

REPLIDYNE INC  
Form 424B3  
January 27, 2009

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**Filed Pursuant to Rule 424(b)(3)  
Registration No. 333-155887**

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 January 26, 2009, the last trading day before the date of this proxy statement/prospectus, the closing sale price of Replidyne common stock was \$0.77 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 January 27, 2009, and is first being mailed to Replidyne stockholders on or about January 30, 2009 and to CSI stockholders on or about January 29, 2009.

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**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**

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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: /s/ Mark L. Smith

Secretary

Louisville, Colorado  
January 27, 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.**

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**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 7,792,905 shares of common stock, 4,737,561 shares of Series A convertible preferred stock, 2,188,425 shares of Series A-1 convertible preferred stock and 2,162,150 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**

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**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: /s/ James E. Flaherty

James E. Flaherty  
Secretary

St. Paul, Minnesota  
January 27, 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.**

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**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,

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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.

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**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.

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**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:

<b>Name</b>	<b>Position in the Combined Company</b>
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 Dougherty	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.

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**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.

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**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

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**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

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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.

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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

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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 warrantholders 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;

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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;

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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

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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

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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:

<b>Name</b>	<b>Position in the Combined Company</b>
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

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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.



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**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.

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	<b>Years Ended December 31,</b>					<b>Nine Months Ended</b>	
<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006(1)</b>	<b>2007(1)</b>	<b>2007(1)</b>	<b>2008(1)</b>	
	<b>(In thousands, except per share amounts)</b>					<b>(unaudited) (unaudited)</b>	
<b>Statement of</b>							
<b>Operations Data:</b>							
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				