q: Am I entitled to appraisal or dissenters rights?

A: Under Delaware law, holders of Replidyne common stock are not entitled to appraisal rights in connection with the merger.

Under Minnesota law, holders of CSI common stock and preferred stock are entitled to dissenters rights in connection with the merger. If you do not wish to accept shares of Replidyne common stock in the merger and you do not vote in favor of CSI Proposal No. 1, you have the right under Minnesota law to seek from CSI the fair value of your shares in lieu of the Replidyne common stock you would receive if the merger is completed. We refer you to the information under the heading *Appraisal and Dissenters Rights* on page 73 of this proxy statement/prospectus and to the applicable Minnesota statute attached as *Annex F* to this proxy statement/prospectus for information on how to exercise your dissenters rights. Failure to follow all of the steps required under Minnesota law will result in the loss of your dissenters rights.

Q: Who is paying for this proxy solicitation?

A: Replidyne and CSI are conducting this proxy solicitation and will each bear one-half the cost of the proxy solicitation, including the preparation, assembly, printing and mailing of this proxy statement/prospectus, the proxy card and any additional information furnished to stockholders. Replidyne and CSI will each bear its own legal expenses. Replidyne has engaged and will pay D. F. King & Co, Inc., a proxy solicitation firm, to solicit proxies from Replidyne stockholders. Replidyne may also reimburse brokerage houses and other custodians, nominees and fiduciaries for their costs of forwarding proxy and solicitation materials to beneficial owners.

Q: Who can help answer my questions?

A: If you are a Replidyne stockholder and would like additional copies, without charge, of this proxy statement/prospectus or if you have questions about the merger, including the procedures for voting your shares, you should contact:

Replidyne, Inc.
Attn: Investor Relations
1450 Infinite Drive
Louisville, CO 80027

(303) 996-5500

If you are a CSI stockholder and would like additional copies, without charge, of this proxy statement/prospectus or if you have questions about the merger, including the procedures for voting your shares, you should contact:

Cardiovascular Systems, Inc.
Attn: Investor Relations
651 Campus Drive
St. Paul, MN 55112
(651) 259-2800

Table of Contents

SUMMARY

*This summary highlights selected information from this proxy statement/prospectus. To understand the merger fully, you should read carefully this entire document and the documents to which we refer, including the annexes attached hereto. See *Where You Can Find More Information* on page 248. The merger agreement is attached as Annex A to this proxy statement/prospectus. We encourage you to read the merger agreement as it is the legal document that governs the merger. We have included page references in parentheses to direct you to a more detailed description of the topics presented in this summary.*

The Companies

Replidyne, Inc.

1450 Infinite Drive
Louisville, CO 80027
(303) 996-5500

Replidyne was incorporated in Delaware in December 2000 and began as a biopharmaceutical company focused on discovering, developing, in-licensing and commercializing innovative anti-infective products. In April 2008, Replidyne suspended enrollment in the last of its clinical trials on its lead product candidate, faropenem medoxomil, in order to conserve its cash assets and further support initiatives related to the pursuit of strategic transactions. As a result of its inability to secure a partner for the faropenem medoxomil program, Replidyne announced in June 2008 that it would return the license for faropenem medoxomil to its licensor, Asubio Pharma Co., Ltd. In August 2008, Replidyne suspended the development of REP3123, an investigational narrow-spectrum antibacterial agent for the treatment of *clostridium difficile* (*C. difficile*) bacteria and *C. difficile* infection, and its other anti-infective programs based on its bacterial DNA replication inhibition technology. These and subsequent related actions have reduced the Replidyne workforce to a level of three employees as of December 31, 2008. Replidyne is pursuing the sale of REP3123 and its related technology and the sale of the anti-infective programs based on its bacterial DNA replication inhibition technology in a transaction or transactions separate from the merger. Replidyne no longer has employees engaged in development and commercialization activities.

Responder Merger Sub, Inc.

1450 Infinite Drive
Louisville, CO 80027
(303) 996-5500

Responder Merger Sub, Inc. is a wholly owned subsidiary of Replidyne that was incorporated in Minnesota in October 2008. Responder Merger Sub, Inc. does not engage in any operations and exists solely to facilitate the merger.

Cardiovascular Systems, Inc.

651 Campus Drive,
St. Paul, MN 55112
(651) 259-2800

CSI is a medical device company focused on developing and commercializing interventional treatment systems for vascular disease. CSI's initial product, the Diamondback 360° Orbital Atherectomy System, is a minimally invasive catheter system for the treatment of peripheral arterial disease, or PAD. In August 2007, the U.S. Food and Drug Administration, or FDA, granted CSI 510(k) clearance for use of the Diamondback 360° as a therapy in patients with

PAD. CSI was formed in 1989 as Shturman Cardiology Systems, Inc. and is incorporated in Minnesota.

The Merger (see page 49)

If the merger is consummated, CSI and Responder Merger Sub, Inc. will merge, with CSI surviving as a wholly owned subsidiary of Replidyne. It is anticipated that shortly after the merger Replidyne will change its name to

Table of Contents

Cardiovascular Systems, Inc. A copy of the merger agreement is attached as *Annex A* to this proxy statement/prospectus. You are encouraged to read the merger agreement in its entirety because it is the legal document that governs the merger.

Immediately after the merger, subject to adjustments to reflect certain events that could occur prior to closing of the merger, CSI stockholders, optionholders and warrant holders will own or have the right to acquire between 83.0% and 83.7% of the combined company and Replidyne stockholders, optionholders and warrant holders will own or have the right to acquire between 16.3% and 17.0% of the combined company, in each case calculated on a fully diluted basis using the treasury stock method of accounting for options and warrants. Replidyne will assume outstanding and unexercised options and warrants to purchase CSI common stock, and they will be converted into options and warrants, as applicable, to purchase Replidyne common stock. The foregoing percentages assume that Replidyne's net assets at closing are between \$35.0 and \$37.0 million as calculated in accordance with the terms of the merger agreement.

For a more complete description of the merger conversion factor, see the section entitled "The Merger Agreement" in this proxy statement/prospectus.

The closing of the merger will occur no later than the fifth business day after the last of the conditions to the merger has been satisfied or waived, or at another time as Replidyne and CSI agree. Replidyne and CSI anticipate that the consummation of the merger will occur shortly after the Replidyne and CSI special meetings. However, because the merger is subject to a number of conditions, neither Replidyne nor CSI can predict exactly when the closing will occur or if it will occur at all. After completion of the merger, assuming that Replidyne receives the required stockholder approval of Replidyne Proposal No. 3, Replidyne will be renamed Cardiovascular Systems, Inc.

Reasons for the Merger (see page 55)

The combined company that results from the merger will be a medical device company focused on developing and commercializing interventional treatment systems for vascular disease. CSI's initial product, the Diamondback 360° Orbital Atherectomy System, is a minimally invasive catheter system for the treatment of peripheral arterial disease, or PAD. Replidyne and CSI believe that the combined company will have the following potential advantages:

Highly differentiated product. The Diamondback 360° Orbital Atherectomy System has received FDA clearance. Replidyne and CSI also believe that the Diamondback 360° has features that differentiate it from other FDA approved or cleared minimally invasive atherectomy devices. CSI's revenues in the four fiscal quarters since the launch of the product and the high reorder rate among its initial customers demonstrate CSI's ability to retain its customer base.

Financial resources of the combined company. CSI believes that Replidyne's projected available cash at closing, together with CSI's other cash resources, will be sufficient to fund CSI's currently projected operating requirements for the foreseeable future.

Large underserved PAD market opportunity. PAD is a circulatory problem in which plaque deposits build up on the walls of arteries, reducing blood flow to the limbs. As cited by the authors of the PARTNERS study published in the Journal of the American Medical Association in 2001, PAD affects approximately eight to 12 million people in the United States. Despite the severity of PAD, it remains relatively under diagnosed. Recent emphasis on PAD education from medical associations, insurance companies and other groups, coupled with publications in medical journals, is increasing physician and patient awareness of PAD risk factors, symptoms and treatment options.

Proven management team with deep PAD experience. CSI's management team has a background in developing and marketing PAD devices and has demonstrated the ability to successfully execute CSI's growth strategy.

Table of Contents

Each of the board of directors of Replidyne and CSI also considered other reasons for the merger, as described herein. The board of directors of Replidyne considered, among other things:

the strategic alternatives available to Replidyne, including a transaction with another potential partner, liquidation of the company and the continued development of its former product candidates;

the failure of Replidyne's lead product candidate, faropenem medoxomil, to receive approval from the FDA for its new drug application;

the early stage of development of Replidyne's research pipeline programs and the capital that would be required to achieve regulatory approval to complete the development of those programs; and

the recent volatility in the public markets that, when combined with Replidyne's net cash position and its public listing, could allow Replidyne to obtain favorable terms in a reverse merger transaction.

In addition, the board of directors of CSI approved the merger based on a number of factors, including the following:

the expectation that the merger would be a more time- and cost-effective means to access capital than other options considered, including an initial public offering or an additional round of private equity financing;

the judgment of CSI's board of directors that the merger is the best alternative available to CSI and its stockholders; and

the likelihood that the merger will be consummated on a timely basis.

Opinion of Replidyne's Financial Advisor (see page 60)

Morgan Stanley & Co. Incorporated, or Morgan Stanley, the financial advisor of Replidyne, delivered to the board of directors of Replidyne a written opinion, dated November 3, 2008, addressed to the board of directors of Replidyne, to the effect that, as of the date of the opinion and based on and subject to the various assumptions, qualifications and limitations set forth in the opinion, the conversion factor pursuant to the merger agreement was fair from a financial point of view to Replidyne. The full text of Morgan Stanley's opinion, which sets forth, among other things, the assumptions made, procedures followed, matters considered and limitations on the scope of the review undertaken by Morgan Stanley in rendering its opinion, is attached as *Annex D* to this proxy statement/prospectus and is incorporated by reference in its entirety into this proxy statement/prospectus. Holders of Replidyne common stock are encouraged to read the opinion carefully and in its entirety. **Morgan Stanley's opinion was directed to the board of directors of Replidyne and only addresses the fairness from a financial point of view of the conversion factor pursuant to the merger agreement to Replidyne as of the date of the opinion. Morgan Stanley's opinion does not address any other aspect of the proposed merger or any alternative to the proposed merger. Morgan Stanley expressed no opinion or recommendation as to how the stockholders of Replidyne or CSI should vote at the stockholders meetings to be held in connection with the proposed merger.**

Overview of the Merger Agreement

Merger Consideration (see page 78)

At the effective time of the merger, each share of CSI capital stock not held as treasury stock or owned by CSI shall be converted into a right to receive a number of shares of Replidyne common stock equal to the conversion factor. The

conversion factor shall equal: (i) (A) the number of surviving Replidyne securities divided by the Replidyne post-closing stockholder ownership percentage minus (B) the number of surviving Replidyne securities, divided by (ii) the number of converting CSI securities, each as defined in the merger agreement and explained in this proxy statement/prospectus.

Pursuant to the terms of the merger agreement, CSI and Replidyne have agreed upon a methodology to determine the conversion factor as defined above. The conversion factor shall be determined as of immediately prior to the effective time of the merger and is subject to change based upon Replidyne's net assets as of such time, and the number of shares of CSI and Replidyne capital stock outstanding and issuable upon exercise of outstanding options

Table of Contents

and warrants, each as calculated in accordance with the terms of the merger agreement. For illustrative purposes only, below is a table that sets forth several levels of net assets for Replidyne as of the closing of the merger, and the conversion factor and aggregate post-closing ownership percentage in the combined company for the stockholders, optionholders and warrant holders of each of Replidyne and CSI that would result based on each such level of net assets, in each case calculated in accordance with the terms of the merger agreement and assuming that the capitalization of both Replidyne and CSI is as of October 31, 2008, except that the acceleration of vesting of certain outstanding options to purchase Replidyne common stock that is expected to occur upon the consummation of the merger is assumed to have occurred for purposes of this calculation.

Net Assets	Conversion Factor	Replidyne Securityholder	CSI Securityholder
		Ownership Percentage in the Combined Company	Ownership Percentage in the Combined Company
\$ 41,000,000	6.304	17.4%	82.6%
40,000,000	6.460	17.0%	83.0%
37,000,000	6.460	17.0%	83.0%
36,000,000	6.624	16.7%	83.3%
35,000,000	6.797	16.3%	83.7%
34,000,000	6.979	15.9%	84.1%
33,000,000	7.172	15.6%	84.4%

The foregoing table is presented for illustrative purposes only. The conversion factor is subject to the variables described above and will not be calculated until immediately prior to the effective time of the merger. Replidyne cannot assure you that its level of net assets as of the effective time of the merger will fall within the range set forth in this table. The conversion factor is subject to proportionate adjustment to account for the effect of the reverse stock split of Replidyne's issued and outstanding common stock.

Conditions to the Completion of the Merger (see page 82)

Each party's obligation to complete the merger is subject to a number of conditions, which may be waived by the applicable party, and that include, among others, and subject to specified exceptions, the following:

stockholders of CSI must have approved and adopted the merger agreement and the merger contemplated therein, and stockholders of Replidyne must have approved the issuance of Replidyne common stock in the merger and the amendment to the restated certificate of incorporation of Replidyne;

no temporary restraining order, preliminary or permanent injunction or other order preventing the consummation of the merger shall have been issued by any court of competent jurisdiction or other governmental body and remain in effect, and there shall not be any legal requirement enacted or deemed applicable to the merger that makes consummation of the merger illegal;

the initial listing application on the Nasdaq Global Market shall have been conditionally approved, and the shares of Replidyne common stock to be issued in the merger shall be conditionally approved for listing on the Nasdaq Global Market, both subject only to the completion of the closing and completion by Replidyne of any

reverse stock split required by Nasdaq; and

since the signing of the merger agreement, there shall not have occurred and be continuing any material adverse effect for either party.

Limitation on Soliciting, Discussing or Negotiating Other Acquisition Proposals (see page 85)

Pursuant to the merger agreement, each of Replidyne and CSI agreed that, except as described below, they will not, during the pre-closing period, directly or indirectly:

solicit, initiate, knowingly encourage, induce or facilitate the making, submission or announcement of any acquisition proposal or acquisition inquiry, each as defined in the merger agreement and explained in this proxy statement/prospectus, or take any action that would reasonably be expected to lead to an acquisition proposal or acquisition inquiry;

Table of Contents

furnish any nonpublic information regarding CSI or Replidyne, as the case may be, to any person in connection with or in response to an acquisition proposal or acquisition inquiry;

engage in discussions or negotiations with any person with respect to any acquisition proposal or acquisition inquiry;

approve, endorse or recommend any acquisition proposal; or

execute or enter into any letter of intent or similar document or any contract contemplating or otherwise relating to any acquisition transaction.

Notwithstanding the foregoing, prior to obtaining the consent of its stockholders, either party may furnish information regarding such party to, and may enter into discussions or negotiations with, any third party in response to a superior offer (as defined in the merger agreement and explained in this proxy statement/prospectus) or an unsolicited bona fide written acquisition proposal made or received after the date of the merger agreement that is reasonably likely to result in a superior offer, if:

neither such party nor any representative of such party has breached the no solicitation provisions of the merger agreement described above with respect to that particular superior offer or acquisition proposal;

the board of directors of such party concludes in good faith, based on the advice of outside legal counsel, that such action is required in order for such party's board of directors to comply with its fiduciary obligations to such party's stockholders under applicable legal requirements;

at least three business days prior to furnishing any such information to, or entering into discussions with, such person, such party gives the other party written notice of the identity of such person and of such party's intention to furnish information to, or enter into discussions with, such person;

such party receives from such person an executed confidentiality agreement containing provisions (including nondisclosure provisions, use restrictions, non-solicitation provisions, no hire provisions and standstill provisions) at least as favorable to such party as those contained in the confidentiality agreement previously entered into between Replidyne and CSI; and

at least three business days prior to furnishing any such nonpublic information to such person, such party furnishes such information to the other party (to the extent such nonpublic information has not been previously furnished by such party to the other party).

Termination of the Merger Agreement (see page 91)

The merger agreement may be terminated prior to the effective time of the merger (whether before or after approval and adoption of the merger agreement by CSI stockholders and whether before or after approval of the amendment to Replidyne's restated certificate of incorporation and the issuance of Replidyne common stock in the merger by Replidyne stockholders):

by mutual written consent of Replidyne and CSI, duly authorized by their respective boards of directors;

subject to certain limitations, by either Replidyne or CSI if the merger shall not have been consummated by April 30, 2009;

by either Replidyne or CSI if a court of competent jurisdiction or other governmental body shall have issued a final and nonappealable order, or shall have taken any other final and nonappealable action, having the effect of permanently restraining, enjoining or otherwise prohibiting the consummation of the merger;

by either Replidyne or CSI if Replidyne stockholders fail to approve either the amendment to Replidyne's restated certificate of incorporation or the issuance of the Replidyne common stock pursuant to the merger agreement at the special meeting;

by either Replidyne or CSI if CSI stockholders fail to approve the adoption of the merger agreement at the special meeting;

Table of Contents

by either Replidyne or CSI if (i) the Replidyne board of directors has withheld, withdrawn, amended or modified its recommendation because it has determined in good faith, based on the advice of its outside legal counsel, that such action is required in order for the Replidyne board of directors to comply with its fiduciary obligations to Replidyne stockholders under applicable legal requirements, or (ii) Replidyne enters into a letter of intent, memorandum of understanding or definitive agreement with respect to a superior offer;

by either Replidyne or CSI if (i) the CSI board of directors has withheld, withdrawn, amended or modified its recommendation because it has determined in good faith, based on the advice of its outside legal counsel, that such action is required in order for the CSI board of directors to comply with its fiduciary obligations to CSI stockholders under applicable legal requirements, or (ii) CSI enters into a letter of intent, memorandum of understanding or definitive agreement with respect to a superior offer; or

subject to certain limitations, by either party in the event of any inaccuracy of representations and warranties of the other party having a material adverse effect or a material breach by the other party of its obligations or covenants under the merger agreement.

Termination Fees (see page 92)

Replidyne must pay CSI a nonrefundable fee of \$1.5 million and reimburse CSI for all actual out of pocket legal, accounting and investment advisory fees paid or payable in connection with the merger agreement and transactions contemplated by the merger agreement if:

the merger agreement is terminated by Replidyne or CSI if (i) the Replidyne board of directors has withheld, withdrawn, amended or modified its recommendation because it has determined in good faith, based on the advice of its outside legal counsel, that such action is required in order for the Replidyne board of directors to comply with its fiduciary obligations to Replidyne stockholders under applicable legal requirements, or (ii) Replidyne enters into a letter of intent, memorandum of understanding or definitive agreement with respect to a superior offer; or

the merger agreement is terminated by Replidyne or CSI if the stockholders of Replidyne do not approve either the amendment to Replidyne's restated certificate of incorporation or the issuance of Replidyne common stock at the Replidyne special meeting of stockholders, and both of the following conditions are met:

prior to the Replidyne special meeting of stockholders, an acquisition proposal with respect to Replidyne has been publicly made and not withdrawn; and

within twelve months of the termination of the merger agreement, Replidyne enters into any agreement for an acquisition transaction contemplated by such acquisition proposal or consummates an acquisition transaction contemplated by such acquisition proposal.

CSI must pay Replidyne a nonrefundable fee of \$1.5 million and reimburse Replidyne for all actual out of pocket legal, accounting and investment advisory fees paid or payable in connection with the merger agreement and transactions contemplated by the merger agreement if:

the merger agreement is terminated by Replidyne or CSI if (i) the CSI board of directors has withheld, withdrawn, amended or modified its recommendation because it has determined in good faith, based on the advice of its outside legal counsel, that such action is required in order for the CSI board of directors to comply with its fiduciary obligations to CSI stockholders under applicable legal requirements, or (ii) CSI enters into a

letter of intent, memorandum of understanding or definitive agreement with respect to a superior offer; or the merger agreement is terminated by Replidyne or CSI if the stockholders of CSI do not approve the adoption of the merger agreement (including the consummation of the merger) at the CSI special meeting of stockholders, and all of the following conditions are met:

prior to the CSI special meeting of stockholders, an acquisition proposal with respect to CSI has been publicly made and not withdrawn; and

Table of Contents

within twelve months of the termination of the merger agreement, CSI enters into any agreement for an acquisition transaction contemplated by such acquisition proposal or consummates an acquisition transaction contemplated by such acquisition proposal.

Voting Agreements (see page 94)

In order to induce Replidyne to enter into the merger agreement, several CSI stockholders entered into voting agreements with and granted irrevocable proxies in favor of Replidyne pursuant to which, among other things, each of these stockholders agreed, solely in its capacity as a stockholder, to vote shares representing approximately 20% of the outstanding capital stock of CSI in favor of the merger, the other actions contemplated by the merger agreement and any action in furtherance of any of the foregoing, and against, among other things, any proposal made in opposition to, or in competition with, the merger. These stockholders represented the maximum number of the outstanding shares of CSI capital stock that could be made subject to these voting agreements under Minnesota corporate law. All of these stockholders are executive officers, directors, or entities controlled by such persons, or 5% stockholders, of CSI.

In addition, in order to induce CSI to enter into the merger agreement, several Replidyne stockholders, who together with their respective affiliates, beneficially own approximately 48% of the outstanding common stock of Replidyne, entered into voting agreements and irrevocable proxies in favor of CSI pursuant to which, among other things, each of these stockholders agreed, solely in his capacity as a stockholder, to vote shares representing approximately 32% of the outstanding common stock of Replidyne in favor of the merger, the other actions contemplated by the merger agreement and any action in furtherance of any of the foregoing, and against, among other things, any proposal made in opposition to, or in competition with, the merger.

Replidyne and CSI stockholders that executed these voting agreements have agreed not to engage in certain actions that would solicit, encourage or support acquisition transactions other than the merger.

Lock-up Agreements (see page 95)

The directors and certain stockholders of both Replidyne and CSI entered into lock-up agreements in favor of Replidyne and CSI pursuant to which they have agreed, subject to limited exceptions, not to sell or otherwise dispose of any shares of CSI common stock or Replidyne common stock or any securities convertible into or exercisable or exchangeable for shares of CSI common stock or Replidyne common stock or engage in certain transactions with respect thereto during the period beginning on the date of the merger agreement and ending 90 days after the closing of the merger. The lock-up restrictions will not apply to certain transfers not involving a disposition for value, provided that the recipient agrees to be bound by these lock-up restrictions and provided that such transfers are not required to be reported, and are not voluntarily reported, in any public report or filing with the SEC during the lock-up period. As of December 31, 2008, the parties to the lock-up agreements owned approximately 37% of Replidyne's outstanding common stock and 28% of CSI's outstanding capital stock, calculated on an as-converted to common stock basis.

Pursuant to the merger agreement, Replidyne and CSI have each agreed to use commercially reasonable efforts to cause its respective officers to enter into lock-up agreements in favor of Replidyne and CSI on substantially the same terms as described above.

CSI Stock Options and Warrants (see page 72)

Upon the consummation of the merger, Replidyne will assume all options and warrants to purchase shares of CSI common stock. Each CSI option and warrant will become exercisable for shares of Replidyne common stock, and the

share quantity and exercise price of each instrument will be adjusted according to the conversion factor between Replidyne common stock and CSI common stock determined in accordance with the merger agreement.

Conversion of CSI Preferred Stock (see page 95)

Concurrently with the execution of the merger agreement, the holders of approximately 68% of CSI's outstanding preferred stock, calculated on an as-converted to common stock basis, entered into an agreement with

Table of Contents

CSI pursuant to which all outstanding shares of CSI preferred stock will be automatically converted into shares of CSI common stock, effective as of immediately prior to the effective time of the merger.

Management Following the Merger (see page 66)

Immediately following the merger, the executive management team of the combined company is expected to be composed of CSI's executive management team prior to the merger and is contemplated to include the following individuals serving in the position set forth opposite his name. Each of the following individuals currently serves in the same position with CSI:

Name	Position in the Combined Company
David L. Martin	President and Chief Executive Officer
Laurence L. Betterley	Chief Financial Officer
James E. Flaherty	Chief Administrative Officer and Secretary
John Borrell	Vice President of Sales
Brian Doughty	Vice President of Marketing
Robert J. Thatcher	Executive Vice President
Paul Tyska	Vice President of Business Development
Paul Koehn	Vice President of Manufacturing

Interests of Certain Directors, Officers and Affiliates of Replidyne and CSI (see page 66)

Interests of Replidyne's Executive Officers and Directors in the Merger

When considering the recommendation by the Replidyne board of directors, you should be aware that a number of Replidyne's executive officers and directors have interests in the merger that are different from those of other Replidyne stockholders. As of December 31, 2008, all directors and executive officers of Replidyne, together with their affiliates, beneficially owned approximately 35% of the shares of Replidyne common stock. For a more complete description of the interests of current and former officers and directors of Replidyne, see the section entitled "Interests of Replidyne's Executive Officers and Directors in the Merger" on page 66 of this proxy statement/prospectus.

Interests of CSI's Executive Officers and Directors in the Merger

You also should be aware that a number of CSI's executive officers and directors have interests in the merger that are different from those of other CSI stockholders. As of December 31, 2008, all directors and executive officers of CSI, together with their affiliates, beneficially owned approximately 28% of the shares of CSI capital stock. For a more complete description of the interests of current and former officers and directors of CSI, see the section entitled "Interests of CSI's Executive Officers and Directors in the Merger" on page 70 of this proxy statement/prospectus.

Risk Factors (see page 18)

The merger (including the possibility that the merger may not be completed) poses a number of risks to each company and its respective stockholders. In addition, both Replidyne and CSI are subject to various risks associated with their businesses and their industries, and the combined company is subject to additional risks. The risks are discussed in greater detail under the caption "Risk Factors" beginning on page 18 of this proxy statement/prospectus. Replidyne and CSI both encourage you to read and consider all of these risks carefully.

Material U.S. Federal Income Tax Consequences of the Merger (see page 74)

As provided in the merger agreement, Cooley Godward Kronish LLP and Fredrikson & Byron, P.A. will each issue a tax opinion to the effect that the merger will constitute a reorganization under Section 368 of Internal Revenue Code of 1986, as amended. In such a reorganization, a CSI stockholder generally will not recognize any gain or loss for U.S. federal income tax purposes upon the exchange of its shares of CSI capital stock for shares of

Table of Contents

Replidyne common stock. However, any cash received for any fractional share will result in the recognition of gain or loss as if such stockholder sold its fractional share.

Tax matters can be complicated, and the tax consequences of the merger to you will depend on the facts of your own situation. You should consult your own tax advisors to fully understand the tax consequences of the merger to you, including the applicability and effect of federal, state, local and foreign income and other tax laws.

Regulatory Approvals and Nasdaq Stock Market Listing (see page 73)

As of the date of this proxy statement/prospectus, neither Replidyne nor CSI is required to make filings or to obtain approvals or clearances from any antitrust regulatory authorities in the United States or other countries to consummate the merger. In the United States, Replidyne must comply with applicable federal and state securities laws and the rules and regulations of any stock exchange to which it becomes subject, in connection with the issuance of shares of Replidyne common stock in the merger and the filing of this proxy statement/prospectus with the Securities and Exchange Commission.

Replidyne and CSI have filed an initial listing application with the Nasdaq Global Market pursuant to Nasdaq Stock Market LLC reverse merger rules. If such application is accepted, Replidyne and CSI anticipate that the combined company's stock will be listed on the Nasdaq Global Market following the closing of the merger under the trading symbol CSII.

Anticipated Accounting Treatment (see page 76)

The merger will be treated as a purchase of the net assets of Replidyne by CSI in accordance with accounting principles generally accepted in the United States.

Appraisal and Dissenters' Rights (see page 73)

Under Delaware law, holders of Replidyne common stock are not entitled to appraisal rights in connection with the merger.

Under Minnesota law, holders of CSI common stock and preferred stock are entitled to dissenters' rights in connection with the merger. A CSI stockholder that does not wish to accept shares of Replidyne common stock in the merger and does not vote in favor of the merger has the right under Minnesota law to seek from CSI the fair value of the holder's CSI shares in lieu of the Replidyne common stock the CSI stockholder would receive if the merger is completed. A CSI stockholder's failure to follow all of the steps required under Minnesota law will result in the loss of dissenters' rights.

Comparison of Stockholder Rights (see page 224)

Replidyne is incorporated under the laws of the State of Delaware, and the rights of Replidyne stockholders are accordingly governed by the Delaware General Corporation Law, or DGCL. CSI is incorporated under the laws of the State of Minnesota, and the rights of CSI stockholders are accordingly governed by the Minnesota Business Corporation Act, or MBCA. If the merger is completed, CSI stockholders will become stockholders of Replidyne, and their rights will be governed by the DGCL and the restated certificate of incorporation and the bylaws of Replidyne, as they may be amended. The rights of Replidyne stockholders under the DGCL and the restated certificate of incorporation and bylaws of Replidyne differ from the rights of CSI stockholders under the MBCA and the articles of incorporation and bylaws of CSI.

Table of Contents

**SELECTED HISTORICAL AND UNAUDITED PRO FORMA CONDENSED
COMBINED FINANCIAL DATA**

The following tables present summary historical financial data for Replidyne and CSI, summary unaudited pro forma condensed combined financial data for Replidyne and CSI, and comparative historical and unaudited pro forma per share data for Replidyne and CSI.

Selected Historical Financial Data of Replidyne

The following selected financial data should be read together with Replidyne's financial statements and accompanying notes and Management's Discussion and Analysis of Financial Condition and Results of Operations for Replidyne included elsewhere in this proxy statement/prospectus. The selected financial data in this section is not intended to replace Replidyne's financial statements and the accompanying notes. Historical results are not necessarily indicative of operating results to be expected in the future.

The selected financial data presented below for each year in the five years ended December 31, 2007 are derived from Replidyne's audited financial statements, and are qualified by reference to such financial statements and notes thereto. The statements of operations data for the years ended December 31, 2005, 2006 and 2007 and the balance sheet data as of December 31, 2006 and 2007 are derived from Replidyne's audited financial statements included elsewhere in this proxy statement/prospectus. The statements of operations data for the years ended December 31, 2003 and 2004 and the balance sheet data as of December 31, 2003, 2004 and 2005 are derived from Replidyne's audited financial statements not included in this proxy statement/prospectus. The statements of operations data for the nine months ended September 30, 2007 and 2008 and the balance sheet data as of September 30, 2008 are derived from Replidyne's unaudited financial statements that are included elsewhere in this proxy statement/prospectus. The unaudited financial data as of September 30, 2008 and for the nine months ended September 30, 2007 and 2008 include all adjustments (consisting only of normal recurring adjustments) that Replidyne considers necessary for a fair presentation of the financial position and operating results for the periods presented.

Table of Contents

	Years Ended December 31,					Nine Months Ended	
	2003	2004	2005	2006(1)	2007(1)	2007(1)	2008(1)
	(In thousands, except per share amounts)					(unaudited)	(unaudited)
Statement of Operations Data:							
Revenue	\$ 726	\$ 834	\$ 441	\$ 15,988	\$ 58,571	\$ 58,571	\$
Costs and expenses							
Research and development	12,331	16,282	29,180	38,295	43,313	28,462	26,842
Sales, general and administrative	2,155	2,994	5,329	12,187	13,020	9,803	12,290
Total costs and expenses	14,486	19,276	34,509	50,482	56,333	38,265	39,132
Income (loss) from operations	(13,760)	(18,442)	(34,068)	(34,494)	2,238	20,306	(39,132)
Other income (expense), net	(190)	(797)	399	5,245	5,454	4,329	1,529
Net income (loss)	(13,950)	(19,239)	(33,669)	(29,249)	7,692	24,635	(37,603)
Preferred stock dividends and accretion	(1,294)	(3,560)	(7,191)	(5,391)			
Net income (loss) attributable to common stockholders	\$ (15,244)	\$ (22,799)	\$ (40,860)	\$ (34,640)	\$ 7,692	\$ 24,635	\$ (37,603)
Basic net income (loss) attributable to common stockholders per share	\$ (20.82)	\$ (30.55)	\$ (39.20)	\$ (2.49)	\$ 0.29	\$ 0.92	\$ (1.39)
Diluted net income (loss) attributable to common stockholders per share	\$ (20.82)	\$ (30.55)	\$ (39.20)	\$ (2.49)	\$ 0.28	\$ 0.89	\$ (1.39)
Weighted average shares used in computing net (income) loss per share:							
Basic	732	746	1,042	13,908	26,730	26,696	27,049

Diluted	732	746	1,042	13,908	27,666	27,666	27,049
---------	-----	-----	-------	--------	--------	--------	--------

(1) Costs and expenses for periods subsequent to December 31, 2005 include stock-based compensation expense in accordance with SFAS No. 123(R), *Share-Based Payment*, which was adopted by Replidyne on January 1, 2006.

	2003	2004	As of December 31, 2005 2006 (In thousands)		2007	As of September 30, 2008 (unaudited)
Consolidated Balance Sheet Data:						
Cash, cash equivalents and short-term investments	\$ 692	\$ 27,018	\$ 59,420	\$ 125,567	\$ 90,266	\$ 50,591
Working capital	(1,657)	24,409	50,755	68,147	80,440	45,034
Total assets	4,169	30,067	63,579	135,561	94,690	52,112
Long-term debt, net of current portion and discount	1,208	84				
Accumulated deficit	(20,105)	(42,235)	(83,107)	(116,980)	(109,288)	(146,891)
Preferred stock	20,058	69,447	136,815			
Total shareholders' equity (deficit)	(20,115)	(42,202)	(82,632)	71,372	82,404	45,237

Table of Contents**Selected Historical Financial Data of CSI**

The following table presents CSI's selected historical consolidated financial data. CSI derived the selected statements of operations data for the years ended June 30, 2006, 2007 and 2008 and balance sheet data as of June 30, 2007 and 2008 from CSI's audited consolidated financial statements and related notes that are included elsewhere in this proxy statement/prospectus. CSI derived the selected consolidated statements of operations data for the years ended June 30, 2004 and 2005 and the balance sheet data as of June 30, 2004, 2005 and 2006 from CSI's audited consolidated financial statements that do not appear in this proxy statement/prospectus. CSI derived the consolidated statements of operations data for the three months ended September 30, 2007 and 2008 and the balance sheet data as of September 30, 2008 from CSI's unaudited consolidated financial statements and related notes that are included elsewhere in this proxy statement/prospectus. CSI has prepared this unaudited information on the same basis as the audited consolidated financial statements and has included all adjustments, consisting only of normal recurring adjustments, that CSI considers necessary for a fair presentation of CSI's financial position and operating results for such period. CSI has prepared the unaudited interim consolidated financial statements in accordance with accounting principles generally accepted in the United States of America, or GAAP, and the rules and regulations of the SEC for interim financial statements. CSI's historical results are not necessarily indicative of the results that may be expected in the future and the results for the three months ended September 30, 2008 are not necessarily indicative of the results for the full year. You should read this data together with CSI's consolidated financial statements and related notes included elsewhere in this proxy statement/prospectus and the information under Management's Discussion and Analysis of Financial Condition and Results of Operations for CSI.

	2004	2005	Years Ended June 30,			Three Months Ended				
			2006	2007(1)	2008(1)	2007(1)	2008(1)			
			(In thousands, except share and per share amounts)							
Consolidated Statements of Operations Data:										
Revenues	\$	\$	\$	\$	\$	22,177	\$	\$	11,646	
Cost of goods sold						8,927			(539)	3,881
Gross profit						13,250			(539)	7,765
Expenses(1):										
Selling, general and administrative		984	1,177	1,735	6,691	35,326		3,552		16,424
Research and development		3,246	2,371	3,168	8,446	16,068		3,328		4,955
Total expenses		4,230	3,548	4,903	15,137	51,394		6,880		21,379
		(4,230)	(3,548)	(4,903)	(15,137)	(38,144)		(7,419)		(13,614)

Loss from operations								
Other income (expense):								
Interest expense			(48)	(1,340)	(923)	(300)	(227)	
Interest income	18	37	56	881	1,167	278	142	
Impairment on investments					(1,267)			
Total other income (expense)	18	37	8	(459)	(1,023)	(22)	(85)	
Net loss	(4,212)	(3,511)	(4,895)	(15,596)	(39,167)	(7,441)	(13,699)	
Accretion of redeemable convertible preferred stock(2)				(16,835)	(19,422)	(4,853)		
Net loss available to common shareholders	\$ (4,212)	\$ (3,511)	\$ (4,895)	\$ (32,431)	\$ (58,589)	\$ (12,294)	\$ (13,699)	
Loss per common share:								
Basic and diluted(3)	\$ (0.78)	\$ (0.61)	\$ (0.79)	\$ (5.22)	\$ (8.57)	\$ (1.95)	\$ (1.78)	
Weighted average common shares used in computation:								
Basic and diluted(3)	5,375,795	5,779,942	6,183,715	6,214,820	6,835,126	6,291,512	7,692,248	

(1) Operating expenses in the years ended June 30, 2007 and 2008 and three months ended September 30, 2007 and 2008 include stock-based compensation expense as a result of the adoption of SFAS No. 123(R), *Share-Based Payment* on July 1, 2006, as follows (in thousands):

Table of Contents

	Years Ended		Three Months Ended	
	June 30,		September 30,	
	2007	2008	2007	2008
Cost of goods sold	\$	\$ 232	\$	\$ 176
Selling, general and administrative	327	6,852	277	1,384
Research and development	63	297	73	112

- (2) See Notes 1 and 10 of the notes to CSI's consolidated financial statements included elsewhere in this proxy statement/prospectus for a discussion of the accretion of redeemable convertible preferred stock.
- (3) See Note 12 of the notes to CSI's consolidated financial statements included elsewhere in this proxy statement/prospectus for a description of the method used to compute basic and diluted net loss per common share and basic and diluted weighted-average number of shares used in per common share calculations.

	2004	2005	As of June 30,		2008	As of
			2006	2007		September 30,
			2006	2007		2008
(In thousands)						
Consolidated Balance Sheet Data:						
Cash and cash equivalents	\$ 3,144	\$ 1,780	\$ 1,554	\$ 7,908	\$ 7,595	\$ 14,727
Short-term investments				11,615		
Working capital(1)	2,868	1,349	(1,240)	18,171	(3,118)	(11,144)
Total current assets	3,166	2,116	2,424	20,828	18,204	24,914
Total assets	4,031	2,874	3,296	22,025	41,958	48,612
Redeemable convertible preferred stock warrants				3,094	3,986	4,047
Total liabilities	298	767	3,723	5,830	25,408	42,605
Redeemable convertible preferred stock				48,498	98,242	98,242
Total shareholders' (deficiency) equity	3,733	2,107	(427)	(32,303)	(81,692)	(92,235)

- (1) Working capital is calculated as total current assets less total current liabilities as of the balance sheet date indicated.

Quarterly Results of Operations

The following table presents CSI's unaudited quarterly results of operations for each of CSI's last nine quarters ended September 30, 2008. You should read the following table in conjunction with CSI's consolidated financial statements and related notes included elsewhere in this proxy statement/prospectus. CSI has prepared the unaudited information on the same basis as CSI's audited consolidated financial statements. These interim financial statements reflect all adjustments consisting of normal recurring accruals, which, in the opinion of CSI's management, are necessary to present fairly the results of CSI's operations for the interim periods. Results of operations for any quarter are not

necessarily indicative of results for any future quarters or for a full year.

	September 30, 2006	December 31, 2006	March 31, 2007	June 30, 2007	September 30, 2007	December 31, 2007	March 31, 2008	June 30, 2008	September 30, 2008
	(In thousands)								
Consolidated Statements of Operations Data:									
Revenues	\$	\$	\$	\$	\$	\$ 4,631	\$ 7,654	\$ 9,892	\$ 11,646
Gross profit (loss)					(539)	2,438	5,142	6,209	7,765
Loss from operations	(1,571)	(2,964)	(3,984)	(6,618)	(7,419)	(10,187)	(9,291)	(11,247)	(13,614)
Net loss	(1,328)	(3,139)	(4,187)	(6,942)	(7,441)	(9,768)	(10,611)	(11,347)	(13,699)
Net loss available to common shareholders(1)	(5,207)	(7,266)	(8,584)	(11,374)	(12,294)	(10,121)	(24,827)	(11,347)	(13,699)

(1) Net loss available to common shareholders includes accretion of redeemable convertible preferred stock.

Table of Contents**Selected Unaudited Pro Forma Condensed Combined Financial Data of Replidyne and CSI**

The following unaudited pro forma financial data should be read in conjunction with the historical financial statements and the accompanying notes of Replidyne and CSI, and Management's Discussion and Analysis of Financial Condition and Results of Operations for Replidyne and Management's Discussion and Analysis of Financial Condition and Results of Operations for CSI, which are included elsewhere in this proxy statement/prospectus, and the other information contained in this proxy statement/prospectus. See Where You Can Find More Information beginning on page 248 and the financial statements of Replidyne and CSI beginning on pages F-1 and F-43, respectively.

The following selected unaudited pro forma condensed combined financial information presents the effect of the merger of Replidyne and CSI pursuant to the merger agreement. For accounting purposes, CSI is considered to be acquiring the net assets of Replidyne in the merger. The following unaudited pro forma condensed combined balance sheet data assume that the merger took place on September 30, 2008 and combines the CSI historical consolidated balance sheet at September 30, 2008 with the Replidyne historical balance sheet at September 30, 2008 and includes the effect of the issuance of warrants to purchase 3.5 million shares of CSI common stock to current CSI preferred stockholders in connection with the conversion of preferred stock into common stock immediately prior to the effective time of the proposed merger. Because as of December 31, 2008 Replidyne had reduced its employee headcount to three employees that are not engaged in development or commercialization efforts and will not transition to CSI, had returned its license to develop faropenem medoxomil to Asubio Pharma Co., Ltd. and had suspended development of REP3123 and its other anti-infective programs based on its bacterial DNA replication inhibition technology, and is engaged in a process to sell or otherwise dispose of its remaining research and development programs, including REP3123 and its bacterial DNA replication inhibition technology, Replidyne is not considered to be a business for accounting purposes. The unaudited pro forma condensed combined statements of operations data assume that the merger took place as of July 1, 2007, and combines the historical results of Replidyne and CSI for the three months ended September 30, 2008 and the year ended June 30, 2008. The historical results of CSI were derived from its unaudited consolidated statement of operations for the three months ended September 30, 2008 and its audited consolidated statement of operations for the year ended June 30, 2008 included herein. The historical results of Replidyne were derived from its unaudited statement of operations for the three months ended September 30, 2008 included herein, and a combination of its audited statement of operations for the year ended December 31, 2007 included herein, and its unaudited statement of operations for the six months ended June 30, 2007 and 2008 included in its Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2008. The unaudited pro forma condensed combined financial statements do not account for the effect of a reverse stock split of Replidyne common stock to be implemented immediately prior to the effective time of the merger.

The selected unaudited pro forma condensed combined financial data are presented for illustrative purposes only and are not necessarily indicative of the combined financial position or results of operations of future periods or the results that actually would have been realized had the entities been a single entity during these periods. Replidyne and CSI expect the fair value of the net assets of Replidyne to approximate the fair value of Replidyne common stock at the date of the merger. The unaudited pro forma condensed combined financial statements have been prepared using CSI's June 30 year end, as the combined company anticipates having a June 30 year end upon closing of the merger. The financial statements of the combined entity after the merger will reflect the historical results of CSI before the merger and will not include the historical financial results of Replidyne before the completion of the merger. The selected unaudited pro forma condensed combined financial data as of and for the three months ended September 30, 2008 and for the year ended June 30, 2008 are derived from the unaudited pro forma condensed combined financial information appearing elsewhere in this proxy statement/prospectus, and should be read in conjunction with that information. For purposes of the unaudited pro forma condensed combined financial statements, presented elsewhere herein, Replidyne

and CSI have made allocations of the estimated purchase price to the assets to be acquired and liabilities to be assumed based on preliminary estimates of their fair value. A final determination of these estimated fair values, which cannot be made prior to the completion of the merger, will be based on the actual net assets of Replidyne that exist as of the date of consummation of the merger. The actual amounts recorded as of the consummation of the merger may differ

Table of Contents

materially from the information presented in these unaudited pro forma condensed combined financial statements as a result of:

net cash used in Replidyne's operations between the pro forma balance sheet date of September 30, 2008 and the closing of the merger;

the timing of completion of the merger;

Replidyne's net assets as calculated pursuant to the merger agreement, which will partially determine the actual number of shares of Replidyne's common stock to be issued pursuant to the merger; and

other changes in Replidyne's net assets that may occur prior to completion of the merger, which could cause material differences in the information presented below.

The estimated total purchase price of Replidyne in these unaudited pro forma condensed combined financial statements was based on the net assets as of September 30, 2008, the date on which the proposed merger is deemed to have occurred for purposes of these pro forma financial statements. The Replidyne net assets as of September 30, 2008 have been adjusted to include estimates for costs to be incurred as a result of ceasing its operations.

The final asset allocation may change significantly from preliminary estimates. The actual asset allocation upon consummation of the merger will be based on the fair value of the consideration paid and fair values of Replidyne's assets and liabilities as determined at the time of consummation. Replidyne continues to use its cash and other liquid assets to finance the closing of its operations. Replidyne and CSI will re-evaluate the determination of the purchase price at the time of consummation of the merger. Please see Note 2 to the unaudited pro forma combined condensed financial statements included elsewhere in this proxy statement/prospectus for further discussion.

	Year Ended June 30, 2008	Three Months Ended September 30, 2008
	(In thousands, except per share amounts)	
Unaudited Pro Forma Condensed Combined Statement of Operations Data		
Total Revenue	\$ 22,177	\$ 11,646
Selling, general and administrative expenses	47,810	21,317
Research and development expenses	62,610	9,675
Loss from operations	(97,170)	(23,227)
Net loss	(93,824)	(22,775)
Basic and diluted net loss per share	(0.70)	(0.16)
	September 30, 2008 (In thousands)	

Unaudited Pro Forma Condensed Combined Balance Sheet Data

Cash and cash equivalents	\$ 46,786
Working capital	26,090
Total assets	100,521
Total liabilities	53,233
Total stockholders' equity	47,288

Table of Contents**Comparative Historical and Unaudited Pro Forma Per Share Data**

The following information reflects the historical net loss and book value per share of CSI common stock and the historical net loss and book value per share of Replidyne common stock in comparison with the unaudited pro forma net loss and book value per share after giving effect to the proposed merger of CSI with Replidyne. The combined company pro forma per common share data are provided for informational purposes only and are not necessarily indications of the results that would have been achieved had the transaction been completed as of the dates indicated or that may be achieved in the future. CSI and Replidyne have derived the combined company pro forma per common share data from the unaudited pro forma condensed combined financial statements presented elsewhere in this proxy statement/prospectus.

You should read the tables below in conjunction with the audited and unaudited financial statements of CSI and the notes related thereto, the audited and unaudited financial statements of Replidyne and the notes related thereto and the unaudited pro forma condensed combined financial information and notes related thereto, each included elsewhere in this proxy statement/prospectus.

	Year Ended June 30, 2008	Three Months Ended September 30, 2008
CSI Historical Common Share Data:		
Basic and diluted net loss per share	\$ (8.57)	\$ (1.78)
Book value per share as of the period end	(10.78)	(11.93)
Replidyne Historical Common Share Data:		
Basic and diluted net loss per share	\$ (2.10)	\$ (0.37)
Book value per share as of the period end	2.02	1.67
Combined Company Pro Forma Per Common Share Data:		
Basic and diluted net loss per share	\$ (0.70)	\$ (0.16)
Book value per share as of the period end	N/A	0.22

Table of Contents**MARKET PRICE AND DIVIDEND INFORMATION****Replidyne**

Replidyne common stock is listed on the Nasdaq Global Market under the symbol RDYN. The following table sets forth, for the periods indicated, the high and low per share sales prices for Replidyne common stock as reported on the Nasdaq Global Market:

	Common Stock	
	High	Low
Fiscal Year Ended December 31, 2008		
First quarter	\$ 3.10	\$ 1.29
Second quarter	1.90	1.25
Third quarter	1.43	1.16
Fourth quarter	1.27	0.28
Fiscal Year Ended December 31, 2007		
First quarter	\$ 6.28	\$ 4.28
Second quarter	6.07	5.10
Third quarter	7.50	5.23
Fourth quarter	6.66	3.05

On November 3, 2008, the last day prior to the public announcement of the merger, the closing price per share of Replidyne common stock as reported on the Nasdaq Global Market was \$1.12, for an aggregate market value of Replidyne of approximately \$30.4 million.

On _____, 2009, the last practicable date before the printing of this proxy statement/prospectus, the closing price per share of Replidyne common stock as reported on the Nasdaq Global Market was \$ _____, for an aggregate market value of Replidyne of approximately \$ _____.

The number of record holders of Replidyne common stock on January 21, 2009 was approximately 77.

Following the merger, the combined company is expected to be renamed Cardiovascular Systems, Inc. and to change its symbol for trading on the Nasdaq Global Market. CSI has reserved the symbol CSII for this purpose.

CSI

CSI is a privately-held company and its shares are not publicly traded. The number of record holders of CSI common stock on January 26, 2009 was approximately _____, and the number of record holders of CSI preferred stock on January 26, 2009 was approximately _____.

Dividend Policy

Neither Replidyne nor CSI has ever declared or paid any cash dividends on its capital stock nor does either intend to do so in the foreseeable future.

Table of Contents

RISK FACTORS

The combined company will be faced with a market environment that cannot be predicted and that involves significant risks, many of which will be beyond its control. In addition to the other information contained in this proxy statement/prospectus, you should carefully consider the material risks described below before deciding how to vote your shares of Replidyne common stock or CSI capital stock.

Risks Relating to the Proposed Merger

If any of the events described in Risks Relating to CSI and the Combined Company occur, those events could cause the potential benefits of the merger not to be realized.

Following the effective time of the merger, current CSI officers and directors will direct the business and operations of the combined company. Additionally, CSI's business is expected to constitute all of the business of the combined company following the merger. As a result, the risks described below in the section entitled Risks Relating to CSI and the Combined Company beginning on page 24 are among the most significant risks to the combined company if the merger is completed. To the extent any of the events in the risks described below in the section entitled Risks Relating to CSI and the Combined Company occur, those events could cause the market price of the combined company's common stock to decline.

In the event that Replidyne's level of net assets at the effective time of the merger, as calculated pursuant to the merger agreement, is lower than \$35.0 million, Replidyne stockholders will hold a smaller percentage ownership of Replidyne following the consummation of the merger than is currently anticipated and the combined company will have less working capital for future operations.

Subject to the terms of the merger agreement with CSI, at the effective time of the merger, each share of CSI common stock issued and outstanding immediately prior to the merger will be canceled, extinguished and automatically converted into the right to receive that number of shares of Replidyne common stock as determined pursuant to the conversion factor described in the merger agreement. The conversion factor depends on Replidyne's level of net assets as of the effective time of the merger. Under the merger agreement, Replidyne's net assets is defined as Replidyne's total current assets minus all of its liabilities and other outstanding and future obligations as of the effective time of the merger, subject to certain adjustments. Replidyne currently anticipates that its level of net assets as of the effective time of the merger will be between \$35.0 and \$37.0 million, which would result in Replidyne's current stockholders, together with holders of its options and warrants, owning or having the right to acquire between 16.3% and 17.0% of the common stock of the combined company on a fully diluted basis as calculated in accordance with the merger agreement. However, if one or more of the following circumstances arise, Replidyne's level of net assets may be lower than Replidyne expects and Replidyne stockholders would hold a smaller percentage ownership of the combined company following the consummation of the merger than is currently anticipated, thus making the merger less attractive to Replidyne stockholders:

Replidyne is unable to generate any proceeds from the sale of its REP3123 and DNA replication inhibition programs;

Replidyne is unable to terminate, sublease or otherwise assign to a third party its remaining obligations under the lease for its headquarters in Louisville, Colorado;

Replidyne does not receive reimbursement from Forest Laboratories for certain decontamination costs incurred by Replidyne under its former supply agreement with MEDA Manufacturing GmbH;

the costs associated with the winding up of Replidyne's business are greater than anticipated; or

Replidyne expends more resources than is currently anticipated as a result of a delay in the closing of the merger or otherwise.

In addition, if Replidyne's net assets are lower than expected, the combined company will have less working capital for future operations, which could adversely affect the ability of the combined company to achieve its business plan.

Table of Contents

The costs associated with the merger are difficult to estimate, may be higher than expected and may harm the financial results of the combined company.

Replidyne and CSI estimate that they will incur aggregate direct transaction costs of approximately \$6.2 million associated with the merger, and additional costs associated with the commencement of CSI's operation as a public company, which cannot be estimated accurately at this time. The costs associated with the merger may increase if any CSI stockholders elect to dissent from the merger and seek payment of the fair value of their shares as permitted by Minnesota law. If the total costs of the merger exceed Replidyne's and CSI's estimates, the combined company will have less working capital for future operations, which will adversely affect the ability of the combined company to achieve its business plan.

Nasdaq considers the anticipated merger a reverse merger and therefore requires CSI and Replidyne to submit a new listing application with respect to the combined company, which will require certain actions by CSI and Replidyne and may not be successful, which would result in you having difficulty selling your shares.

Nasdaq considers the merger proposed in this proxy statement/prospectus as a reverse merger and requires CSI and Replidyne to submit a new listing application with respect to the combined company. Nasdaq may not approve this new listing application. If this occurs and the merger is still consummated, you may have difficulty selling your shares.

Additionally, as part of the new listing application, CSI and Replidyne will be required to submit, among other things, a plan for the combined company to conduct a reverse stock split. A reverse stock split would increase the per share trading price by a yet undetermined multiple. The change in share price may affect the volatility and liquidity of the combined company's stock, as well as the marketplace's perception of the stock. As a result, the relative price of the combined company's stock may decline and/or fluctuate more than in the past, and you may have trouble converting your investments in the combined company into cash effectively.

The market price of Replidyne common stock has fallen significantly since the public announcement of the proposed merger. If the merger is completed, the market price of the combined company's common stock may decline further.

On November 3, 2008, the last day prior to the public announcement of the proposed merger, the closing price per share of Replidyne common stock as reported on The Nasdaq Global Market was \$1.12. On _____, 2009, the last practicable date before the printing of this proxy statement/prospectus, the closing price per share of Replidyne common stock as reported on The Nasdaq Global Market was \$ _____, which represents a _____% decrease from the closing price on November 3, 2008. This decrease may increase the risk that Replidyne would become subject to securities class action litigation, which could result in substantial costs and a delay in the completion of the merger. If the merger is completed, the market price of the combined company's common stock may decline further for a number of reasons, including if:

the effect of the merger on the combined company's business and prospects is not consistent with the expectations of financial or industry analysts; or

investors react negatively to the effect on the combined company's business and prospects from the merger.

Because the lack of a public market for CSI's outstanding shares makes it difficult to evaluate the fairness of the merger, CSI stockholders may receive consideration in the merger that is greater than or less than the fair market value of the CSI shares.

The outstanding capital stock of CSI is privately held and is not traded in any public market. The lack of a public market makes it extremely difficult to determine the fair market value of CSI. Since the percentage of Replidyne's equity to be issued to CSI stockholders was determined based on negotiations between the parties, it is possible that the value of the Replidyne common stock to be issued in connection with the merger will be greater than the fair market value of CSI. Alternatively, it is possible that the value of the shares of Replidyne common stock to be issued in connection with the merger will be less than the fair market value of CSI.

Table of Contents

Replidyne and CSI executive officers and directors may have interests in the merger that are different from, or in addition to, those of Replidyne and CSI stockholders generally.

The executive officers and directors of Replidyne and CSI may have interests in the merger that are different from, or are in addition to, those of Replidyne and CSI stockholders generally. The directors of the combined company will consist of two directors from Replidyne's board and eight directors from CSI's board. Further, certain Replidyne executive officers will receive change in control payments in connection with the merger. See the sections entitled "Interests of Replidyne's Executive Officers and Directors in the Merger" starting on page 66 and "Interests of CSI's Executive Officers and Directors in the Merger" starting on page 70.

Replidyne and CSI may not be able to complete the merger or may elect to pursue a different strategic transaction, which may not occur on commercially reasonable terms or at all.

Neither Replidyne nor CSI can assure you that they will close the pending merger in a timely manner or at all. The merger agreement is subject to many closing conditions and termination rights, as set forth in more detail in "The Merger Agreement - Conditions to the Completion of the Merger" and "The Merger Agreement - Termination of the Merger Agreement" below. If Replidyne and CSI do not complete the pending merger, Replidyne's and CSI's board of directors may elect to attempt to complete a different strategic transaction. Attempting to complete a different strategic transaction would prove to be costly and time consuming, and neither Replidyne nor CSI can make any assurances that a future strategic transaction will occur on commercially reasonable terms or at all.

Failure to complete the merger could adversely affect Replidyne's stock price and Replidyne's and CSI's future business and operations.

The merger is subject to the satisfaction of closing conditions, including approval by Replidyne and CSI stockholders, and neither Replidyne nor CSI can assure you that the merger will be completed. In the event that the merger is not completed, Replidyne and CSI may be subject to many significant costs, including legal, accounting and advisory fees related to the merger, which must be paid even if the merger is not completed, and the payment of a termination fee and certain expenses under certain circumstances. If the merger is not completed, the market price of Replidyne common stock could decline as a result. If the merger is not completed, CSI will need additional debt or equity financing to carry out its business plan and there is no assurance that such debt or equity financing will be available on acceptable terms or at all.

During the pendency of the merger, Replidyne and CSI may not be able to enter into a business combination with another party because of restrictions in the merger agreement.

The merger agreement restricts the ability of Replidyne and CSI to make acquisitions or complete other transactions. While the merger agreement is in effect, subject to limited exceptions, each party is prohibited from soliciting, initiating, encouraging or taking actions designed to facilitate any inquiries or the making of any proposal or offer that could lead to such party entering into certain extraordinary transactions with any third party, such as a sale of assets, an acquisition of common stock, a tender offer for capital stock or a merger or other business combination outside the ordinary course of business. Any such transactions could be favorable to Replidyne or CSI stockholders.

The merger may be completed even though material adverse changes may result from the announcement of the merger, industry-wide changes and other causes.

In general, either party can refuse to complete the merger if there is a material adverse change affecting the other party between November 3, 2008, the date of the merger agreement, and the closing of the merger. However, some types of changes do not permit either party to refuse to complete the merger, even if such changes would have a material

adverse effect on Replidyne or CSI. If adverse changes occur but Replidyne and CSI must still complete the merger, the combined company's stock price may suffer.

Table of Contents**Risks Relating to Replidyne**

If the proposed merger with CSI is not consummated, Replidyne's prospects will be materially and adversely affected and its stock price could decline.

Replidyne and CSI are targeting a closing of the merger in the first calendar quarter of 2009. If the merger agreement is terminated and Replidyne seeks another business combination, Replidyne may not be able to find a third party willing to provide equivalent or more attractive consideration than the consideration to be provided in the proposed merger with CSI. In such circumstances, Replidyne's board of directors may elect to, among other things, take the steps necessary to liquidate Replidyne's business and assets. In the case of a liquidation, the consideration that Replidyne might receive may be less attractive than the consideration to be received by it pursuant to the merger with CSI.

Replidyne no longer has any internal capabilities to develop its product candidates. Replidyne's ability to increase stockholder value is dependent on Replidyne's ability to successfully complete a strategic transaction or transactions for the sale of the company and the sale of Replidyne's product development programs, which Replidyne may be unable to complete.

In August 2008, Replidyne commenced restructuring its operations to reduce its employee headcount to six employees by the end of October 2008. Replidyne suspended further development activities of REP3123, Replidyne's investigational agent for the treatment of *Clostridium difficile*, or *C. difficile*, bacteria and *C. difficile* Infection, or CDI, and novel anti-infective compounds based on Replidyne's DNA replication inhibition technology. Previously, Replidyne had restructured its operations in a number of actions announced in December 2007, April 2008 and June 2008 that included Replidyne's decision to terminate its license with Asubio Pharma, Co., Ltd, or Asubio Pharma, for faropenem medoxomil and related contract manufacturing agreements for faropenem medoxomil, discontinue enrollment in Replidyne's Phase III clinical trial of faropenem medoxomil for the treatment of acute exacerbations of chronic bronchitis and reduce employee headcount. Replidyne had previously devoted substantially all of its clinical development and research and development efforts and a material portion of its financial resources toward the development of faropenem medoxomil, REP3123, its DNA replication inhibition technologies and its other product candidates. Replidyne currently has no product candidates in clinical or pre-clinical development and has further reduced its employee headcount to three employees, all of whom are involved primarily in financial and administrative roles. Replidyne has entered into an agreement with Morgan Stanley to provide financial advisory services for Replidyne's strategic alternatives process. Replidyne's management has also devoted a substantial amount of time and effort to the strategic alternatives process. As a result of this process, Replidyne has entered into the merger agreement with CSI and continues to pursue the sale of its suspended REP3123 program and DNA replication inhibition technologies.

Consummation of the merger with CSI is subject to numerous conditions to closing, including approval from Replidyne stockholders and the stockholders of CSI, which approval cannot be assured. Further, Replidyne cannot predict whether its REP3123 program and/or DNA replication inhibition technologies can be sold on favorable terms or at all. Completing the merger with CSI and pursuing the sale of its REP3123 program and DNA replication inhibition technologies may require Replidyne to incur substantial additional costs. If Replidyne is unable to complete the merger, its business may be liquidated.

Replidyne may not be able to generate adequate proceeds or any proceeds from the sale of its REP3123 program and DNA replication inhibition technology.

Replidyne is pursuing the sale of its REP3123 program and DNA replication inhibition technology. Replidyne has solicited bids through provision of bid instruction letters to numerous parties. Replidyne's Chief Scientific Officer is acting as the representative for a company in formation that has indicated an interest in acquiring and pursuing these programs. If Replidyne does not receive an acceptable bid for its REP3123 program or DNA replication inhibition technology, Replidyne may not be able to generate adequate proceeds or any proceeds from the sale of these programs. The failure to generate these proceeds would negatively impact the percentage of the combined company that Replidyne stockholders will hold following the merger with CSI. In particular, if Replidyne's level of net assets at the effective time of the merger is lower than \$35.0 million, Replidyne's current

Table of Contents

stockholders, together with holders of its options and warrants, will own or have the right to acquire less than 16.3% of the common stock of the combined company.

Replidyne has received a warning letter from the FDA for Replidyne's NDA filed in December 2005 for faropenem medoxomil, Replidyne's former product candidate. Failure to resolve the matters addressed in the warning letter could negatively impact Replidyne's or a successor company's ability to undertake clinical trials in the future or timely complete future IND and NDA submissions.

On January 22, 2008, Replidyne received a warning letter from the Division of Scientific Investigation of the FDA, or DSI, informing Replidyne of objectionable conditions found during the DSI's investigation of Replidyne's role as applicant for Replidyne's new drug application, or NDA, for faropenem medoxomil. The FDA's observations were based on its establishment inspection reports following on site inspections in conjunction with the FDA's review of Replidyne's NDA. Specifically, DSI cited that Replidyne failed to make available the underlying raw data from the investigation for the FDA's audit and failed to provide the FDA adequate descriptions and analyses of any other data or information relevant to the evaluation of the safety and effectiveness of faropenem medoxomil obtained or otherwise received by Replidyne from any source derived from clinical investigations. The clinical trials that supported Replidyne's NDA were conducted by Bayer as a previous licensee of faropenem medoxomil. In June 2008, DSI made further inquiries of Replidyne related to Replidyne's previous responses to their observations in the warning letter. In July 2008, Replidyne communicated to the FDA Replidyne's decision to terminate Replidyne's license for faropenem medoxomil with Asubio Pharma and withdrew the NDA from consideration by the FDA. Replidyne also informed DSI of these actions. In a communication dated July 22, 2008 the FDA advised Replidyne that since Replidyne has active Investigational New Drug applications, or INDs, and ongoing clinical trials, the issues raised in the warning letter remained open. Following receipt of this communication, Replidyne withdrew all of its open INDs that related to faropenem medoxomil and REP8839. If Replidyne is unable to sufficiently establish to the FDA that future clinical trials conducted by Replidyne, or potentially a successor company, would be in accordance with FDA regulations, Replidyne may be subject to enforcement action by the FDA including being subject to the FDA's Application Integrity Policy. This policy would require third-party validation of the integrity of the raw data underlying any of Replidyne's future filings to the FDA before those filings would be accepted for consideration. Such a requirement would be onerous and require significant additional time and expense for the clinical development and potential approval of any product candidates that Replidyne may wish to develop in the future. These requirements would make it difficult for Replidyne to attempt to restart the development of any of its former product candidates or commence the development of any new product candidates in the event that the merger with CSI is not completed. Further, Replidyne could be subject to additional actions from the FDA that may negatively impact Replidyne's ability or the ability of a successor company to enter into clinical trials or submit an IND or NDA in the future.

Replidyne has incurred significant operating losses since inception and anticipates that it will incur continued losses for the foreseeable future.

Replidyne has experienced significant operating losses since its inception in December 2000. At September 30, 2008, Replidyne had an accumulated deficit of approximately \$146.9 million. Replidyne has generated no revenue from product sales to date. Replidyne has funded its operations to date principally from the sale of its securities and payments by Forest Laboratories under Replidyne's former collaboration agreement. As a result of the suspension of Replidyne's clinical development of each of faropenem medoxomil, REP3123, its anti-bacterial agent addressing *C. difficile* bacteria and *C. difficile*-associated disease, and its DNA replication inhibition technology, Replidyne has no current prospect for near term revenues. Replidyne expects to continue to incur substantial additional operating losses during the period in which it seeks to consummate the proposed merger and pursue the sale of certain company assets including REP3123 and its DNA replication inhibition technology. Because of the numerous risks and uncertainties associated with closing the proposed merger with CSI and transactions related to the sale of Replidyne's drug programs, Replidyne is unable to predict the extent of any future losses or the timeline for completing potential

transactions.

Table of Contents

Replidyne may be unable to retain the senior management required to complete the merger or pursue alternative transactions.

Replidyne's success in selling its remaining pipeline programs and completing the merger depends in part on its continued ability to retain and motivate qualified management and scientific personnel and on its ability to develop and analyze strategic alternatives. Replidyne is highly dependent upon its senior management, particularly Kenneth Collins, its President and Chief Executive Officer, Mark Smith, its Chief Financial Officer, and Donald Morrissey, its Senior Vice President of Corporate Development. The loss of services of any of Mr. Collins, Mr. Smith or Mr. Morrissey could delay or prevent the successful completion of the merger or its ability to complete an alternative transaction or the sale of REP3123 or its DNA replication inhibition technologies.

The market price of Replidyne common stock is highly volatile.

Replidyne cannot assure you that an active trading market for its common stock will exist at any time. You may not be able to sell your shares quickly or at the market price if trading in Replidyne common stock is not active. The trading price of Replidyne common stock has been highly volatile and could be subject to wide fluctuations in price in response to various factors, many of which are beyond Replidyne's control, including:

market reaction and other developments related to the proposed merger with CSI;

any developments related to the business of CSI, including during the pendency of the merger;

the announcement of or other developments related to a sale of part or all of the development stage assets of Replidyne;

failure to achieve stockholder approval of the merger with CSI;

a decision to liquidate the assets of Replidyne;

termination of significant agreements;

changes in laws or regulations applicable to Replidyne's assets;

actual or anticipated variations in Replidyne's results of operations;

actual or anticipated changes in earnings estimates or recommendations by securities analysts;

actions taken by regulatory agencies with respect to Replidyne;

conditions or trends in the biotechnology and biopharmaceutical industries;

announcements by Replidyne or its competitors of significant acquisitions, strategic partnerships, joint ventures or capital commitments;

general economic and market conditions and other factors that may be unrelated to Replidyne's operating performance or to the operating performance of its competitors;

changes in the market valuations of similar companies;

sales of common stock or other securities by Replidyne or its stockholders in the future;

additions or departures of key scientific or management personnel;

the outcome of litigation or arbitration claims;

developments relating to proprietary rights held by Replidyne or its competitors;

disputes or other developments relating to proprietary rights, including patents, litigation matters and Replidyne's ability to obtain patent protection for its technologies;

trading volume of Replidyne common stock;

sales of Replidyne common stock by Replidyne or its stockholders; and

Table of Contents

any proceedings instituted by Nasdaq related to the delisting of Replidyne common stock from the Nasdaq Global Market.

In addition, the stock market in general and the market for biotechnology and biopharmaceutical companies in particular have experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of those companies. These broad market and industry factors may seriously harm the market price of Replidyne common stock, regardless of its operating performance. In the past, following periods of volatility in the market, securities class-action litigation has often been instituted against companies. Such litigation, if instituted against Replidyne, could result in substantial costs and diversion of management's attention and resources, which could materially adversely affect Replidyne's prospects and financial condition.

Replidyne's principal stockholders and management own a significant percentage of Replidyne's stock and are able to exercise significant influence over matters subject to stockholder approval.

Replidyne's executive officers, directors and principal stockholders, together with their respective affiliates, currently own a significant percentage of Replidyne's voting stock, including shares subject to outstanding options and warrants, and Replidyne expects this group will continue to hold a significant percentage of its outstanding voting stock until consummation of the merger, when their ownership interests will be decreased due to the issuance of Replidyne common stock to CSI stockholders. Accordingly, these stockholders will likely be able to have a significant impact on the composition of Replidyne's board of directors and continue to have significant influence over Replidyne's operations and decisions until consummation of the merger. Replidyne stockholders with approximately 48% of Replidyne's outstanding common stock have entered into voting agreements and irrevocable proxies in favor of CSI for approximately 32% of Replidyne's outstanding common stock, pursuant to which, among other things, each of these stockholders agreed, solely in his capacity as a stockholder, to vote these shares in favor of the issuance of the shares of Replidyne common stock in the merger and the other actions contemplated by the merger agreement. This concentration of ownership and the voting agreements could have the effect of delaying or preventing a change in control, other than the merger with CSI, or otherwise discouraging a potential acquirer from attempting to obtain control of Replidyne, which in turn could have a material and adverse effect on the market value of Replidyne common stock.

Risks Relating to CSI and the Combined Company

In determining whether you should approve the issuance of shares of Replidyne common stock pursuant to the merger, you should carefully read the following risk factors. Replidyne and CSI anticipate that, immediately following the merger, the business of the combined company will be the business conducted by CSI immediately prior to the merger. As a result, the risk factors section of this proxy statement/prospectus entitled "Risk Factors Relating to the Proposed Merger" together with the following risk factors, are the most significant you will face if the merger is completed.

Risks Relating to CSI's Business and Operations

Negative conditions in the global credit markets have impaired the liquidity of CSI's auction rate securities, and these securities have experienced an other-than-temporary decline in value, which has adversely affected CSI's income. These circumstances, along with CSI's history of incurring substantial operating losses and negative cash flows from operations, raise substantial doubt about CSI's ability to continue as a going concern.

As of September 30, 2008, CSI's investments included \$23.0 million of AAA rated auction rate securities issued primarily by state agencies and backed by student loans substantially guaranteed by the Federal Family Education

Loan Program. These auction rate securities are debt instruments with a long-term maturity and with an interest rate that is reset in short intervals, primarily every 28 days, through auctions. The recent conditions in the global credit markets have prevented CSI from liquidating its holdings of auction rate securities because the amount of securities submitted for sale has exceeded the amount of purchase orders for such securities. In February 2008, CSI was informed that there was insufficient demand for auction rate securities, resulting in failed auctions for \$23.0 million in auction rate securities held at June 30, 2008 and September 30, 2008. Currently, these affected

Table of Contents

securities are not liquid and will not become liquid until a future auction for these investments is successful or they are redeemed by the issuer or they mature. In the event that CSI needs to access the funds of its auction rate securities that have experienced insufficient demand at auctions, CSI will not be able to do so without the possible loss of principal, until a future auction for these investments is successful or they are redeemed by the issuer or they mature. If CSI is unable to sell these securities in the market or they are not redeemed, then CSI may be required to hold them to maturity and CSI may have insufficient funds to operate its business. For the year ended June 30, 2008, CSI recorded an other-than-temporary impairment loss of \$1.3 million relating to these securities in its statement of operations, and for the three months ended September 30, 2008, CSI recorded an unrealized loss of \$0.3 million relating to these securities in other comprehensive income (loss). CSI will continue to monitor and evaluate the value of its investments each reporting period for further possible impairment or unrealized loss. Although CSI currently does not intend to do so, CSI may consider selling its auction rate securities in the secondary markets in the future, which may require a sale at a substantial discount to the stated principal value of these securities.

In addition, because CSI has incurred substantial operating losses and negative cash flows from operations, all of which will require it to obtain additional funding to continue its operations, management has concluded that there is substantial doubt about CSI's ability to continue as a going concern. Based on the factors described above, CSI's independent registered public accountants have included an explanatory paragraph in their report for CSI's fiscal year ended June 30, 2008 with respect to CSI's ability to continue as a going concern. On March 28, 2008, CSI obtained a margin loan from UBS Financial Services, Inc., the entity through which CSI originally purchased its auction rate securities, for up to \$12.0 million, which was secured by the \$23.0 million par value of CSI's auction rate securities. On August 21, 2008, CSI replaced this loan with a margin loan from UBS Bank USA, which increased maximum borrowings available to \$23.0 million, and on September 12, 2008, CSI obtained additional debt financing from Silicon Valley Bank with maximum available borrowings of \$13.5 million. Based on anticipated operating requirements, combined with limited capital resources, financing CSI's operations will require that CSI raise additional equity or debt capital prior to or during the quarter ending September 30, 2009. CSI has entered into the merger agreement to obtain the working capital necessary to execute its business plan. If the merger is not completed or CSI fails to raise sufficient equity or debt capital through other means, management would implement cost reduction measures, including workforce reductions, as well as reductions in overhead costs and capital expenditures. There can be no assurance that these sources will provide sufficient cash flows to enable CSI to continue as a going concern. CSI currently has no commitments for additional debt or equity financing and may experience difficulty in obtaining additional financing on favorable terms, if at all, if the merger is not consummated.

The existence of the explanatory paragraph may adversely affect CSI's relationships with current and prospective customers, suppliers and investors, and therefore could have a material adverse effect on CSI's business, financial condition, results of operations and cash flows.

CSI has a history of net losses and anticipates that it will continue to incur losses.

CSI is not profitable and has incurred net losses in each fiscal year since its formation in 1989. In particular, CSI had net losses of \$3.5 million in fiscal 2005, \$4.9 million in fiscal 2006, \$15.6 million in fiscal 2007, \$39.2 million in fiscal 2008, and \$13.7 million for the three months ended September 30, 2008. As of September 30, 2008, CSI had an accumulated deficit of approximately \$132.0 million. CSI commenced commercial sales of the Diamondback 360° Orbital Atherectomy System in September 2007, and CSI's short commercialization experience makes it difficult for it to predict future performance. CSI also expects to incur significant additional expenses for sales and marketing and manufacturing as CSI continues to commercialize the Diamondback 360° and additional expenses as CSI seeks to develop and commercialize future versions of the Diamondback 360° and other products. Additionally, CSI expects that its general and administrative expenses will increase as its business grows and CSI incurs the legal and regulatory costs associated with being a public company. As a result, CSI expects to continue to incur significant operating losses.

Table of Contents

CSI has a very limited history selling the Diamondback 360°, which is currently CSI's only product, and CSI's inability to market this product successfully would have a material adverse effect on CSI's business and financial condition.

The Diamondback 360° is CSI's only product and CSI is wholly dependent on it. The Diamondback 360° received 510(k) clearance from the FDA in the United States for use as a therapy in patients with PAD in August 2007. CSI initiated a limited commercial introduction of the Diamondback 360° in the United States in September 2007 and CSI therefore has very limited experience in the commercial manufacture and marketing of this product. CSI's ability to generate revenue will depend upon its ability to successfully commercialize the Diamondback 360° and to develop, manufacture and receive required regulatory clearances and approvals and patient reimbursement for treatment with future versions of the Diamondback 360°. As CSI seeks to commercialize the Diamondback 360°, CSI will need to expand its sales force significantly to reach its target market. Developing a sales force is expensive and time consuming and could delay or limit the success of any product launch. Thus, CSI may not be able to expand its sales and marketing capabilities on a timely basis or at all. If CSI is unable to adequately increase these capabilities, CSI will need to contract with third parties to market and sell the Diamondback 360° and any other products that CSI may develop. To the extent that CSI enters into arrangements with third parties to perform sales, marketing and distribution services on CSI's behalf, CSI's product revenues could be lower than if CSI marketed and sold its products on a direct basis. Furthermore, any revenues resulting from co-promotion or other marketing and sales arrangements with other companies will depend on the skills and efforts of others, and CSI does not know whether these efforts will be successful. Some of these companies may have current products or products under development that compete with CSI's, and they may have an incentive not to devote sufficient efforts to marketing CSI's products. If CSI fails to successfully develop, commercialize and market the Diamondback 360° or any future versions of this product that CSI develops, its business will be materially adversely affected.

The Diamondback 360° and future products may never achieve market acceptance.

The Diamondback 360° and future products CSI may develop may never gain market acceptance among physicians, patients and the medical community. The degree of market acceptance of any of CSI's products will depend on a number of factors, including:

the actual and perceived effectiveness and reliability of CSI's products;

the prevalence and severity of any adverse patient events involving CSI's products, including infection, perforation or dissection of the artery wall, internal bleeding, limb loss and death;

the results of any long-term clinical trials relating to use of CSI's products;

the availability, relative cost and perceived advantages and disadvantages of alternative technologies or treatment methods for conditions treated by CSI's systems;

the degree to which treatments using CSI's products are approved for reimbursement by public and private insurers;

the strength of CSI's marketing and distribution infrastructure; and

the level of education and awareness among physicians and hospitals concerning CSI's products.

Failure of the Diamondback 360° to significantly penetrate current or new markets would negatively impact CSI's business, financial condition and results of operations.

If longer-term or more extensive clinical trials performed by CSI or others indicate that procedures using the Diamondback 360° or any future products are not safe, effective and long lasting, physicians may choose not to use CSI's products. Furthermore, unsatisfactory patient outcomes or injuries could cause negative publicity for CSI's products. Physicians may be slow to adopt CSI's products if they perceive liability risks arising from the use of these products. It is also possible that as CSI's products become more widely used, latent defects could be identified, creating negative publicity and liability problems for CSI, thereby adversely affecting demand for its products. If the Diamondback 360° and CSI's future products do not achieve an adequate level of acceptance by physicians, patients and the medical community, CSI's overall business and profitability would be harmed.

Table of Contents

CSI's future growth depends on physician adoption of the Diamondback 360°, which requires physicians to change their screening and referral practices.

CSI believes that it must educate physicians to change their screening and referral practices. For example, although there is a significant correlation between PAD and coronary artery disease, many physicians do not routinely screen for PAD while screening for coronary artery disease. CSI targets its sales efforts to interventional cardiologists, vascular surgeons and interventional radiologists because they are often the primary care physicians diagnosing and treating both coronary artery disease and PAD. However, the initial point of contact for many patients may be general practitioners, podiatrists, nephrologists and endocrinologists, each of whom commonly treats patients experiencing complications resulting from PAD. If CSI does not educate referring physicians about PAD in general and the existence of the Diamondback 360° in particular, they may not refer patients to interventional cardiologists, vascular surgeons or interventional radiologists for the procedure using the Diamondback 360°, and those patients may instead be surgically treated or treated with an alternative interventional procedure. If CSI is not successful in educating physicians about screening for PAD or referral opportunities, CSI's ability to increase its revenue may be impaired.

CSI's customers may not be able to achieve adequate reimbursement for using the Diamondback 360°, which could affect the acceptance of CSI's product and cause its business to suffer.

The availability of insurance coverage and reimbursement for newly approved medical devices and procedures is uncertain. The commercial success of CSI's products is substantially dependent on whether third-party insurance coverage and reimbursement for the use of such products and related services are available. CSI expects the Diamondback 360° to generally be purchased by hospitals and other providers who will then seek reimbursement from various public and private third-party payors, such as Medicare, Medicaid and private insurers, for the services provided to patients. CSI can give no assurance that these third-party payors will provide adequate reimbursement for use of the Diamondback 360° to permit hospitals and doctors to consider the product cost-effective for patients requiring PAD treatment. In addition, the overall amount of reimbursement available for PAD treatment could decrease in the future. Failure by hospitals and other users of CSI's product to obtain sufficient reimbursement could cause CSI's business to suffer.

Medicare, Medicaid, health maintenance organizations and other third-party payors are increasingly attempting to contain healthcare costs by limiting both coverage and the level of reimbursement, and, as a result, they may not cover or provide adequate payment for use of the Diamondback 360°. In order to position the Diamondback 360° for acceptance by third-party payors, CSI may have to agree to lower prices than it might otherwise charge. The continuing efforts of governmental and commercial third-party payors to contain or reduce the costs of healthcare may limit CSI's revenue.

CSI expects that there will continue to be federal and state proposals for governmental controls over healthcare in the United States. Governmental and private sector payors have instituted initiatives to limit the growth of healthcare costs using, for example, price regulation or controls and competitive pricing programs. Some third-party payors also require demonstrated superiority, on the basis of randomized clinical trials, or pre-approval of coverage, for new or innovative devices or procedures before they will reimburse healthcare providers who use such devices or procedures. Also, the trend toward managed healthcare in the United States and proposed legislation intended to reduce the cost of government insurance programs could significantly influence the purchase of healthcare services and products and may result in necessary price reductions for CSI's products or the exclusion of its products from reimbursement programs. It is uncertain whether the Diamondback 360° or any future products CSI may develop will be viewed as sufficiently cost-effective to warrant adequate coverage and reimbursement levels.

If third-party coverage and reimbursement for the Diamondback 360° is limited or not available, the acceptance of the Diamondback 360° and, consequently, CSI's business will be substantially harmed.

Table of Contents

CSI has limited data and experience regarding the safety and efficacy of the Diamondback 360°. Any long-term data that is generated may not be positive or consistent with CSI's limited short-term data, which would affect market acceptance of this product.

CSI's success depends on the acceptance of the Diamondback 360° by the medical community as safe and effective. Because CSI's technology is relatively new in the treatment of PAD, CSI has performed clinical trials only with limited patient populations. The long-term effects of using the Diamondback 360° in a large number of patients are not known and the results of short-term clinical use of the Diamondback 360° do not necessarily predict long-term clinical benefit or reveal long-term adverse effects. For example, CSI does not have sufficient experience with the Diamondback 360° to evaluate its relative effectiveness in different plaque morphologies, including hard, calcified lesions and soft, non-calcified lesions. If the results obtained from any future clinical trials or clinical or commercial experience indicate that the Diamondback 360° is not as safe or effective as other treatment options or as current short-term data would suggest, adoption of this product may suffer and CSI's business would be harmed.

Even if CSI believes that the data collected from clinical trials or clinical experience indicate positive results, each physician's actual experience with CSI's device will vary. Clinical trials conducted with the Diamondback 360° have involved procedures performed by physicians who are very technically proficient. Consequently, both short and long-term results reported in these studies may be significantly more favorable than typical results achieved by physicians, which could negatively impact market acceptance of the Diamondback 360°.

CSI will face significant competition and may be unable to sell the Diamondback 360° at profitable levels.

CSI competes against very large and well-known stent and balloon angioplasty device manufacturers, including Abbott Laboratories, Boston Scientific, Cook, Johnson & Johnson and Medtronic. CSI may have difficulty competing effectively with these competitors because of their well-established positions in the marketplace, significant financial and human capital resources, established reputations and worldwide distribution channels. CSI also competes against manufacturers of atherectomy catheters including, among others, ev3, Spectranetics, Boston Scientific and Pathway Medical Technologies, as well as other manufacturers that may enter the market due to the increasing demand for treatment of vascular disease. Several other companies provide products used by surgeons in peripheral bypass procedures. Other competitors include pharmaceutical companies that manufacture drugs for the treatment of mild to moderate PAD and companies that provide products used by surgeons in peripheral bypass procedures.

CSI's competitors may:

develop and patent processes or products earlier than CSI will;

obtain regulatory clearances or approvals for competing medical device products more rapidly than CSI will;

market their products more effectively than CSI will; or

develop more effective or less expensive products or technologies that render CSI's technology or products obsolete or non-competitive.

CSI has encountered and expects to continue to encounter potential customers who, due to existing relationships with CSI's competitors, are committed to or prefer the products offered by these competitors. If CSI is unable to compete successfully, CSI's revenue will suffer. Increased competition might lead to price reductions and other concessions that might adversely affect CSI's operating results. Competitive pressures may decrease the demand for CSI's products and could adversely affect its financial results.

CSI's ability to compete depends on its ability to innovate successfully. If CSI's competitors demonstrate the increased safety or efficacy of their products as compared to CSI, its revenue may decline.

The market for medical devices is highly competitive, dynamic and marked by rapid and substantial technological development and product innovations. CSI's ability to compete depends on its ability to innovate successfully, and there are few barriers that would prevent new entrants or existing competitors from developing products that compete directly with CSI's products. Demand for the Diamondback 360° could be diminished by

Table of Contents

equivalent or superior products and technologies offered by competitors. CSI's competitors may produce more advanced products than CSI's or demonstrate superior safety and efficacy of their products. If CSI is unable to innovate successfully, the Diamondback 360° could become obsolete and CSI's revenue would decline as its customers purchase competitor products.

CSI has limited commercial manufacturing experience and could experience difficulty in producing the Diamondback 360° or will need to depend on third parties to manufacture the product.

CSI has limited experience in commercially manufacturing the Diamondback 360° and has no experience manufacturing this product in the volume that CSI anticipates will be required if it achieves planned levels of commercial sales. As a result, CSI may not be able to develop and implement efficient, low-cost manufacturing capabilities and processes that will enable it to manufacture the Diamondback 360° or future products in significant volumes, while meeting the legal, regulatory, quality, price, durability, engineering, design and production standards required to market CSI's products successfully. If CSI fails to develop and implement these manufacturing capabilities and processes, CSI may be unable to profitably commercialize the Diamondback 360° and any future products CSI may develop because the per unit cost of CSI's products is highly dependent upon production volumes and the level of automation in CSI's manufacturing processes. There are technical challenges to increasing manufacturing capacity, including equipment design and automation capabilities, material procurement, problems with production yields and quality control and assurance. Increasing CSI's manufacturing capacity will require it to invest substantial additional funds and to hire and retain additional management and technical personnel who have the necessary manufacturing experience. CSI may not successfully complete any required increase in manufacturing capacity in a timely manner or at all. If CSI is unable to manufacture a sufficient supply of its products, maintain control over expenses or otherwise adapt to anticipated growth, or if CSI underestimates growth, it may not have the capability to satisfy market demand and its business will suffer.

Since CSI has little actual commercial experience with the Diamondback 360°, the forecasts of demand CSI uses to determine order quantities and lead times for components purchased from outside suppliers may be incorrect. Lead times for components may vary significantly depending on the type of component, the size of the order, time required to fabricate and test the components, specific supplier requirements and current market demand for the components and subassemblies. Failure to obtain required components or subassemblies when needed and at a reasonable cost would adversely affect CSI's business.

In addition, CSI may in the future need to depend upon third parties to manufacture the Diamondback 360° and future products. CSI also cannot assure you that any third-party contract manufacturers will have the ability to produce the quantities of CSI's products needed for development or commercial sales or will be willing to do so at prices that allow the products to compete successfully in the market. In addition, CSI can give no assurance that even if it does contract with third-party manufacturers for production that these manufacturers will not experience manufacturing difficulties or experience quality or regulatory issues. Any difficulties in locating and hiring third-party manufacturers, or in the ability of third-party manufacturers to supply quantities of CSI's products at the times and in the quantities CSI needs, could have a material adverse effect on CSI's business.

CSI depends upon third-party suppliers, including single source suppliers to CSI and its customers, making it vulnerable to supply problems and price fluctuations.

CSI relies on third-party suppliers to provide it certain components of CSI's products and to provide key components or supplies to CSI's customers for use with CSI's products. CSI relies on single source suppliers for the following components of the Diamondback 360°: diamond grit coated crowns, ABS molded products, components within the brake assembly and the turbine assembly, and the air-and-saline cable assembly. CSI purchases components from these suppliers on a purchase order basis and carries only very limited levels of inventory for these components. If

CSI underestimates its requirements, it may not have an adequate supply, which could interrupt manufacturing of CSI's products and result in delays in shipments and loss of revenue. CSI's customers depend on a single source supplier for the catheter lubricant used with the Diamondback 360° system. If CSI's customers are unable to obtain adequate supplies of this lubricant, its customers may reduce or cease purchases of CSI's product. CSI depends on these suppliers to provide it and its customers with materials in a timely manner that meet CSI's and their quality, quantity and cost requirements. These suppliers may encounter problems during

Table of Contents

manufacturing for a variety of reasons, including unanticipated demand from larger customers, failure to follow specific protocols and procedures, failure to comply with applicable regulations, equipment malfunction, quality or yield problems, and environmental factors, any of which could delay or impede their ability to meet CSI's demand and its customers' demand. CSI's reliance on these outside suppliers also subjects CSI to other risks that could harm its business, including:

interruption of supply resulting from modifications to, or discontinuation of, a supplier's operations;

delays in product shipments resulting from defects, reliability issues or changes in components from suppliers;

price fluctuations due to a lack of long-term supply arrangements for key components with CSI's suppliers;

CSI's suppliers may make errors in manufacturing components, which could negatively affect the efficacy or safety of CSI's products or cause delays in shipment of its products;

CSI's suppliers may discontinue production of components, which could significantly delay CSI's production and sales and impair operating margins;

CSI and its customers may not be able to obtain adequate supplies in a timely manner or on commercially acceptable terms;

CSI and its customers may have difficulty locating and qualifying alternative suppliers for CSI's and their sole-source supplies;

switching components may require product redesign and new regulatory submissions, either of which could significantly delay production and sales;

CSI may experience production delays related to the evaluation and testing of products from alternative suppliers and corresponding regulatory qualifications;

CSI's suppliers manufacture products for a range of customers, and fluctuations in demand for the products these suppliers manufacture for others may affect their ability to deliver components to CSI or its customers in a timely manner; and

CSI's suppliers may encounter financial hardships unrelated to CSI or its customers' demand for components or other products, which could inhibit their ability to fulfill orders and meet requirements.

Other than existing, unfulfilled purchase orders, CSI's suppliers have no contractual obligations to supply CSI with, and CSI is not contractually obligated to purchase from them, any of its supplies. Any supply interruption from CSI's suppliers or failure to obtain additional suppliers for any of the components used in CSI's products would limit CSI's ability to manufacture its products and could have a material adverse effect on CSI's business, financial condition and results of operations. CSI has no reason to believe that any of its current suppliers could not be replaced if they were unable to deliver components to CSI in a timely manner or at an acceptable price and level of quality. However, if CSI lost one of these suppliers and were unable to obtain an alternate source on a timely basis or on terms acceptable to CSI, CSI's production schedules could be delayed, its margins could be negatively impacted, and it could fail to meet its customers' demand. CSI's customers rely upon CSI's ability to meet committed delivery dates and any disruption in the supply of key components would adversely affect CSI's ability to meet these dates and could result in legal action by CSI's customers, cause it to lose customers or harm its ability to attract new customers, any of which could decrease CSI's revenue and negatively impact its growth. In addition, to the extent that CSI's suppliers use technology or

manufacturing processes that are proprietary, CSI may be unable to obtain comparable materials or components from alternative sources.

Manufacturing operations are often faced with a supplier's decision to discontinue manufacturing a component, which may force CSI or its customers to make last time purchases, qualify a substitute part, or make a design change which may divert engineering time away from the development of new products.

Table of Contents

CSI will need to increase the size of its organization and CSI may experience difficulties managing growth. If CSI is unable to manage the anticipated growth of its business, its future revenue and operating results may be adversely affected.

The growth CSI may experience in the future will provide challenges to CSI's organization, requiring it to rapidly expand its sales and marketing personnel and manufacturing operations. CSI's sales and marketing force has increased from six employees on January 1, 2007 to 129 employees on December 31, 2008, and CSI expects to continue to grow its sales and marketing force. CSI also expects to significantly expand its manufacturing operations to meet anticipated growth in demand for its products. Rapid expansion in personnel means that less experienced people may be producing and selling CSI's product, which could result in unanticipated costs and disruptions to CSI's operations. If CSI cannot scale and manage its business appropriately, its anticipated growth may be impaired and CSI's financial results will suffer.

CSI anticipates future losses and may require additional financing, and CSI's failure to obtain additional financing when needed could force CSI to delay, reduce or eliminate its product development programs or commercialization efforts.

CSI anticipates significant future losses and is therefore dependent on additional financing to execute its business plan. CSI expects that the merger will provide additional working capital for its business operations that, together with funds available under CSI's debt financing arrangements and from operations, will be sufficient to satisfy CSI's working capital needs for the foreseeable future. If, however, the merger is not completed or delays in CSI's business plan reduce the amount of cash available from operations, CSI will require additional financing in order to satisfy its capital requirements. In particular, CSI may require additional capital in order to continue to conduct the research and development and obtain regulatory clearances and approvals necessary to bring any future products to market and to establish effective marketing and sales capabilities for existing and future products. CSI's operating plan may change, and it may need additional funds sooner than anticipated to meet its operational needs and capital requirements for product development, clinical trials and commercialization. Additional funds may not be available when CSI needs them on terms that are acceptable to CSI, or at all. If adequate funds are not available on a timely basis, CSI may terminate or delay the development of one or more of its products, or delay establishment of sales and marketing capabilities or other activities necessary to commercialize its products.

CSI's future capital requirements will depend on many factors, including:

- whether the merger is completed and, if so, Replidyne's level of net assets at the effective time of the merger;
- the costs of expanding CSI's sales and marketing infrastructure and its manufacturing operations;
- the degree of success CSI experiences in commercializing the Diamondback 360°;
- the number and types of future products CSI develops and commercializes;
- the costs, timing and outcomes of regulatory reviews associated with CSI's future product candidates;
- the costs of preparing, filing and prosecuting patent applications and maintaining, enforcing and defending intellectual property-related claims; and
- the extent and scope of CSI's general and administrative expenses.

Raising additional capital through debt financing may restrict CSI's operations.

To the extent that CSI raises additional capital through debt financing, the terms may include provisions that adversely affect your rights as a stockholder. Debt financing, if available, may involve agreements that include covenants limiting or restricting CSI's ability to take specific actions such as incurring additional debt, making capital expenditures or declaring dividends. Any of these events could adversely affect CSI's ability to achieve its product development and commercialization goals and have a material adverse effect on CSI's business, financial condition and results of operations.

Table of Contents

CSI does not currently intend to market the Diamondback 360° internationally, which will limit CSI's potential revenue from this product.

As a part of CSI's product development and regulatory strategy, CSI does not currently intend to market the Diamondback 360° internationally in order to focus CSI's resources and efforts on the U.S. market, as international efforts would require substantial additional sales and marketing, regulatory and personnel expenses. CSI's decision to market this product only in the United States will limit its ability to reach all of its potential markets and will limit its potential sources of revenue. In addition, CSI's competitors will have an opportunity to further penetrate and achieve market share abroad until such time, if ever, that CSI markets the Diamondback 360° or other products internationally.

CSI is dependent on its senior management team and scientific personnel, and CSI's business could be harmed if CSI is unable to attract and retain personnel necessary for its success.

CSI is highly dependent on its senior management, especially David L. Martin, CSI's President and Chief Executive Officer. CSI's success will depend on its ability to retain senior management and to attract and retain qualified personnel in the future, including scientists, clinicians, engineers and other highly skilled personnel and to integrate current and additional personnel in all departments. Competition for senior management personnel, as well as scientists, clinical and regulatory specialists, engineers and sales personnel, is intense and CSI may not be able to retain its personnel. The loss of members of CSI's senior management, scientists, clinical and regulatory specialists, engineers and sales personnel could prevent it from achieving its objectives of continuing to grow the company. The loss of a member of CSI's senior management or professional staff would require the remaining senior executive officers to divert immediate and substantial attention to seeking a replacement. In particular, CSI expects to substantially increase the size of CSI's sales force, which will require management's attention. In that regard, ev3 Inc., ev3 Endovascular, Inc., and FoxHollow Technologies, Inc. have brought an action against CSI that, if successful, could limit CSI's ability to retain the services of certain sales personnel that were formerly employed by those companies and make it more difficult to recruit and hire such sales and other personnel in the future. CSI does not carry key person life insurance on any of its employees, other than Michael J. Kallok, CSI's Chief Scientific Officer and former Chief Executive Officer.

CSI has a new management team and may experience instability in the short term as a result.

Since July 2006, CSI has added six new executives to its management team, including its Chief Executive Officer, who joined in February 2007, and its Chief Financial Officer, who joined in April 2008. During the preparation for CSI's initial public offering, which was abandoned due to unfavorable market conditions in order to proceed with the merger, CSI's board of directors determined that it would be in CSI's best interests to replace James Flaherty in his role as Chief Financial Officer due to his consent to a court order enjoining him from any violation of certain provisions of federal securities law in connection with events that occurred while he was the Chief Financial Officer of Zomax Incorporated. The board of directors desired to retain Mr. Flaherty as a member of CSI's executive team, and, accordingly, Mr. Flaherty became CSI's Chief Administrative Officer, giving him responsibility over non-financial operations matters, and Mr. Martin became Interim Chief Financial Officer until the hiring of Laurence L. Betterley as CSI's Chief Financial Officer. CSI's new executives lack long-term experience with CSI. CSI may experience instability in the short term as its new executives become integrated into the company. Competition for qualified employees is intense and the loss of service of any of CSI's executive officers or certain key employees could delay or curtail CSI's research, development, commercialization and financial objectives.

CSI may incur significant costs due to the application of Section 409A of the Internal Revenue Code.

The estimated fair value of the common stock underlying CSI's stock options was originally estimated in good faith by CSI's board of directors based upon the best information available regarding CSI on the dates of grant, including

financing activity, development of CSI's business, the FDA process and launch of CSI's product, the initial public offering process and CSI's financial results. During the fiscal years ended June 30, 2007 and June 30,

Table of Contents

2008, CSI did not obtain valuations from an independent valuation firm contemporaneously with each option grant date. As further discussed under Management's Discussion and Analysis of Financial Condition and Results of Operations for CSI Critical Accounting Policies and Significant Judgments and Estimates, CSI hired an independent valuation firm to determine the estimated fair value of CSI common stock for financial reporting purposes as of various dates, including June 29, 2007, September 30, 2007, December 31, 2007, March 31, 2008 and June 30, 2008. CSI's board considered these estimates when estimating the fair market value of CSI common stock on each option grant date that followed the board's receipt of an estimate from the valuation firm, but certain grants were later deemed to have been made at less than fair market value when such valuation estimates were retrospectively applied. With respect to options granted from June 12, 2007 through February 14, 2008, the estimated fair value of the common stock determined by the independent valuation firm was higher than the exercise price of stock options CSI had previously granted at or near such dates by a weighted average per share amount of approximately \$0.79.

If the Internal Revenue Service were to determine that the fair market value of CSI common stock was higher than the exercise price of any of CSI's stock options as of the grant date of such options, either in accordance with CSI's financial reporting valuations or under a different methodology, then CSI and CSI's optionholders may experience adverse tax consequences under Section 409A of the Internal Revenue Code and related provisions, including the imposition of future tax liabilities and penalties based on the spread between the fair market value and the exercise price at the time of option vesting and on future increases (if any) in the value of the stock of CSI or the combined company after the vesting date. These liabilities may be significant. The imposition of such liabilities may affect a significant portion of CSI's employees and could adversely affect employee morale and CSI's business operations.

CSI may be subject to damages or other remedies as a result of pending litigation.

On December 28, 2007, ev3 Inc., ev3 Endovascular, Inc. and FoxHollow Technologies, Inc. filed a complaint against CSI and certain of CSI's employees alleging, among other things, misappropriation and use of their confidential information by CSI and certain of its employees who were formerly employees of FoxHollow. The complaint also alleges that certain of its employees violated their employment agreements with FoxHollow requiring them to refrain from soliciting FoxHollow employees. This litigation is in an early stage and there can be no assurance as to its outcome. CSI is defending this litigation vigorously. If CSI is not successful in defending it, CSI could be required to pay substantial damages and be subject to equitable relief that could include a requirement that CSI terminate the employment of certain employees, including certain key sales personnel who were formerly employed by FoxHollow. In any event, the defense of this litigation, regardless of the outcome, could result in substantial legal costs and diversion of CSI's management's time and efforts from the operation of CSI's business. If the plaintiffs in this litigation are successful, it could have a material adverse effect on CSI's business, operations and financial condition.

In addition, CSI is currently involved in a dispute with its founder, Dr. Leonid Shturman. Although CSI settled certain claims it had against Dr. Shturman in September 2008, Dr. Shturman raised counterclaims with regard to two shaft winding machines that CSI imported from Russia, which have not been resolved. Dr. Shturman is seeking monetary damages, which he believes to be in excess of \$1.0 million. In an attempted settlement of these counterclaims, the parties entered into a settlement conditioned upon CSI's agreement to pay Dr. Shturman \$50,000 by November 14, 2008, and in connection with Dr. Shturman's desire to sell 22,000 shares of CSI common stock held by him by November 14, 2008 at a fixed price, CSI agreed to refer to Dr. Shturman the names of parties that may be interested in purchasing such shares in private transactions. As of November 19, 2008, CSI had referred to Dr. Shturman names of parties that were interested in purchasing these shares and had also paid Dr. Shturman \$50,000. In addition, CSI and Dr. Shturman have executed a settlement agreement and mutual releases. Dr. Shturman has since expressed his desire to keep the funds and void the releases. On January 22, 2009, the court denied Dr. Shturman's request to void the releases. If Dr. Shturman's counterclaims against CSI are not settled, it is possible that CSI may incur substantial costs as a result of this litigation. The technology that is the subject of these disputes is not used in the Diamondback 360° and the shaft winding machines represent obsolete technology that CSI will likely never use.

Table of Contents

Risks Related to Government Regulation

CSI's ability to market the Diamondback 360° in the United States is limited to use as a therapy in patients with PAD, and if CSI wants to expand its marketing claims, CSI will need to file for additional FDA clearances or approvals and conduct further clinical trials, which would be expensive and time-consuming and may not be successful.

The Diamondback 360° received FDA 510(k) clearance in the United States for use as a therapy in patients with PAD. This general clearance restricts CSI's ability to market or advertise the Diamondback 360° beyond this use and could affect CSI's growth. While off-label uses of medical devices are common and the FDA does not regulate physicians' choice of treatments, the FDA does restrict a manufacturer's communications regarding such off-label use. CSI will not actively promote or advertise the Diamondback 360° for off-label uses. In addition, CSI cannot make comparative claims regarding the use of the Diamondback 360° against any alternative treatments without conducting head-to-head comparative clinical trials, which would be expensive and time consuming. If CSI's promotional activities fail to comply with the FDA's regulations or guidelines, CSI may be subject to FDA warnings or enforcement action.

If CSI determines to market the Diamondback 360° in the United States for other uses, for instance, use in the coronary arteries, CSI would need to conduct further clinical trials and obtain premarket approval from the FDA. Clinical trials are complex, expensive, time consuming, uncertain and subject to substantial and unanticipated delays. Before CSI may begin clinical trials, it must submit and obtain approval for an investigational device exemption, or IDE, that describes, among other things, the manufacture of, and controls for, the device and a complete investigational plan. Clinical trials generally involve a substantial number of patients in a multi-year study. CSI may encounter problems with its clinical trials, and any of those problems could cause CSI or the FDA to suspend those trials, or delay the analysis of the data derived from them.

A number of events or factors, including any of the following, could delay the completion of CSI's clinical trials in the future and negatively impact CSI's ability to obtain FDA clearance or approval for, and to introduce, a particular future product:

failure to obtain approval from the FDA or any foreign regulatory authority to commence an investigational study;

conditions imposed on CSI by the FDA or any foreign regulatory authority regarding the scope or design of CSI's clinical trials;

delays in obtaining or maintaining required approvals from institutional review boards or other reviewing entities at clinical sites selected for participation in CSI's clinical trials;

insufficient supply of CSI's future product candidates or other materials necessary to conduct CSI's clinical trials;

difficulties in enrolling patients in CSI's clinical trials;

negative or inconclusive results from clinical trials, results that are inconsistent with earlier results, or the likelihood that the part of the human anatomy involved is more prone to serious adverse events, necessitating additional clinical trials;

serious or unexpected side effects experienced by patients who use CSI's future product candidates; or

failure by any of CSI's third-party contractors or investigators to comply with regulatory requirements or meet other contractual obligations in a timely manner.

CSI's clinical trials may not begin as planned, may need to be redesigned, and may not be completed on schedule, if at all. Delays in CSI's clinical trials may result in increased development costs for CSI's future product candidates, which could cause CSI's stock price to decline and limit CSI's ability to obtain additional financing. In addition, if one or more of CSI's clinical trials are delayed, competitors may be able to bring products to market before CSI does, and the commercial viability of CSI's future product candidates could be significantly reduced.

Table of Contents

Even if CSI believes that a clinical trial demonstrates promising safety and efficacy data, such results may not be sufficient to obtain FDA clearance or approval. Without conducting and successfully completing further clinical trials, CSI's ability to market the Diamondback 360° will be limited and CSI's revenue expectations may not be realized.

CSI may become subject to regulatory actions if it is found to have promoted the Diamondback 360° for unapproved uses.

If the FDA determines that CSI's promotional materials, training or other activities constitute promotion of CSI's product for an unapproved use, it could request that CSI cease use of or modify its training or promotional materials or subject CSI to regulatory enforcement actions, including the issuance of an untitled or warning letter, injunction, seizure, civil fine and criminal penalties. It is also possible that other federal, state or foreign enforcement authorities might take action if they consider promotional, training or other materials to constitute promotion of CSI's product for an unapproved or uncleared use, which could result in significant fines or penalties under other statutory authorities, such as laws prohibiting false claims for reimbursement.

The Diamondback 360° may in the future be subject to product recalls that could harm CSI's reputation.

The FDA and similar governmental authorities in other countries have the authority to require the recall of commercialized products in the event of material regulatory deficiencies or defects in design or manufacture. A government mandated or voluntary recall by CSI could occur as a result of component failures, manufacturing errors or design or labeling defects. CSI has not had any instances requiring consideration of a recall, although as CSI continues to grow and develop its products, including the Diamondback 360°, CSI may see instances of field performance requiring a recall. Any recalls of CSI's product would divert managerial and financial resources, harm its reputation with customers and have an adverse effect on its financial condition and results of operations.

If CSI or its suppliers fail to comply with ongoing regulatory requirements, or if CSI experiences unanticipated problems, CSI's products could be subject to restrictions or withdrawal from the market.

The Diamondback 360° and related manufacturing processes, clinical data, adverse events, recalls or corrections and promotional activities, are subject to extensive regulation by the FDA and other regulatory bodies. In particular, CSI and its component suppliers are required to comply with the FDA's Quality System Regulation, or QSR, and other regulations, which cover the methods and documentation of the design, testing, production, control, quality assurance, labeling, packaging, storage and shipping of any product for which CSI obtains marketing clearance or approval. The FDA enforces the QSR through announced and unannounced inspections. CSI and certain of its third-party manufacturers have not yet been inspected by the FDA. Failure by CSI or one of its component suppliers to comply with the QSR requirements or other statutes and regulations administered by the FDA and other regulatory bodies, or failure to adequately respond to any observations, could result in, among other things:

warning or other letters from the FDA;

fines, injunctions and civil penalties;

product recall or seizure;

unanticipated expenditures;

delays in clearing or approving or refusal to clear or approve products;

withdrawal or suspension of approval or clearance by the FDA or other regulatory bodies;

orders for physician notification or device repair, replacement or refund;
operating restrictions, partial suspension or total shutdown of production or clinical trials; and
criminal prosecution.

If any of these actions were to occur, it would harm CSI's reputation and cause its product sales to suffer.

Table of Contents

Furthermore, any modification to a device that has received FDA clearance or approval that could significantly affect its safety or efficacy, or that would constitute a major change in its intended use, design or manufacture, requires a new clearance or approval from the FDA. If the FDA disagrees with any determination by CSI that new clearance or approval is not required, CSI may be required to cease marketing or to recall the modified product until CSI obtains clearance or approval. In addition, CSI could be subject to significant regulatory fines or penalties.

Regulatory clearance or approval of a product may also require costly post-marketing testing or surveillance to monitor the safety or efficacy of the product. Later discovery of previously unknown problems with CSI's products, including unanticipated adverse events or adverse events of unanticipated severity or frequency, manufacturing problems, or failure to comply with regulatory requirements such as the QSR, may result in restrictions on such products or manufacturing processes, withdrawal of the products from the market, voluntary or mandatory recalls, fines, suspension of regulatory approvals, product seizures, injunctions or the imposition of civil or criminal penalties.

The use, misuse or off-label use of the Diamondback 360° may increase the risk of injury, which could result in product liability claims and damage to CSI's business.

The use, misuse or off-label use of the Diamondback 360° may result in injuries that lead to product liability suits, which could be costly to CSI's business. The Diamondback 360° is not FDA-cleared or approved for treatment of the carotid arteries, the coronary arteries, within bypass grafts or stents, of thrombus or where the lesion cannot be crossed with a guidewire or a significant dissection is present at the lesion site. CSI cannot prevent a physician from using the Diamondback 360° for off-label applications. The application of the Diamondback 360° to coronary or carotid arteries, as opposed to peripheral arteries, is more likely to result in complications that have serious consequences, including heart attacks or strokes which could result, in certain circumstances, in death.

CSI will face risks related to product liability claims, which could exceed the limits of available insurance coverage.

If the Diamondback 360° is defectively designed, manufactured or labeled, contains defective components or is misused, CSI may become subject to costly litigation by its customers or their patients. The medical device industry is subject to substantial litigation, and CSI faces an inherent risk of exposure to product liability claims in the event that the use of CSI's product results or is alleged to have resulted in adverse effects to a patient. In most jurisdictions, producers of medical products are strictly liable for personal injuries caused by medical devices. CSI may be subject in the future to claims for personal injuries arising out of the use of CSI's products. Product liability claims could divert management's attention from CSI's core business, be expensive to defend and result in sizable damage awards against CSI. A product liability claim against CSI, even if ultimately unsuccessful, could have a material adverse effect on its financial condition, results of operations and reputation. While CSI has product liability insurance coverage for its products and intends to maintain such insurance coverage in the future, there can be no assurance that CSI will be adequately protected from the claims that will be brought against it.

Compliance with environmental laws and regulations could be expensive. Failure to comply with environmental laws and regulations could subject CSI to significant liability.

CSI's operations are subject to regulatory requirements relating to the environment, waste management and health and safety matters, including measures relating to the release, use, storage, treatment, transportation, discharge, disposal and remediation of hazardous substances. Although CSI is currently classified as a Very Small Quantity Hazardous Waste Generator within Ramsey County, Minnesota, CSI cannot ensure that it will maintain its licensed status as such, nor can CSI ensure that it will not incur material costs or liability in connection with its operations, or that CSI's past or future operations will not result in claims or injury by employees or the public. Environmental laws and regulations could also become more stringent over time, imposing greater compliance costs and increasing risks and penalties associated with violations.

Table of Contents

CSI and its distributors must comply with various federal and state anti-kickback, self-referral, false claims and similar laws, any breach of which could cause a material adverse effect on CSI's business, financial condition and results of operations.

CSI's relationships with physicians, hospitals and the marketers of CSI's products are subject to scrutiny under various federal anti-kickback, self-referral, false claims and similar laws, often referred to collectively as healthcare fraud and abuse laws.

Healthcare fraud and abuse laws are complex, and even minor, inadvertent violations can give rise to claims that the relevant law has been violated. If CSI's operations are found to be in violation of these laws, CSI, as well as its employees, may be subject to penalties, including monetary fines, civil and criminal penalties, exclusion from federal and state healthcare programs, including Medicare, Medicaid, Veterans Administration health programs, workers compensation programs and TRICARE (the healthcare system administered by or on behalf of the U.S. Department of Defense for uniformed services beneficiaries, including active duty and their dependents, retirees and their dependents), and forfeiture of amounts collected in violation of such prohibitions. Individual employees may need to defend such suits on behalf of CSI or themselves, which could lead to significant disruption in CSI's present and future operations. Certain states in which CSI intends to market its products have similar fraud and abuse laws, imposing substantial penalties for violations. Any government investigation or a finding of a violation of these laws would likely have a material adverse effect on CSI's business, financial condition and results of operations.

Anti-kickback laws and regulations prohibit any knowing and willful offer, payment, solicitation or receipt of any form of remuneration in return for the referral of an individual or the ordering or recommending of the use of a product or service for which payment may be made by Medicare, Medicaid or other government-sponsored healthcare programs. In addition, the cost of non-compliance with these laws could be substantial, since CSI could be subject to monetary fines and civil or criminal penalties, and CSI could also be excluded from federally funded healthcare programs, including Medicare and Medicaid, for non-compliance.

CSI has entered into consulting agreements with physicians, including some who may make referrals to CSI or order its product. One of these physicians was one of 20 principal investigators in CSI's OASIS clinical trial at the same time he was acting as a paid consultant for CSI. In addition, some of these physicians own CSI's stock, which they purchased in arm's-length transactions on terms identical to those offered to non-physicians, or received stock options from CSI as consideration for consulting services performed by them. CSI believes that these consulting agreements and equity investments by physicians are common practice in CSI's industry, and while these transactions were structured with the intention of complying with all applicable laws, including the federal ban on physician self-referrals, commonly known as the Stark Law, state anti-referral laws and other applicable anti-kickback laws, it is possible that regulatory or enforcement agencies or courts may in the future view these transactions as prohibited arrangements that must be restructured or for which CSI would be subject to other significant civil or criminal penalties, or prohibit the company from accepting referrals from these physicians. Because CSI's strategy relies on the involvement of physicians who consult with CSI on the design of its product, CSI could be materially impacted if regulatory or enforcement agencies or courts interpret CSI's financial relationships with its physician advisors who refer or order CSI's product to be in violation of applicable laws and determine that CSI would be unable to achieve compliance with such applicable laws. This could harm CSI's reputation and the reputations of its clinical advisors.

The scope and enforcement of all of these laws is uncertain and subject to rapid change, especially in light of the lack of applicable precedent and regulations. There can be no assurance that federal or state regulatory or enforcement authorities will not investigate or challenge CSI's current or future activities under these laws. Any investigation or challenge could have a material adverse effect on CSI's business, financial condition and results of operations. Any state or federal regulatory or enforcement review of CSI, regardless of the outcome, would be costly and time consuming. Additionally, CSI cannot predict the impact of any changes in these laws, whether these changes are

retroactive or will have effect on a going-forward basis only.

Table of Contents

The combined company will incur significant costs as a result of operating as a public company, and the combined company's management will be required to devote substantial time to compliance initiatives.

As a public company, Replidyne currently incurs significant legal, accounting and other expenses that Replidyne did not incur as a private company. In addition, the Sarbanes-Oxley Act, as well as rules subsequently implemented by the Securities and Exchange Commission and the Nasdaq Global Market, have imposed various requirements on public companies, including requiring establishment and maintenance of effective disclosure and financial controls and changes in corporate governance practices. Replidyne's management and other personnel devote a substantial amount of time to these compliance initiatives. Moreover, these rules and regulations have increased Replidyne's legal and financial compliance costs and made some activities more time consuming and costly. While Replidyne has developed and instituted a corporate compliance program based on what Replidyne believes are the current appropriate best practices and continues to update the program in response to newly implemented or changing regulatory requirements, Replidyne cannot ensure that it is or will be in compliance with all potentially applicable regulations.

The Sarbanes-Oxley Act requires, among other things, that Replidyne maintain effective internal controls for financial reporting and disclosure controls and procedures. In particular, Replidyne must perform system and process evaluation and testing of Replidyne's internal controls over financial reporting to allow management and, at certain times, Replidyne's independent registered public accounting firm to report on the effectiveness of Replidyne's internal controls over financial reporting, as required by Section 404 of the Sarbanes-Oxley Act. Replidyne's testing, or the subsequent testing by its independent registered public accounting firm, when required, may reveal deficiencies in Replidyne's internal controls over financial reporting that are deemed to be material weaknesses. Moreover, if Replidyne is not able to comply with the requirements of Section 404 in a timely manner, or if Replidyne or its independent registered public accounting firm identifies deficiencies in Replidyne's internal controls over financial reporting that are deemed to be material weaknesses, the market price of Replidyne's stock could decline and Replidyne could be subject to sanctions or investigations by Nasdaq, the SEC or other regulatory authorities, which would require additional financial and management resources. The reductions in headcount that Replidyne has recently completed may make it more difficult for Replidyne to maintain its internal controls over financial reporting.

The combined company will be subject to all of the same obligations, but CSI's current management will be responsible for compliance. These obligations will require significant additional expenditures, place additional demands on the combined company's management and divert management's time and attention away from the combined company's business. These additional obligations will also require the combined company to hire additional personnel. CSI is currently evaluating its internal controls systems in order to allow the combined company to report on, and the combined company's independent registered public accounting firm to attest to, internal controls, as required by Section 404 of the Sarbanes-Oxley Act. CSI cannot be certain as to the timing of completion of the evaluation, testing and remediation actions or the impact of the same on the operations of the combined company. The combined company's management may not be able to effectively and timely implement controls and procedures that adequately respond to the increased regulatory compliance and reporting requirements that will be applicable. If the combined company fails to staff its accounting and finance function adequately or maintain internal controls adequate to meet the demands that will be placed upon it as a public company, including the requirements of the Sarbanes-Oxley Act, the combined company may be unable to report its financial results accurately or in a timely manner and the combined company's business and stock price may suffer. The costs of being a public company, as well as diversion of management's time and attention, may have a material adverse effect on the combined company's business, financial condition and results of operations.

Additionally, these laws and regulations could make it more difficult or more costly for the combined company to obtain certain types of insurance, including director and officer liability insurance, and the combined company may be forced to accept reduced policy limits and coverage or incur substantially higher costs to obtain the same or similar coverage. The impact of these events could also make it more difficult for the combined company to attract and retain

qualified persons to serve on its board of directors, board committees or as executive officers.

Table of Contents**Risks Relating to CSI's Intellectual Property**

CSI's inability to adequately protect its intellectual property could allow its competitors and others to produce products based on CSI's technology, which could substantially impair CSI's ability to compete.

CSI's success and ability to compete depends, in part, upon its ability to maintain the proprietary nature of its technologies. CSI relies on a combination of patents, copyrights and trademarks, as well as trade secrets and nondisclosure agreements, to protect its intellectual property. As of December 31, 2008, CSI had a portfolio of 16 issued U.S. patents and 33 issued or granted non-U.S. patents covering aspects of CSI's core technology, which expire between 2017 and 2022. However, CSI's issued patents and related intellectual property may not be adequate to protect CSI or permit it to gain or maintain a competitive advantage. The issuance of a patent is not conclusive as to its scope, validity or enforceability. The scope, validity or enforceability of CSI's issued patents can be challenged in litigation or proceedings before the U.S. Patent and Trademark Office, or the USPTO. In addition, CSI's pending patent applications include claims to numerous important aspects of CSI's products under development that are not currently protected by any of CSI's issued patents. CSI cannot assure you that any of its pending patent applications will result in the issuance of patents to it. The USPTO may deny or require significant narrowing of claims in CSI's pending patent applications. Even if any patents are issued as a result of pending patent applications, they may not provide CSI with significant commercial protection or be issued in a form that is advantageous to it. Proceedings before the USPTO could result in adverse decisions as to the priority of CSI's inventions and the narrowing or invalidation of claims in issued patents. Further, if any patents CSI obtains or licenses are deemed invalid and unenforceable, or have their scope narrowed, it could impact CSI's ability to commercialize or license its technology.

Changes in either the patent laws or in interpretations of patent laws in the United States and other countries may diminish the value of CSI's intellectual property. For instance, the U.S. Supreme Court has recently modified some tests used by the USPTO in granting patents during the past 20 years, which may decrease the likelihood that CSI will be able to obtain patents and increase the likelihood of challenge of any patents CSI obtains or licenses. In addition, the USPTO has adopted new rules of practice (the application of which has been enjoined as a result of litigation) that limit the number of claims that may be filed in a patent application and the number of continuation or continuation-in-part applications that may be filed. These new rules may result in patent applicants being unable to secure all of the rights that they would otherwise have been entitled to in the absence of the new rules and, therefore, may negatively affect CSI's ability to obtain comprehensive patent coverage. The laws of some foreign countries may not protect CSI's intellectual property rights to the same extent as the laws of the United States, if at all.

To protect CSI's proprietary rights, CSI may, in the future, need to assert claims of infringement against third parties to protect CSI's intellectual property. The outcome of litigation to enforce its intellectual property rights in patents, copyrights, trade secrets or trademarks is highly unpredictable, could result in substantial costs and diversion of resources, and could have a material adverse effect on its financial condition, reputation and results of operations regardless of the final outcome of such litigation. In the event of an adverse judgment, a court could hold that some or all of CSI's asserted intellectual property rights are not infringed, invalid or unenforceable, and could order CSI to pay third-party attorneys' fees. Despite CSI's efforts to safeguard its unpatented and unregistered intellectual property rights, CSI may not be successful in doing so or the steps taken by it in this regard may not be adequate to detect or deter misappropriation of CSI's technology or to prevent an unauthorized third party from copying or otherwise obtaining and using its products, technology or other information that it regards as proprietary. In addition, CSI may not have sufficient resources to litigate, enforce or defend its intellectual property rights. Additionally, third parties may be able to design around CSI's patents.

CSI also relies on trade secrets, technical know-how and continuing innovation to develop and maintain its competitive position. In this regard, CSI seeks to protect its proprietary information and other intellectual property by requiring its employees, consultants, contractors, outside scientific collaborators and other advisors to execute non-disclosure and assignment of invention agreements on commencement of their employment or engagement. Agreements with CSI's employees also forbid them from bringing the proprietary rights of third parties to it. CSI also requires confidentiality or material transfer agreements from third parties that receive CSI's confidential data or materials. However, trade secrets are difficult to protect. CSI cannot provide any assurance that employees and third parties will abide by the confidentiality or assignment terms of these agreements, or that CSI will be effective

Table of Contents

securing necessary assignments from these third parties. Despite measures taken to protect CSI's intellectual property, unauthorized parties might copy aspects of CSI's products or obtain and use information that CSI regards as proprietary. Enforcing a claim that a third party illegally obtained and is using any of CSI's trade secrets is expensive and time consuming, and the outcome is unpredictable. In addition, courts outside the United States are sometimes less willing to protect trade secrets. Finally, others may independently discover trade secrets and proprietary information, and this would prevent CSI from asserting any such trade secret rights against these parties.

CSI's inability to adequately protect its intellectual property could allow its competitors and others to produce products based on CSI's technology, which could substantially impair CSI's ability to compete.

Claims of infringement or misappropriation of the intellectual property rights of others could prohibit CSI from commercializing products, require it to obtain licenses from third parties or require it to develop non-infringing alternatives, and subject it to substantial monetary damages and injunctive relief.

The medical technology industry is characterized by extensive litigation and administrative proceedings over patent and other intellectual property rights. The likelihood that patent infringement or misappropriation claims may be brought against CSI increases as it achieves more visibility in the marketplace and introduces products to market. All issued patents are entitled to a presumption of validity under the laws of the United States. Whether a product infringes a patent involves complex legal and factual issues, the determination of which is often uncertain. Therefore, CSI cannot be certain that it has not infringed th