

IRONWOOD PHARMACEUTICALS INC
Form 424B5
February 08, 2012

Use these links to rapidly review the document

[Table of Contents](#)

[TABLE OF CONTENTS](#)

[Table of Contents](#)

The information in this preliminary prospectus supplement is not complete and may be changed. This preliminary prospectus supplement and the accompanying prospectus are not an offer to sell these securities and they are not soliciting an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

**Filed Pursuant to Rule 424(b)(5)
Registration No. 333-179430**

Subject to Completion, Dated February 8, 2012

Preliminary Prospectus Supplement (to Prospectus Dated February 8, 2012)

5,250,000 Shares

Ironwood Pharmaceuticals, Inc.

Class A Common Stock

We are offering 5,250,000 shares of our Class A common stock.

Our Class A common stock is listed on The NASDAQ Global Select Market under the symbol "IRWD." The last reported sale price of our Class A common stock on February 6, 2012 was \$14.85 per share.

We have granted the underwriters a 30-day option to purchase up to an additional 787,500 shares of Class A common stock at the public offering price less the underwriting discount.

Investing in our Class A common stock involves risks. See "Risk Factors" beginning on page S-12 of this prospectus supplement and "Part II Item 1A Risk Factors" beginning on page 36 of our Quarterly Report on Form 10-Q for the period ended September 30, 2011, which is incorporated by reference in this prospectus supplement and the accompanying prospectus, as that disclosure has been updated by subsequent periodic reports.

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 prospectus supplement or the accompanying prospectus. Any representation to the contrary is a criminal offense.

	Per Share	Total
Public offering price	\$	\$
Underwriting discounts and commissions	\$	\$
Proceeds, before expenses, to us	\$	\$

The underwriters expect to deliver the Class A common stock on or about _____, 2012 only in book-entry form through the facilities of The Depository Trust Company.

J.P. Morgan

BofA Merrill Lynch

The date of this prospectus supplement is _____, 2012.

Table of Contents

PROSPECTUS SUPPLEMENT

<u>ABOUT THIS PROSPECTUS SUPPLEMENT</u>	<u>S-2</u>
<u>PROSPECTUS SUPPLEMENT SUMMARY</u>	<u>S-3</u>
<u>SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS</u>	<u>S-10</u>
<u>RISK FACTORS</u>	<u>S-12</u>
<u>USE OF PROCEEDS</u>	<u>S-15</u>
<u>PRICE RANGE OF CLASS A COMMON STOCK</u>	<u>S-15</u>
<u>DIVIDEND POLICY</u>	<u>S-15</u>
<u>DILUTION</u>	<u>S-16</u>
<u>CAPITALIZATION</u>	<u>S-17</u>
<u>UNDERWRITING</u>	<u>S-18</u>
<u>LEGAL MATTERS</u>	<u>S-23</u>
<u>EXPERTS</u>	<u>S-23</u>
<u>WHERE YOU CAN YOU FIND MORE INFORMATION</u>	<u>S-23</u>

PROSPECTUS

<u>ABOUT THIS PROSPECTUS</u>	<u>3</u>
<u>RISK FACTORS</u>	<u>3</u>
<u>WHERE YOU CAN FIND MORE INFORMATION</u>	<u>3</u>
<u>IRONWOOD PHARMACEUTICALS, INC.</u>	<u>4</u>
<u>USE OF PROCEEDS</u>	<u>5</u>
<u>DESCRIPTION OF CLASS A COMMON STOCK</u>	<u>5</u>
<u>MATERIAL U.S. FEDERAL TAX CONSIDERATIONS FOR NON-U.S. HOLDERS OF COMMON STOCK</u>	<u>12</u>
<u>PLAN OF DISTRIBUTION</u>	<u>16</u>
<u>LEGAL MATTERS</u>	<u>17</u>
<u>EXPERTS</u>	<u>17</u>

Table of Contents

ABOUT THIS PROSPECTUS SUPPLEMENT

This prospectus supplement and the accompanying prospectus relate to part of a registration statement that we filed with the Securities and Exchange Commission, or SEC, using a shelf registration process. Both this prospectus supplement and the accompanying prospectus include or incorporate by reference important information about us, our Class A common stock and other information you should know before investing. You should read both this prospectus supplement and the accompanying prospectus as well as additional information described under "Where You Can Find More Information" in this prospectus supplement before making an investment decision.

We have not authorized anyone to provide any information other than that contained or incorporated by reference in this prospectus supplement or in any free writing prospectus prepared by or on behalf of us or to which we have referred you. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. This prospectus supplement and the accompanying prospectus do not constitute an offer to sell or the solicitation of an offer to buy any securities other than the securities described in this prospectus supplement or an offer to sell or the solicitation of any offer to buy such securities in any circumstances in which such offer or solicitation is unlawful. You should assume that the information appearing in this prospectus supplement and the accompanying prospectus, the documents incorporated by reference and any related free writing prospectus is accurate only as of their respective dates. Our business, financial condition, results of operations and prospects may have changed materially since those dates.

This prospectus supplement may add to, update or change the information in the accompanying prospectus. If information in this prospectus supplement is inconsistent with information in the accompanying prospectus, this prospectus supplement will apply and will supersede that information in the accompanying prospectus.

We use various trademarks and trade names in our business, including without limitation "Ironwood" and "Ironwood Pharmaceuticals." This prospectus supplement also contains trademarks and trade names of other businesses that are the property of their respective holders.

Unless otherwise indicated or unless the context requires otherwise, all references in this prospectus supplement to "Ironwood," "we," "us" and "our" refer to Ironwood Pharmaceuticals, Inc.

Table of Contents

PROSPECTUS SUPPLEMENT SUMMARY

This summary highlights selected information contained elsewhere in this prospectus supplement and the accompanying prospectus. This summary does not contain all of the information you should consider before investing in our Class A common stock. You should read this entire prospectus supplement and the accompanying prospectus carefully, especially the risks of investing in our Class A common stock discussed under "Risk Factors" beginning on page S-12 of this prospectus supplement and the consolidated financial statements and notes to those consolidated financial statements incorporated by reference in this prospectus supplement, before making an investment decision.

Our Company

We are an entrepreneurial pharmaceutical company that discovers, develops and intends to commercialize differentiated medicines that improve patients' lives. In order to be successful, we will need to overcome the enormous challenges inherent in the pharmaceutical product development model. Developing a novel therapeutic agent can take a decade or more and cost hundreds of millions of dollars, and most drug candidates fail to reach the market. We recognize that most companies undertaking this endeavor fail, yet despite the significant risks and our own experiences with multiple failed drug candidates, we are enthusiastic and passionate about our mission to deliver life-changing medicines to patients. To achieve our mission, we are building a team, a culture and processes centered on creating and marketing important new drugs. If we are successful getting medicines to patients and generating substantial returns for our stockholders, we plan to reinvest a portion of our future cash flows into our research and development efforts in order to accelerate and enhance our ability to bring new products to market. If we meet our goals, we hope to earn the right to continue building an enduring pharmaceutical company, an outstanding business that will thrive well beyond our lifetimes.

We are pioneers in the area of guanylate cyclase type-C, or GC-C, agonists and in the science and treatment of gastrointestinal diseases. Our development team has substantial expertise with the pharmacological profile associated with GC-C agonists, and they are complemented by our global operations and commercial teams that have significant experience in the associated therapeutic modalities. We believe that linaclotide, our GC-C agonist being developed for the treatment of patients with irritable bowel syndrome with constipation, or IBS-C, and chronic constipation, or CC, could present patients and healthcare practitioners with a unique therapy for a major medical need not yet met by existing therapies. IBS-C and CC are gastrointestinal disorders that affect millions of sufferers worldwide, according to our analysis of studies performed by N.J. Talley (published in 1995 in the American Journal of Epidemiology), P.D.R. Higgins (published in 2004 in the American Journal of Gastroenterology) and A.P.S. Hungin (published in 2003 in Alimentary Pharmacology and Therapeutics) as well as 2007 U.S. census data. Linaclotide was designed by Ironwood scientists to target the defining attributes of IBS-C: abdominal pain, discomfort, bloating and constipation. Linaclotide acts locally in the gut with no detectable systemic exposure in humans at therapeutic doses.

In eight Phase 2 and Phase 3 clinical studies in almost 3,700 IBS-C and CC patients, linaclotide demonstrated sustained improvement of the pain and bloating as well as the constipation symptoms that define these chronic gastrointestinal disorders with once-daily oral dosing. In 2010, linaclotide completed the clinical efficacy portion of its development program, achieving favorable efficacy and safety results in all four of its Phase 3 clinical trials (two IBS-C clinical trials and two CC clinical trials), meeting all U.S. and European Union, or E.U., primary and secondary endpoints.

In each of the 12-week and 26-week Phase 3 studies in patients with IBS-C, linaclotide-reduced abdominal pain, abdominal discomfort and bloating within the first week, and these reductions were sustained throughout the entire treatment period. In the 12-week trial, 50% of linaclotide-treated patients had at least a 30% reduction in abdominal pain for at least six of the 12 weeks, and in the 26-week trial, 49% of linaclotide-treated patients had at least a 30% reduction in abdominal pain for at

Table of Contents

least six of the first 12 weeks of the treatment period. In the 26-week trial, linaclotide elicited a 40% mean decrease in abdominal pain by the sixth week, a 46% mean decrease by the twelfth week, and a 50% mean decrease at the twenty-sixth week.

As with abdominal pain, linaclotide-treated patients experienced a significant improvement in constipation symptoms during the first week of treatment in each of the Phase 3 IBS-C and CC clinical trials, and this improvement was sustained throughout the whole treatment period.

In the four Phase 3 studies, diarrhea was the most frequently reported adverse event (seen in 14% to 20% of linaclotide-treated patients), and the most frequently reported adverse event that led to study discontinuation (in 3% to 6% of linaclotide-treated patients). 90% of patients who had diarrhea described their diarrhea as mild to moderate.

In August 2011, we and our U.S. collaboration partner, Forest Laboratories, Inc., or Forest, submitted a New Drug Application, or an NDA, with the U.S. Food and Drug Administration, or the FDA, for linaclotide for the treatment of IBS-C and CC. In October 2011, the FDA accepted the NDA for review, and the FDA Prescription Drug User Fee Act, or PDUFA, target action date is expected to occur in June 2012. If linaclotide is approved for IBS-C and CC patients age 18 and older in the U.S., we may seek to expand linaclotide's market opportunity by exploring its utility in other gastrointestinal indications and in the pediatric population.

In September 2011, our European partner, Almirall S.A., or Almirall, submitted a Marketing Authorization Application, or an MAA, with the European Medicines Agency, or the EMA, for linaclotide for the treatment of IBS-C.

We have pursued a partnering strategy for commercializing linaclotide that has enabled us to retain significant control over linaclotide's development and commercialization, share the costs with high-quality collaborators whose capabilities complement ours, and retain approximately half of linaclotide's future long-term value in the major pharmaceutical markets, should linaclotide meet our sales expectations. As of December 31, 2011, licensing fees, milestone payments, related equity investments and development costs received from our linaclotide partners totaled approximately \$350 million.

In September 2007, we entered into a partnership with Forest to co-develop and co-market linaclotide in the U.S. Under the terms of the collaboration agreement, we and Forest are jointly and equally funding the development and commercialization of linaclotide in the U.S., with equal share of any profits. Forest also has exclusive rights to develop and commercialize linaclotide in Canada and Mexico. If linaclotide is successfully developed and commercialized in the U.S., total licensing, milestone payments and related equity investments to us under the Forest collaboration agreement could total up to \$330 million, including the \$120 million that Forest has already paid to us and the \$25 million of our capital stock that Forest has already purchased.

In April 2009, we entered into a license agreement with Almirall to develop and commercialize linaclotide in Europe (including the Commonwealth of Independent States countries and Turkey). If linaclotide is successfully developed and commercialized in the Almirall territory, total licensing, milestone payments and related equity investments to us could total up to \$95 million, including the \$57 million, net of foreign withholding taxes, that Almirall has already paid to us and the \$15 million of our capital stock that Almirall has already purchased.

In November 2009, we entered into a license agreement with Astellas Pharma Inc., or Astellas, to develop and commercialize linaclotide in Japan, South Korea, Taiwan, Thailand, the Philippines and Indonesia. If linaclotide is successfully developed and commercialized in the Astellas territory, total licensing and milestone payments to us could total up to \$75 million, including the \$30 million that has already been paid to us.

Table of Contents

We are coordinating efforts with our partners to ensure that we launch an integrated, global linaclotide brand. By leveraging the knowledge base and expertise of our experienced commercial team and the insights of each of our linaclotide commercialization partners, we continually improve our collective marketing strategies. We have retained all rights to linaclotide outside of the territories discussed above and continue to evaluate partnership opportunities in those unpartnered regions.

In addition to five years of exclusivity under the Drug Price Competition and Patent Term Restoration Act of 1984, or the Hatch-Waxman Act, that would be granted if linaclotide is approved by the FDA, linaclotide is covered by a U.S. composition of matter patent that expires in 2025, subject to possible patent term extension. Linaclotide is also covered by E.U. and Japanese composition of matter patents, both of which expire in 2024, subject to possible patent term extension.

We invest carefully in our pipeline, and the commitment of funding for each subsequent stage of our development programs is dependent upon the receipt of clear, supportive data. Linaclotide is our only product candidate that has demonstrated clinical proof of concept. IW-9179 is a second generation GC-C agonist discovered by Ironwood scientists that is being developed for the treatment of painful disorders of the small intestine, such as dyspepsia and gastroparesis. We anticipate that IW-9179 will enter Phase 2 clinical trials in 2012. We are investing in several additional early development candidates in multiple therapeutic areas, including gastrointestinal disease, central nervous system, or CNS, disorders, and respiratory disease. We are also conducting research in these therapeutic areas, as well as in the area of cardiovascular disease. Finally, we are actively engaged in evaluating and licensing rights to externally-discovered drug candidates at all stages of development. In evaluating potential assets, we apply the same criteria as those used for investments in internally-discovered assets.

We were incorporated in Delaware on January 5, 1998.

Owner-related Business Principles

We encourage all current and potential stockholders to read the owner-related business principles below that guide our overall strategy and decision making.

1. Ironwood's stockholders own the business; all of our employees work for them.

Each of our employees also has equity in the business, aligning their interests with their fellow stockholders. As employees and co-owners of Ironwood, our management and employee team seek to effectively allocate scarce stockholder capital to maximize long term annual growth of per share value.

Through our policies and communication, we seek to attract like-minded owner-oriented stockholders. We strive to effectively communicate our views of the business opportunities and risks over time so that entering and exiting stockholders are doing so at a price that approximately reflects our intrinsic value.

2. We believe we can best maximize long-term stockholder value by building a great pharmaceutical franchise.

We believe that Ironwood has the potential to deliver outstanding long-term returns to stockholders who are sober to the risks inherent in the pharmaceutical product lifecycle and to the potential dramatic highs and lows along the way, and who focus on superior long-term, per share cash flows.

Since the pharmaceutical product lifecycle is lengthy and unpredictable, we believe it is critical to have a long-term strategic horizon. We work hard to embed our long-term focus into our policies and practices, which may give us a competitive advantage in attracting like-minded stockholders and the highest caliber employees. Our current and future employees may perceive both financial and qualitative advantages in having their inventions or hard work result in marketed drugs that they and

Table of Contents

their fellow stockholders continue to own. Some of our key policies and practices that are aligned with this imperative include:

- a. Our dual class equity voting structure (which provides for super-voting rights of our pre-IPO stockholders only in the event of a change of control vote) is designed to concentrate change of control decisions in the hands of long-term focused owners who have a history of experience with us.
- b. Compensation is weighted to equity over salary for all of our employees, and many employees have a significant portion of their incentive compensation in milestone-based equity grants that reward achievement of major value-creating events a number of years out from the time of grant.
- c. We have adopted a change of control severance plan for all of our employees that is intended to encourage them to bring forward their best ideas by providing them with the comfort that if a change of control occurs and their employment is terminated, they will still have an opportunity to share in the economic value that they have helped create for stockholders.
- d. All of the members of our board of directors are substantial investors in the company. Furthermore, each director is required to hold all shares of stock acquired as payment for his or her service as a director throughout his or her term on the board.
- e. Our partnerships with Forest, Almirall and Astellas all include standstill agreements, which serve to protect us from an unwelcome acquisition attempt by one of our partners. In addition, we have change of control provisions in our partnership agreements in order to protect the economic value of linaclotide should the acquirer of one of our partners be unable or unwilling to devote the time and resources required to make the program successful.

3. We are and will remain careful stewards of our stockholders' capital.

We work intensely to allocate capital carefully and prudently, continually reinforcing a lean, cost-conscious culture.

While we are mindful of the declining productivity and inherent challenges of pharmaceutical research and development, we intend to invest in discovery research for many years to come. Our singular passion is to create, develop and commercialize novel drug candidates, seeking to integrate the most successful drugmaking and marketing practices of the past and the best of today's cutting-edge technologies and basic research, development and commercialization advances.

While we hope to improve the productivity and efficiency of our drug creation efforts over time, our discovery process revolves around small, highly interactive, cross-functional teams. We believe that this is one area where our relatively small size is a competitive advantage, so for the foreseeable future, we do not expect our drug discovery team to grow beyond 100-150 scientists. We will continue to prioritize constrained resources and maintain organizational discipline. Once internally- or externally-derived candidates advance into development, compounds follow careful stage-gated plans, with further advancement depending on clear data points. Since most pharmaceutical research and development projects fail, it is critical that our teams are rigorous in making go/no go decisions, following the data, terminating unsuccessful programs, and allocating scarce dollars and talent to the most promising efforts, thus enhancing the likelihood of late phase development success.

Our global operations and commercial teams take a similar approach to capital allocation and decision-making. By ensuring redundancy at each critical node of the linaclotide global supply chain, our global operations team is mitigating against a fundamental risk inherent with pharmaceuticals unanticipated shortages of commercial product. Likewise, we are building a high-quality commercial organization dedicated to bringing innovative, highly-valued healthcare solutions to all of our customers

Table of Contents

who work closely and methodically with our global commercialization partners, striving to achieve the highest quality, most cost-efficient efforts aimed at the patient, the payor and the healthcare provider all critical to maximizing linaclotide's commercial potential.

4. We believe commercializing our drugs is a crucial element of our long-term success.

For the foreseeable future, we intend to play an active role in the commercialization of our products in the U.S., and to out-license commercialization rights for other territories. We believe in the long-term value of our drug candidates, so we seek collaborations that provide meaningful economics and incentives for us and any potential partner. Furthermore, we seek partners who share our values, culture, processes, and vision for our products, which we believe will enable us to work with those partners successfully for the entire potential patent life of our drugs.

5. Our financial goal is to maximize long-term per share cash flows.

Our goal is to maximize long-term cash flows per share, and we will prioritize this even if it leads to uneven short-term financial results from an accounting perspective. If and when we become profitable, we expect and accept uneven earnings growth. Our underlying product development model is risky and unpredictable, and we have no intention to advance marginal development candidates or consummate suboptimal in-license transactions in an attempt to fill anticipated gaps in revenue growth. Successful drugs can be enormously beneficial to patients and highly profitable and rewarding to stockholders, and we believe strongly in our ability to occasionally (but not in regular or predictable fashion) create and commercialize great medicines that make a meaningful difference in patients' lives.

If and when we reach profitability, we do not intend to issue quarterly or annual earnings guidance, however we plan to be transparent about the key elements of our performance, including near-term operating plans and longer-term strategic goals.

Our Strategy

Our goal is to discover, develop and commercialize differentiated medicines that improve patients' lives, and to generate outstanding returns for our stockholders. Key elements of our strategy include:

attract and incentivize a team with a singular passion for creating and commercializing medicines that can make a significant difference in patients' lives;

solidify and expand our position as the leader in the field of GC-C agonists;

successfully commercialize linaclotide in collaboration with Forest in the U.S.;

support our international partners to commercialize linaclotide outside of the U.S.;

harvest the maximum value of linaclotide outside of our partnered territories;

if approved for IBS-C and CC, develop linaclotide for the treatment of other gastrointestinal disorders and for the pediatric population;

invest in our pipeline of novel product candidates and evaluate candidates outside of the company for in-licensing or acquisition opportunities;

maximize the commercial potential of our drugs and participate in an important way in the economics when they reach the market; and

execute our strategy with our stockholders' long-term interests in mind by seeking to maximize long-term per share cash flows.

S-7

Table of Contents

Risk Factors

For a discussion of the factors you should carefully consider before deciding to purchase any shares, please review "Part II Item 1A Risk Factors" beginning on page 36 of our Quarterly Report on Form 10-Q for the period ended September 30, 2011, which is incorporated by reference in this prospectus supplement and the accompanying prospectus, as that disclosure has been updated by subsequent periodic reports, as well as "Risk Factors" in this prospectus supplement.

Our Principal Executive Offices

The address of our principal executive offices is 301 Binney Street, Cambridge, Massachusetts 02142, and the telephone number at our principal executive offices is (617) 621-7722.

Table of Contents

The Offering

The following summary is qualified in its entirety by reference to the more detailed information appearing elsewhere in this prospectus supplement and the accompanying prospectus. For more information concerning our common stock, see the "Description of Class A Common Stock" section in the accompanying prospectus.

Issuer	Ironwood Pharmaceuticals, Inc.
NASDAQ Global Select Market Symbol	IRWD
Class A Common Stock Offered	5,250,000 shares
Class A Common Stock to be Outstanding After this Offering(1)	67,873,097 shares
Use of Proceeds	We estimate that the net proceeds from this offering, after deducting estimated underwriting discounts and commissions and offering expenses, will be approximately \$73.0 million (or approximately \$84.0 million if the underwriters exercise in full their option to purchase additional shares), based on an assumed public offering price of \$14.85 per share, the last sale price of our Class A common stock on February 6, 2012, as reported on The NASDAQ Global Select Market. We intend to apply the net proceeds from this offering for general corporate purposes, including expenses related to the expected commercial launch of linaclotide. For more information, see "Use of Proceeds."

- (1) The number of shares of our Class A common stock outstanding after this offering assumes no exercise of the underwriters' option to purchase an additional 787,500 shares and is based on 62,623,097 shares outstanding as of February 6, 2012, which excludes:
- options exercisable into 18,618,095 shares of common stock outstanding as of February 6, 2012 at a weighted average exercise price of \$7.14 per share; and
 - 3,946,600 shares of our common stock reserved as of February 6, 2012 for future issuance under compensation plans.

Table of Contents

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus supplement and the information incorporated by reference in this prospectus supplement include forward-looking statements. All statements contained in this prospectus supplement and the information incorporated by reference other than statements of historical fact are forward-looking statements. Forward-looking statements include statements regarding our future financial position, business strategy, budgets, projected costs, plans and objectives of management for future operations. The words "may," "continue," "estimate," "intend," "plan," "will," "believe," "project," "expect," "seek," "anticipate" and similar expressions may identify forward-looking statements, but the absence of these words does not necessarily mean that a statement is not forward-looking. These forward-looking statements include, among other things, statements about:

the progress of, timing of and amount of expenses associated with our research, development and commercialization activities;

our ability to obtain U.S. and foreign regulatory approval for our product candidates and the ability of our product candidates to meet existing or future regulatory standards;

our expectations regarding federal, state and foreign regulatory requirements;

the therapeutic benefits and effectiveness of our product candidates;

the safety profile and related adverse events of our product candidates;

our ability to manufacture sufficient amounts of linaclotide for commercialization activities with target characteristics;

the success of our clinical studies for our product candidates;

our plans with respect to collaborations and licenses related to the development, manufacture or sale of our product candidates;

the ability of our partners to perform their obligations under our collaboration and license agreements with them;

our expectations as to future financial performance, expense levels, capital raising and liquidity sources;

our ability to compete with other companies that are or may be developing or selling products that are competitive with our product candidates;

anticipated trends and challenges in our potential markets;

our ability to attract and motivate key personnel; and

other factors discussed elsewhere in this prospectus supplement or information incorporated herein.

Any or all of our forward-looking statements in this prospectus supplement or the information incorporated by reference may turn out to be inaccurate. These forward-looking statements may be affected by inaccurate assumptions or by known or unknown risks and uncertainties, including the risks, uncertainties and assumptions identified under the heading "Risk Factors" in this prospectus supplement and "Part II, Item 1A Risk Factors" in our most recent Quarterly Report on Form 10-Q. In light of these risks, uncertainties and assumptions, the forward-looking events and circumstances discussed in this prospectus supplement or incorporated herein by reference may not occur as contemplated, and actual results could differ materially from those anticipated or implied by the forward-looking statements.

S-10

Table of Contents

You should not unduly rely on these forward-looking statements, which speak only as of the date of this prospectus supplement or the date of the document incorporated by reference in this prospectus supplement. Unless required by law, we undertake no obligation to publicly update or revise any forward-looking statements to reflect new information or future events or otherwise. You should, however, review the factors and risks we describe in the reports we will file from time to time with the SEC after the date of this prospectus supplement.

S-11

Table of Contents

RISK FACTORS

Investing in our Class A common stock involves a high degree of risk. You should carefully consider the following risk factors, as well as the other information in this prospectus supplement and the accompanying prospectus, including the information incorporated by reference, before making an investment decision. In addition, you should carefully consider, among other things, the matters discussed under "Part II Item 1A Risk Factors" beginning on page 36 of our Quarterly Report on Form 10-Q for the period ended September 30, 2011, which is incorporated by reference in this prospectus supplement and the accompanying prospectus, as that disclosure has been updated by subsequent periodic reports, as well as other documents that we file with the SEC that are incorporated by reference. The risks and uncertainties described in the documents incorporated by reference and those described below are not the only risks and uncertainties we face. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also impair our business operations. If any of those risks actually occurs, our business, financial condition and results of operations would suffer. In that event, the market price of our Class A common stock could decline, and you may lose all or part of your investment in our Class A common stock. The risks discussed below also include forward-looking statements and our actual results may differ substantially from those discussed in these forward-looking statements. See "Special Note Regarding Forward-Looking Statements."

Risks Related to this Offering

Our management team may invest or spend the proceeds of this offering in ways with which you may not agree or in ways which may not yield a significant return, if any.

Our management will have broad discretion over the use of proceeds from this offering. The net proceeds from this offering will be used for general corporate purposes, including expenses related to the expected commercial launch of linaclotide. Our management will have considerable discretion in the application of the net proceeds, and you will not have the opportunity, as part of your investment decision, to assess whether the proceeds are being used appropriately. The net proceeds may be used for corporate purposes that do not increase our operating results or market value. Until the net proceeds are used, they may be placed in investments that do not produce significant income or investments that lose value.

Investors in this offering will experience immediate dilution in the book value per share of the Class A common stock they purchase.

Because the price per share of our Class A common stock being offered is substantially higher than the book value per share of our Class A common stock, you will suffer substantial dilution in the net tangible book value of the Class A common stock you purchase in this offering. After giving effect to the sale of 5,250,000 shares of Class A common stock in this offering, and based on an assumed public offering price of \$14.85 per share, the last sale price of our Class A common stock on February 6, 2012, as reported on The NASDAQ Global Select Market, and net tangible book value per share of our Class A common stock of \$1.12 as of September 30, 2011, if you purchase shares in this offering, you will suffer immediate and substantial dilution of \$13.09 per share in the net tangible book value of the Class A common stock purchased.

Investors in this offering may experience future dilution.

In order to raise additional capital, we may in the future offer additional shares of our Class A common stock or other securities convertible into, or exchangeable for, our Class A common stock at prices that may not be the same as the price per share in this offering. We have an effective shelf registration statement from which additional shares of Class A common stock can be offered. We cannot assure you that we will be able to sell shares or other securities in any other offering at a price

Table of Contents

per share that is equal to or greater than the price per share paid by investors in this offering. If the price per share at which we sell additional shares of our Class A common stock or related securities in future transactions is less than the price per share in this offering, investors who purchase our Class A common stock in this offering will suffer a dilution in their investment.

Future sales of our Class A common stock may depress our stock price.

Immediately after this offering, we will have outstanding 67,873,097 shares of Class A common stock and 38,175,539 shares of Class B common stock, based on the number of outstanding shares of Class A common stock and Class B common stock as of February 6, 2012. The shares of Class A common stock that we are selling in connection with this offering may be resold in the public market immediately. We, our directors, certain entities affiliated with our directors, and our executive officers have agreed not to dispose of or hedge any Class A common stock or securities convertible into or exchangeable for shares of Class A common stock during the period from the date of this prospectus supplement continuing through the date 60 days after the date of this prospectus supplement, subject to certain exceptions. See "Underwriting." In addition, the representatives of the underwriters may, in their discretion, release the restrictions on any such shares at any time without notice. We cannot predict the effect that future sales of our Class A common stock or other equity-related securities would have on the market price of our Class A common stock.

Our ability to use net operating loss and tax credit carryforwards and certain built-in losses to reduce future tax payments is limited by provisions of the Internal Revenue Code, and it is possible that the transactions described in this offering combined with future transactions may result in material additional limitations on our ability to use our net operating loss and tax credit carryforwards.

Section 382 and 383 of the Internal Revenue Code of 1986, as amended, or the Code, contain rules that limit the ability of a company that undergoes an ownership change, which is generally any change in ownership of more than 50% of its stock over a three-year period, to utilize its net operating loss and tax credit carryforwards and certain built-in losses recognized in years after the ownership change. These rules generally operate by focusing on ownership changes involving stockholders owning directly or indirectly 5% or more of the stock of a company and any change in ownership arising from a new issuance of stock by the company. Generally, if an ownership change occurs, the yearly taxable income limitation on the use of net operating loss and tax credit carryforwards and certain built-in losses is equal to the product of the applicable long term tax exempt rate and the value of the company's stock immediately before the ownership change. We may be unable to offset our taxable income with losses, or our tax liability with credits, before such losses and credits expire and therefore would incur larger federal income tax liability.

In addition, it is possible that the transactions described in this offering, either on a standalone basis or when combined with future transactions (including issuances of new shares of our Class A common stock or Class B common stock and sales of shares of our Class A common stock), will cause us to undergo one or more additional ownership changes. In that event, we generally would not be able to use our pre-change loss or credit carryovers or certain built-in losses prior to such ownership change to offset future taxable income in excess of the annual limitations imposed by Sections 382 and 383 and those attributes already subject to limitations (as a result of our prior ownership changes) may be subject to more stringent limitations. As of December 31, 2010, we had an immaterial amount of net operating loss carryforwards and tax credit carryforwards at risk of loss due to a prior ownership change. In addition, as of December 31, 2010, we had approximately \$153.2 million of net operating loss carryforwards to offset future federal taxable income, approximately \$97.7 million of net operating loss carryforwards to offset future state taxable income, and approximately \$15.8 million of tax credit carryforwards to offset future federal and state income taxes at risk of limitation in the event of a future ownership change.

Table of Contents

We have never paid dividends on our capital stock, and because we do not anticipate paying any cash dividends in the foreseeable future, capital appreciation, if any, of our Class A common stock will be your sole source of gain on an investment in our Class A common stock.

We have paid no cash dividends on any of our classes of capital stock to date, and we currently intend to retain our future earnings, if any, to fund the development and growth of our business. We do not anticipate paying any cash dividends on our common stock in the foreseeable future. As a result, capital appreciation, if any, of our Class A common stock will be your sole source of gain for the foreseeable future.

Table of Contents**USE OF PROCEEDS**

The net proceeds from the sale of the common stock offered hereby are estimated to be approximately \$73.0 million (approximately \$84.0 million if the underwriters for this common stock offering exercise in full their option to purchase additional shares of common stock), based on an assumed public offering price of \$14.85 per share, the last sale price of our Class A common stock on February 6, 2012, as reported on The NASDAQ Global Select Market after deducting estimated underwriting discounts and commissions and offering expenses.

We intend to use the net proceeds from this common stock offering for general corporate purposes, including expenses related to the expected commercial launch of linaclotide. Pending these uses, we intend to invest the net proceeds of this Class A common stock offering in interest-bearing investment-grade securities.

The foregoing represents our intentions based upon our present plans and business conditions. The occurrence of unforeseen events or changed business conditions, however, could result in the application of the proceeds from this Class A common stock offering in a manner other than as described in this prospectus supplement.

PRICE RANGE OF CLASS A COMMON STOCK

Our Class A common stock is listed on The NASDAQ Global Select Market and trades under the symbol "IRWD." The following table sets forth, for the quarterly periods indicated, the high and low sale price per share of the Class A common stock as reported on The NASDAQ Global Select Market:

	High	Low
2010		
First Quarter (from initial public offering on February 2, 2010)	\$ 14.91	\$ 11.20
Second Quarter	15.03	9.73
Third Quarter	13.14	8.90
Fourth Quarter	11.49	10.00
2011		
First Quarter	\$ 14.39	\$ 10.17
Second Quarter	16.50	13.32
Third Quarter	16.49	10.18
Fourth Quarter	14.35	9.97
2012		
First Quarter (through February 6, 2012)	\$ 15.67	10.65

On February 6, 2012, the last reported sale price of our Class A common stock was \$14.85 per share. On February 6, 2012, we had 43 holders of record of our Class A common stock.

DIVIDEND POLICY

We have never declared or paid any cash dividends on our capital stock, and we do not currently anticipate declaring or paying cash dividends on our capital stock in the foreseeable future. We currently intend to retain all of our future earnings, if any, to finance operations. Any future determination relating to our dividend policy will be made at the discretion of our board of directors and will depend on a number of factors, including future earnings, capital requirements, financial conditions, future prospects, contractual restrictions and covenants and other factors that our board of directors may deem relevant.

Table of Contents**DILUTION**

If you invest in our Class A common stock in this offering, your ownership interest will be immediately diluted to the extent of the difference between the public offering price per share and the net tangible book value per share of our Class A common stock after this offering. Our net tangible book value as of September 30, 2011 was \$112.9 million, or \$1.12 per share of our Class A common stock.

After giving effect to the sale by us of 5,250,000 shares of our Class A common stock in this offering at an assumed public offering price of \$14.85 per share, the last sale price of our Class A common stock on February 6, 2012, and after deducting underwriting discounts and commissions and estimated offering expenses payable by us, our pro forma net tangible book value as of September 30, 2011 would have been approximately \$186.0 million, or \$1.76 per share of our Class A common stock. This amount represents an immediate increase in our pro forma net tangible book value of \$0.64 per share to our existing stockholders and an immediate dilution in our pro forma net tangible book value of \$13.09 per share to new investors purchasing shares of our Class A common stock in this offering at the public offering price.

The following table illustrates this dilution on a per share basis:

Public offering price per share	\$ 14.85
Pro forma net tangible book value per share as of September 30, 2011	\$ 1.12
Increase per share attributable to this offering	0.64
Pro forma net tangible book value per share after this offering	\$ 1.76
Dilution per share to new investors	\$ 13.09

If the underwriters exercise their option to purchase additional shares in full, the pro forma as adjusted net tangible book value will increase to \$1.85 per share, representing an immediate increase to existing stockholders of \$0.73 per share and an immediate dilution of \$13.00 per share to new investors.

In the discussion and table above, we assume no exercise of outstanding options. As of September 30, 2011, there were 58,805,086 shares of our Class A common stock outstanding and 41,684,472 shares of our Class B common stock outstanding. This number excludes:

options exercisable into 15,861,198 shares of common stock outstanding as of September 30, 2011 at a weighted average exercise price of \$5.78 per share; and

3,013,488 shares of our common stock reserved as of September 30, 2011 for future issuance under compensation plans.

To the extent that any of these options are exercised, there will be further dilution per share to new investors purchasing shares of our Class A common stock in this offering.

Table of Contents**CAPITALIZATION**

The following table sets forth our cash and cash equivalents and capitalization as of September 30, 2011:

on an actual basis; and

on an as adjusted basis to give effect to the issuance and sale of 5,250,000 shares of our Class A common stock in this offering at an assumed public offering price of \$14.85 per share (which was the closing price for the common stock on February 6, 2012), after deducting the estimated underwriting discounts and commissions and offering expenses (assuming no exercise of the underwriters' option to purchase additional shares).

This table should be read in conjunction with our consolidated financial statements and related notes incorporated by reference in this prospectus supplement. See "Where You Can Find More Information."

	As of September 30, 2011	
	Actual	As Adjusted
	(unaudited)	
	(in thousands, except share	
	and per share data)	
Cash, cash equivalents and available-for-sale securities	\$ 175,129	\$ 248,164
Total long-term debt, less current portion	481	481
Class A common stock, \$0.001 par value: 500,000,000 shares authorized; 58,805,086 shares issued and outstanding, actual; 64,055,086 shares issued and outstanding, as adjusted(1)	59	64
Class B common stock, \$0.001 par value: 100,000,000 shares authorized; 41,684,472 shares issued and outstanding, actual and as adjusted	42	42
Preferred stock, \$0.001 par value: 75,000,000 authorized; no shares issued or outstanding, actual or as adjusted		
Additional paid-in capital	538,241	611,271
Accumulated deficit	(425,418)	(425,418)
Accumulated other comprehensive income	6	6
Total stockholders' equity	112,930	185,965
Total liabilities and stockholders' equity (deficit)	\$ 219,480	\$ 292,575
Total capitalization	\$ 113,411	\$ 186,446

(1) Includes 5,250,000 shares to be issued pursuant to this offering.

The table above does not include:

options exercisable into 15,861,198 shares of common stock outstanding as of September 30, 2011 at a weighted average exercise price of \$5.78 per share; and

3,013,488 shares of our common stock reserved as of September 30, 2011 for future issuance under compensation plans.

Table of Contents

UNDERWRITING

We are offering the shares of Class A common stock described in this prospectus supplement through a number of underwriters. J.P. Morgan Securities LLC and Merrill Lynch, Pierce, Fenner & Smith Incorporated are acting as joint book-running managers of the offering and as representatives of the underwriters. We have entered into an underwriting agreement with the underwriters. Subject to the terms and conditions of the underwriting agreement, we have agreed to sell to the underwriters, and each underwriter has severally agreed to purchase, at the public offering price less the underwriting discounts and commissions set forth on the cover page of this prospectus supplement, the number of shares of Class A common stock listed next to its name in the following table:

Name	Number of Shares
J.P. Morgan Securities LLC	
Merrill Lynch, Pierce, Fenner & Smith Incorporated	
Total	5,250,000

The underwriters are committed to purchase all the shares of Class A common stock offered by us if they purchase any shares. The underwriting agreement also provides that if an underwriter defaults, the purchase commitments of non-defaulting underwriters may also be increased or the offering may be terminated.

The underwriters propose to offer the shares of Class A common stock directly to the public at the public offering price set forth on the cover page of this prospectus supplement and to certain dealers at that price less a concession not in excess of \$ per share. Any such dealers may resell shares to certain other brokers or dealers at a discount of up to \$ per share from the public offering price. After the public offering of the shares, the offering price and other selling terms may be changed by the underwriters. Sales of shares made outside of the United States may be made by affiliates of the underwriters.

The underwriters have an option to buy up to 787,500 additional shares of Class A common stock. The underwriters have 30 days from the date of this prospectus supplement to exercise this option. If any shares are purchased with this option, the underwriters will purchase shares in approximately the same proportion as shown in the table above. If any additional shares of Class A common stock are purchased, the underwriters will offer the additional shares on the same terms as those on which the shares are being offered.

The underwriting fee is equal to the public offering price per share of Class A common stock less the amount paid by the underwriters to us per share of Class A common stock. The underwriting fee is \$ per share. The following table shows the per share and total underwriting discounts and commissions to be paid to the underwriters assuming both no exercise and full exercise of the underwriters' option to purchase additional shares.

	Without option exercise	With full option exercise
Per Share	\$	\$
Total	\$	\$

We estimate that the total expenses of this offering, including registration, filing and listing fees, printing fees and legal and accounting expenses, but excluding the underwriting discounts and commissions, will be approximately \$.

Table of Contents

A prospectus in electronic format may be made available on the web sites maintained by one or more underwriters, or selling group members, if any, participating in the offering. The underwriters may agree to allocate a number of shares to underwriters and selling group members for sale to their online brokerage account holders. Internet distributions will be allocated by the representatives to underwriters and selling group members that may make Internet distributions on the same basis as other allocations.

We have agreed that we will not, subject to limited exceptions, (1) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, or otherwise transfer or dispose of, directly or indirectly, or file with the SEC a registration statement under the Securities Act relating to, any shares of our Class A common stock or securities convertible into or exchangeable or exercisable for any shares of our Class A common stock, or publicly disclose the intention to make any offer, sale pledge, disposition or filing, or (2) enter into any swap or other arrangement that transfers, in whole or in part, any of the economic consequences of ownership of any shares of Class A common stock or any such other securities (regardless of whether any of these transactions are to be settled by the delivery of shares of Class A common stock, or such other securities, in cash or otherwise), in each case without the prior written consent of J.P. Morgan Securities LLC and Merrill Lynch, Pierce, Fenner & Smith Incorporated for a period of 60 days after the date of this prospectus supplement. Notwithstanding the foregoing, if (1) during the last 17 days of the 60-day restricted period, we issue an earnings release or material news or a material event relating to our company occurs, or (2) prior to the expiration of the 60-day restricted period, we announce that we will release earnings results during the 16-day period beginning on the last day of the 60-day period, the restrictions described above will continue to apply until the expiration of the 18-day period beginning on the issuance of the earnings release or the occurrence of the material news or material event.

All of our directors and executive officers, and certain of our stockholders and optionees, have entered into lock-up agreements with the underwriters prior to the commencement of this offering pursuant to which each of these persons or entities, with limited exceptions, for a period of 60 days after the date of this prospectus supplement, may not, without the prior written consent of J.P. Morgan Securities LLC and Merrill Lynch, Pierce, Fenner & Smith Incorporated, (1) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, or otherwise transfer or dispose of, directly or indirectly, any shares of our Class A common stock or securities convertible into or exchangeable or exercisable for any shares of our Class A common stock (including, without limitation, (i) Class A common stock or such other securities which may be deemed to be beneficially owned by such directors, executive officers, managers and members in accordance with the rules and regulations of the SEC, (ii) securities which may be issued upon exercise of a stock option or warrant and (iii) shares of our Class B common stock), (2) enter into any swap or other agreement that transfers, in whole or in part, any of the economic consequences of ownership of our Class A common stock or such other securities, whether any such transaction described in clause (1) or (2) above is to be settled by delivery of Class A common stock or such other securities, in cash or otherwise or (3) make any demand for, or exercise any right with respect to, the registration of any shares of our Class A common stock or any security convertible into or exercisable or exchangeable for our Class A common stock. Notwithstanding the foregoing, if (1) during the last 17 days of the 60-day restricted period, we issue an earnings release or material news or a material event relating to our company occurs; or (2) prior to the expiration of the 60-day restricted period, we announce that we will release earnings results during the 16-day period beginning on the last day of the 60-day period, the restrictions described above will continue to apply until the expiration of the 18-day period beginning on the issuance of the earnings release or the occurrence of the material news or material event

Table of Contents

We have agreed to indemnify the underwriters against certain liabilities, including liabilities under the Securities Act of 1933.

Our Class A common stock is listed/quoted on the NASDAQ Global Select Market under the symbol "IRWD".

In connection with this offering, the underwriters may engage in stabilizing transactions, which involves making bids for, purchasing and selling shares of Class A common stock in the open market for the purpose of preventing or retarding a decline in the market price of the Class A common stock while this offering is in progress. These stabilizing transactions may include making short sales of the Class A common stock, which involves the sale by the underwriters of a greater number of shares of Class A common stock than they are required to purchase in this offering, and purchasing shares of Class A common stock on the open market to cover positions created by short sales. Short sales may be "covered" shorts, which are short positions in an amount not greater than the underwriters' option referred to above, or may be "naked" shorts, which are short positions in excess of that amount. The underwriters may close out any covered short position either by exercising their option to purchase additional shares, in whole or in part, or by purchasing shares in the open market. In making this determination, the underwriters will consider, among other things, the price of shares available for purchase in the open market compared to the price at which the underwriters may purchase shares through the option to purchase additional shares. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the Class A common stock in the open market that could adversely affect investors who purchase in this offering. To the extent that the underwriters create a naked short position, they will purchase shares in the open market to cover the position.

The underwriters have advised us that, pursuant to Regulation M of the Securities Act of 1933, they may also engage in other activities that stabilize, maintain or otherwise affect the price of the Class A common stock, including the imposition of penalty bids. This means that if the representatives of the underwriters purchase Class A common stock in the open market in stabilizing transactions or to cover short sales, the representatives can require the underwriters that sold those shares as part of this offering to repay the underwriting discount received by them.

These activities may have the effect of raising or maintaining the market price of the Class A common stock or preventing or retarding a decline in the market price of the Class A common stock, and, as a result, the price of the Class A common stock may be higher than the price that otherwise might exist in the open market. If the underwriters commence these activities, they may discontinue them at any time. The underwriters may carry out these transactions on the NASDAQ Global Select Market, in the over-the-counter market or otherwise.

In addition, in connection with this offering certain of the underwriters (and selling group members) may engage in passive market making transactions in our Class A common stock on The Nasdaq Stock Market prior to the pricing and completion of this offering. Passive market making consists of displaying bids on The Nasdaq Stock Market no higher than the bid prices of independent market makers and making purchases at prices no higher than these independent bids and effected in response to order flow. Net purchases by a passive market maker on each day are generally limited to a specified percentage of the passive market maker's average daily trading volume in the Class A common stock during a specified period and must be discontinued when such limit is reached. Passive market making may cause the price of our Class A common stock to be higher than the price that otherwise would exist in the open market in the absence of these transactions. If passive market making is commenced, it may be discontinued at any time.

Other than in the United States, no action has been taken by us or the underwriters that would permit a public offering of the securities offered by this prospectus supplement in any jurisdiction where action for that purpose is required. The securities offered by this prospectus supplement may not

Table of Contents

be offered or sold, directly or indirectly, nor may this prospectus supplement or any other offering material or advertisements in connection with the offer and sale of any such securities be distributed or published in any jurisdiction, except under circumstances that will result in compliance with the applicable rules and regulations of that jurisdiction. Persons into whose possession this prospectus supplement comes are advised to inform themselves about and to observe any restrictions relating to the offering and the distribution of this prospectus supplement. This prospectus supplement does not constitute an offer to sell or a solicitation of an offer to buy any securities offered by this prospectus supplement in any jurisdiction in which such an offer or a solicitation is unlawful.

Certain of the underwriters and their affiliates have provided in the past to us and our affiliates and may provide from time to time in the future certain commercial banking, financial advisory, investment banking and other services for us and such affiliates in the ordinary course of their business, for which they have received and may continue to receive customary fees and commissions. In addition, from time to time, certain of the underwriters and their affiliates may effect transactions for their own account or the account of customers, and hold on behalf of themselves or their customers, long or short positions in our debt or equity securities or loans, and may do so in the future.

Selling Restrictions

European Economic Area

In relation to each Member State of the European Economic Area which has implemented the Prospectus Directive (each, a "Relevant Member State") an offer to the public of any shares of our Class A common stock may not be made in that Relevant Member State, except that an offer to the public in that Relevant Member State of any shares of our Class A common stock may be made at any time under the following exemptions under the Prospectus Directive, if they have been implemented in that Relevant Member State:

- (a) to any legal entity which is a qualified investor as defined in the Prospectus Directive;
- (b) to fewer than 100 or, if the Relevant Member State has implemented the relevant provision of the 2010 PD Amending Directive, 150, natural or legal persons (other than qualified investors as defined in the Prospectus Directive), as permitted under the Prospectus Directive, subject to obtaining the prior consent of the representatives for any such offer; or
- (c) in any other circumstances falling within Article 3(2) of the Prospectus Directive, provided that no such offer of shares of our Class A common stock shall result in a requirement for the publication by us or any underwriter of a prospectus pursuant to Article 3 of the Prospectus Directive.

For the purposes of this provision, the expression an "offer to the public" in relation to any shares of our Class A common stock in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and any shares of our Class A common stock to be offered so as to enable an investor to decide to purchase any shares of our Class A common stock, as the same may be varied in that Member State by any measure implementing the Prospectus Directive in that Member State, the expression "Prospectus Directive" means Directive 2003/71/EC (and amendments thereto, including the 2010 PD Amending Directive, to the extent implemented in the Relevant Member State), and includes any relevant implementing measure in the Relevant Member State, and the expression "2010 PD Amending Directive" means Directive 2010/73/EU.

Table of Contents

United Kingdom

Each underwriter has represented and agreed that:

- (a) it has only communicated or caused to be communicated and will only communicate or cause to be communicated an invitation or inducement to engage in investment activity (within the meaning of Section 21 of the FSMA) received by it in connection with the issue or sale of the shares of our Class A common stock in circumstances in which Section 21(1) of the FSMA does not apply to us; and
- (b) it has complied and will comply with all applicable provisions of the FSMA with respect to anything done by it in relation to the shares of our Class A common stock in, from or otherwise involving the United Kingdom.

Switzerland

We have not and will not register with the Swiss Financial Market Supervisory Authority ("FINMA") as a foreign collective investment scheme pursuant to Article 119 of the Federal Act on Collective Investment Scheme of 23 June 2006, as amended ("CISA"), and accordingly the Class A common stock being offered pursuant to this prospectus supplement have not and will not be approved, and may not be licenseable, with FINMA. Therefore, the Class A common stock have not been authorized for distribution by FINMA as a foreign collective investment scheme pursuant to Article 119 CISA and the Class A common stock offered hereby may not be offered to the public (as this term is defined in Article 3 CISA) in or from Switzerland. The Class A common stock may solely be offered to "qualified investors," as this term is defined in Article 10 CISA, and in the circumstances set out in Article 3 of the Ordinance on Collective Investment Scheme of 22 November 2006, as amended ("CISO"), such that there is no public offer. Investors, however, do not benefit from protection under CISA or CISO or supervision by FINMA. This prospectus supplement and any other materials relating to the Class A common stock are strictly personal and confidential to each offeree and do not constitute an offer to any other person. This prospectus supplement may only be used by those qualified investors to whom it has been handed out in connection with the offer described herein and may neither directly or indirectly be distributed or made available to any person or entity other than its recipients. It may not be used in connection with any other offer and shall in particular not be copied and/or distributed to the public in Switzerland or from Switzerland. This prospectus supplement does not constitute an issue prospectus as that term is understood pursuant to Article 652a and/or 1156 of the Swiss Federal Code of Obligations. We have not applied for a listing of the Class A common stock on the SIX Swiss Exchange or any other regulated securities market in Switzerland, and consequently, the information presented in this prospectus supplement does not necessarily comply with the information standards set out in the listing rules of the SIX Swiss Exchange and corresponding prospectus schemes annexed to the listing rules of the SIX Swiss Exchange.

Dubai International Financial Centre

This prospectus supplement relates to an Exempt Offer in accordance with the Offered Securities Rules of the Dubai Financial Services Authority ("DFSA"). This prospectus supplement is intended for distribution only to persons of a type specified in the Offered Securities Rules of the DFSA. It must not be delivered to, or relied on by, any other person. The DFSA has no responsibility for reviewing or verifying any documents in connection with Exempt Offers. The DFSA has not approved this prospectus supplement nor taken steps to verify the information set forth herein and has no responsibility for the prospectus supplement. The Class A common stock to which this prospectus supplement relates may be illiquid and/or subject to restrictions on its resale. Prospective purchasers of the Class A common stock offered should conduct their own due diligence on the shares. If you do not

Table of Contents

understand the contents of this prospectus supplement you should consult an authorized financial advisor.

LEGAL MATTERS

The validity of the shares of Class A common stock offered hereby will be passed upon for us by Ropes & Gray LLP. Davis Polk & Wardwell LLP, New York, New York will pass upon certain legal matters related to this offering for the underwriters.

EXPERTS

Ernst & Young LLP, independent registered public accounting firm, has audited our consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2010, as set forth in their report, which is incorporated by reference in this prospectus and elsewhere in the registration statement. Our financial statements as of December 31, 2010 are incorporated by reference in reliance on Ernst & Young LLP's report, given on their authority as experts in accounting and auditing.

WHERE YOU CAN YOU FIND MORE INFORMATION

We file annual, quarterly and current reports, proxy statements and other information with the Securities and Exchange Commission, or the SEC. You may read and copy any materials that we file with the SEC at its Public Reference Room, 100 F Street, N.E., Washington, D.C. 20549. You may call the SEC at 1-800-SEC-0330 for further information on the operation of the Public Reference Room. Our SEC filings are also available to the public from the SEC's website at <http://www.sec.gov>.

The SEC's rules allow us to "incorporate by reference" the information we have filed with the SEC, which means that we can disclose important information by referring you to those documents. The information incorporated by reference is a part of this prospectus supplement, and information that we file later with the SEC will automatically update and supersede the information included and/or incorporated by reference in this prospectus supplement. We incorporate by reference into this prospectus supplement the documents listed below and any future filings made by us with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934 (other than, in each case, any document or portion of a document that is deemed not to be filed) after the initial filing of the registration statement that contains the accompanying prospectus and prior to the time that we sell all of the securities offered by this prospectus supplement:

Annual Report on Form 10-K for the year ended December 31, 2010;

Definitive Proxy Statement on Schedule 14A, filed on April 27, 2011 (excluding those portions that are not incorporated by reference into our Annual Report on Form 10-K for the year ended December 31, 2010);

Quarterly Reports on Form 10-Q for the quarterly periods ended March 31, 2011, June 30, 2011 and September 30, 2011;

Current Reports on Form 8-K filed on February 7, 2011, March 9, 2011, April 8, 2011, May 25, 2011, May 31, 2011, June 13, 2011, August 11, 2011, September 29, 2011, October 20, 2011 and January 4, 2012; and

The description of our Class A common stock contained in our Registration Statement on Form 8-A, originally filed with the SEC on February 1, 2010, as amended by any amendment or report filed for the purpose of updating such description.

Table of Contents

You may obtain documents incorporated by reference into this prospectus supplement at no cost by requesting them in writing or telephoning us at the following address:

Corporate Communications
Ironwood Pharmaceuticals, Inc.
301 Binney Street
Cambridge, MA 02142
(617) 621-7722

These filings are also made available, free of charge, on our website at www.ironwoodpharma.com. The information contained in, and that can be accessed through, our website is not incorporated into and does not form a part of this prospectus supplement.

S-24

Table of Contents

PROSPECTUS

IRONWOOD PHARMACEUTICALS, INC.

Class A Common Stock

We may offer and sell, or facilitate the resale of, shares of our Class A common stock from time to time. We will provide specific offering terms in supplements to this prospectus. The prospectus supplements may also add, update or change information contained or incorporated by reference in this document. This prospectus may be used to offer and sell securities only if accompanied by a prospectus supplement. You should read this prospectus and any prospectus supplements, along with the additional information described under the heading "Where You Can Find More Information," before making an investment decision.

The shares of our Class A common stock may be sold directly to our stockholders or to purchasers or through agents on our behalf or through underwriters or dealers as designated from time to time. If any agents or underwriters are involved in the sale of any of these securities, the applicable prospectus supplement will provide the names of the agents or underwriters and any applicable fees, commissions, or discounts.

Our Class A common stock is listed on The NASDAQ Global Select Market under the symbol "IRWD."

Investing in these securities involves substantial risk. Please see "Risk Factors" on page 3.

The address of our principal executive offices is 301 Binney Street, Cambridge, Massachusetts 02142, and the telephone number at our principal executive offices is (617) 621-7722.

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

The date of this prospectus is February 8, 2012

Table of Contents

TABLE OF CONTENTS

<u>About this Prospectus</u>	<u>3</u>
Risk Factors	3
<u>Where You Can Find More Information</u>	<u>3</u>
<u>Ironwood Pharmaceuticals, Inc.</u>	<u>4</u>
<u>Use of Proceeds</u>	<u>5</u>
<u>Description of Class A Common Stock</u>	<u>5</u>
<u>Material U.S. Federal Tax Considerations for Non-U.S. Holders of Common Stock</u>	<u>12</u>
<u>Plan of Distribution</u>	<u>16</u>
<u>Legal Matters</u>	<u>17</u>
<u>Experts</u>	<u>17</u>

Table of Contents

ABOUT THIS PROSPECTUS

Each time we offer securities using this prospectus, we will provide the number of shares and offering price in a supplement to this prospectus. The prospectus supplements also may add, update or change the information contained or incorporated by reference in this prospectus and also will describe the specific manner in which we will be offering shares. You should read carefully both this prospectus and any prospectus supplement together with the additional information described under the heading "Where You Can Find More Information."

We have not authorized anyone to provide any information other than that contained or incorporated by reference in this prospectus, in any accompanying prospectus supplement or in any free writing prospectus prepared by or on behalf of us or to which we have referred you. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. We are not making an offer to sell these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information appearing in this prospectus or incorporated by reference herein is accurate only as of the date on the front of this prospectus or the respective dates of filing of the incorporated documents. Our business, financial condition, results of operations and prospects may have changed since that date.

Unless otherwise indicated or unless the context requires otherwise, all references in this prospectus to "Ironwood," "we," "us" and "our" refer to Ironwood Pharmaceuticals, Inc.

RISK FACTORS

For a discussion of the factors you should carefully consider before deciding to purchase any shares, please review "Part II, Item 1A Risk Factors" in our most recent Quarterly Report on Form 10-Q, which is incorporated by reference in this prospectus, as that disclosure has been updated by subsequent periodic reports, as well as the "Risk Factors" section in the applicable prospectus supplement.

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports, proxy statements and other information with the Securities and Exchange Commission, or the SEC. You may read and copy any materials that we file with the SEC at its Public Reference Room, 100 F Street, N.E., Washington, D.C. 20549. You may call the SEC at 1-800-SEC-0330 for further information on the operation of the Public Reference Room. Our SEC filings are also available to the public from the SEC's website at <http://www.sec.gov>.

The SEC's rules allow us to "incorporate by reference" the information we have filed with the SEC, which means that we can disclose important information by referring you to those documents. The information incorporated by reference is a part of this prospectus, and information that we file later with the SEC will automatically update and supersede the information included and/or incorporated by reference in this prospectus. We incorporate by reference into this prospectus the documents listed below and any future filings made by us with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934 (other than, in each case, any document or portion of a document that is deemed not to be filed) after the initial filing of the registration statement that contains this prospectus and prior to the time that we sell all of the securities offered by this prospectus:

Annual Report on Form 10-K for the year ended December 31, 2010;

Definitive Proxy Statement on Schedule 14A, filed on April 27, 2011 (excluding those portions that are not incorporated by reference into our Annual Report on Form 10-K for the year ended December 31, 2010);

Edgar Filing: IRONWOOD PHARMACEUTICALS INC - Form 424B5

Table of Contents

Quarterly Reports on Form 10-Q for the quarterly periods ended March 31, 2011, June 30, 2011 and September 30, 2011;

Current Reports on Form 8-K filed on February 7, 2011, March 9, 2011, April 8, 2011, May 25, 2011, May 31, 2011, June 13, 2011, August 11, 2011, September 29, 2011, October 20, 2011 and January 4, 2012; and

The description of our Class A common stock contained in our Registration Statement on Form 8-A, originally filed with the SEC on February 1, 2010, as amended by any amendment or report filed for the purpose of updating such description.

You may obtain documents incorporated by reference into this prospectus at no cost by requesting them in writing or telephoning us at the following address:

Corporate Communications
Ironwood Pharmaceuticals, Inc.
301 Binney Street
Cambridge, MA 02142
(617) 621-7722

These filings are also made available, free of charge, on our website at www.ironwoodpharma.com. The information contained in, and that can be accessed through, our website is not incorporated into and does not form a part of this prospectus.

This prospectus constitutes a part of a registration statement on Form S-3, referred to herein, including all amendments and exhibits, as the Registration Statement, that we have filed with the SEC under the Securities Act of 1933. This prospectus does not contain all of the information contained in the Registration Statement. We refer you to the Registration Statement and related exhibits for further information regarding us and our securities. The Registration Statement may be inspected at the public reference facilities maintained by the SEC at the address set forth above or from the SEC's website at <http://www.sec.gov>. Statements contained in this prospectus or in a document incorporated or deemed to be incorporated by reference herein concerning the provisions of any document filed as an exhibit to the Registration Statement are not necessarily complete and, in each instance, reference is made to the copy of such document filed as an exhibit to the Registration Statement or otherwise filed with the SEC. Each such statement is qualified in its entirety by such reference.

IRONWOOD PHARMACEUTICALS, INC.

We are an entrepreneurial pharmaceutical company that discovers, develops and intends to commercialize differentiated medicines that improve patients' lives. In order to be successful, we will need to overcome the enormous challenges inherent in the pharmaceutical product development model. Developing a novel therapeutic agent can take a decade or more and cost hundreds of millions of dollars, and most drug candidates fail to reach the market. We recognize that most companies undertaking this endeavor fail, yet despite the significant risks and our own experiences with multiple failed drug candidates, we are enthusiastic and passionate about our mission to deliver differentiated medicines to patients. To achieve our mission, we are building a team, a culture and processes centered on creating and marketing important new drugs. If we are successful getting medicines to patients and generating substantial returns for our stockholders, we plan to reinvest a portion of our future cash flows into our research and development efforts in order to accelerate and enhance our ability to bring new products to market. If we meet our goals, we hope to earn the right to continue building an enduring pharmaceutical company, an outstanding business that will thrive well beyond our lifetimes.

We are pioneers in the area of guanylate cyclase type-C, or GC-C, agonists and in the science and treatment of gastrointestinal diseases. Our development team has substantial expertise with the pharmacological profile associated with GC-C agonists, and they are complemented by our global

Table of Contents

operations and commercial teams that have significant experience in the associated therapeutic modalities. We believe that linaclotide, our GC-C agonist being developed for the treatment of patients with irritable bowel syndrome with constipation, or IBS-C, and chronic constipation, or CC, could present patients and healthcare practitioners with a unique therapy for a major medical need not yet met by existing therapies. IBS-C and CC are gastrointestinal disorders that affect millions of sufferers worldwide, according to our analysis of studies performed by N.J. Talley (published in 1995 in the American Journal of Epidemiology), P.D.R. Higgins (published in 2004 in the American Journal of Gastroenterology) and A.P.S. Hungin (published in 2003 in Alimentary Pharmacology and Therapeutics) as well as 2007 U.S. census data. Linaclotide was designed by Ironwood scientists to target the defining attributes of IBS-C: abdominal pain, discomfort, bloating and constipation. Linaclotide acts locally in the gut with no detectable systemic exposure in humans at therapeutic doses. Linaclotide is our only product candidate that has demonstrated clinical proof of concept.

USE OF PROCEEDS

The use of proceeds from the disposition of the securities covered by this prospectus will be as set forth in the applicable prospectus supplement.

DESCRIPTION OF CLASS A COMMON STOCK

General

The following is a summary of the material rights of our capital stock and related provisions of our certificate of incorporation and bylaws. The following description of our capital stock does not purport to be complete and is subject to, and qualified in its entirety by, our eleventh amended and restated certificate of incorporation and fifth amended and restated bylaws, both of which are included as exhibits to the registration statement of which this prospectus is a part, as well as our eighth amended and restated investors' rights agreement that is currently in effect and which we have included as an exhibit to the registration statement of which this prospectus is a part.

Our eleventh amended and restated certificate of incorporation provides that we have two series of common stock: one series we call our Class A common stock and the other series we call our Class B common stock. As described below and in our eleventh amended and restated certificate of incorporation, the dual class common stock structure will remain in place at least until 2018 (and potentially until 2038), during the critical period when we expect to be building our commercial capabilities, launching linaclotide, and investing in our development pipeline.

This dual class structure is a fundamental element of our overall strategy to seek to maximize shareholder value over the long-term. Holders of our Class A and Class B common stock have identical rights, except that, in certain circumstances as described below, holders of our Class A common stock are entitled to one vote per share and holders of our Class B common stock are entitled to ten votes per share. The breadth of our Class B stockholder group should ensure that significant decisions about our independence are made within a context of diverse opinions and interests.

Any holder of Class B common stock may convert his or her shares at any time into shares of Class A common stock on a share-for-share basis. Shares of Class B common stock can be sold at any time and, subject to limited exceptions, irrevocably convert to shares of Class A common stock upon sale or transfer. Therefore, we expect that over time, the Class B stockholder class will diminish as a percentage of our total shares outstanding, and that the remaining Class B shares will be concentrated in the hands of our longest term stockholders.

Our authorized capital stock consists of 675,000,000 shares, each with a par value of \$0.001 per share, of which:

500,000,000 shares are designated as Class A common stock.

Table of Contents

100,000,000 shares are designated as Class B common stock.

75,000,000 shares are designated as preferred stock.

As of February 6, 2012, we had 62,623,097 shares of Class A common stock outstanding and 38,175,539 shares of Class B common stock outstanding.

Voting Rights

Each share of Class A common stock and each share of Class B common stock has one vote per share, except on the following matters (in which each share of Class A common stock has one vote per share and each share of Class B common stock has ten votes per share), if submitted to a vote of stockholders:

adoption of a merger or consolidation agreement involving Ironwood;

a sale, lease or exchange of all or substantially all of Ironwood's assets;

a dissolution or liquidation of Ironwood; or

every matter, if and when any individual, entity or "group" (as such term is used in Regulation 13D of the Exchange Act) has, or has publicly disclosed (through a press release or a filing with the SEC) an intent to have, beneficial ownership of 30% or more of the number of outstanding shares of Class A common stock and Class B common stock, combined.

Holders of shares of Class A common stock and Class B common stock vote together as a single class on all matters (including the election of directors) submitted to a vote of stockholders, unless otherwise required by our certificate of incorporation or bylaws. Our certificate of incorporation provides that any increase in the number of authorized shares of either our Class A common stock or our Class B common stock may be approved by a majority of our Class A common stock and Class B common stock, voting together as a single class. Our certificate of incorporation requires that a majority of the Class B common stock approve further issuances of shares of Class B common stock, subject to certain exceptions, or any amendment to our certificate of incorporation. Delaware law could require either our Class A common stock or Class B common stock to vote separately as a single class in the following circumstances:

If we amended our certificate of incorporation to increase or decrease the par value of a class of stock, then that class would be required to vote separately to approve the proposed amendment.

If we amended our certificate of incorporation in a manner that altered or changed the powers, preferences or special rights of a class of stock in a manner that affects them adversely then that class would be required to vote separately to approve the proposed amendment.

We have not provided for cumulative voting for the election of directors in our certificate of incorporation. Because our certificate of incorporation does provide for plurality voting for the election of directors, a director may be elected even if less than a majority of the votes cast are in favor of such election.

Dividends

Subject to preferences that may apply to any shares of preferred stock outstanding at the time, the holders of Class A common stock and Class B common stock will be entitled to share equally in any dividends that our board of directors may determine to issue from time to time. In the event a dividend is paid in the form of shares of common stock or rights to acquire shares of common stock, the holders of Class A common stock will receive Class A common stock, or rights to acquire Class A common stock, as the case may be, and the holders of Class B common stock will receive Class B common stock, or rights to acquire Class B common stock, as the case may be.

Table of Contents

We have never declared or paid any cash dividends on our capital stock, and we do not currently anticipate declaring or paying cash dividends on our capital stock in the foreseeable future. We currently intend to retain all of our future earnings, if any, to finance operations. Any future determination relating to our dividend policy will be made at the discretion of our board of directors and will depend on a number of factors, including future earnings, capital requirements, financial conditions, future prospects, contractual restrictions and covenants and other factors that our board of directors may deem relevant.

Liquidation Rights

Upon our liquidation, dissolution or winding-up, the holders of Class A common stock and Class B common stock will be entitled to share equally all assets remaining after the payment of any liabilities and the liquidation preferences on any outstanding preferred stock.

Conversion

Our Class A common stock is not convertible into any other shares of our capital stock.

Each share of Class B common stock is convertible at any time at the option of the holder into one share of Class A common stock.

In addition, each share of Class B common stock will convert automatically into one share of Class A common stock upon any transfer, whether or not for value, except for certain transfers described in our certificate of incorporation, including the following:

transfers for tax and estate planning purposes, including to trusts, corporations, partnerships or other legal entities in which the holder of Class B common stock retains the voting control over such shares;

transfers to a family member or to another legal entity for the benefit of the family member;

transfers to any person directly or indirectly controlling, controlled by or under common control with the holder of Class B common stock; and

if the holder of Class B common stock is a partnership, transfers to any general partner of the partnership who also is a director of Ironwood at that time.

The death of any holder of Class B common stock who is a natural person will result in the conversion of his or her shares of Class B common stock into Class A common stock unless, as a result of the death of such holder, the shares of Class B common stock transfer to one or more of the entities described in the preceding bulleted list.

Furthermore, each share of Class B common stock will convert automatically into one share of Class A common stock upon the earliest of the following:

the later of (1) the first date on which the number of shares of Class B common stock then outstanding is less than 19,561,556, or (2) December 31, 2018;

December 31, 2038; or

a date agreed to in writing by the holders of at least a majority of then outstanding shares of Class B common stock.

Once converted into Class A common stock, the Class B common stock will be retired and will not be reissued.

Table of Contents

Preferred Stock

Our board of directors has the authority, without approval by the stockholders, to issue up to a total of 75,000,000 shares of preferred stock in one or more series. Our board of directors may establish the number of shares to be included in each such series and may fix the designations, preferences, powers and other rights of the shares of a series of preferred stock. Our board could authorize the issuance of preferred stock with voting or conversion rights that could dilute the voting power or rights of the holders of common stock. However, such shares of preferred stock would not convert into shares of Class B common stock without the prior consent of our board. The issuance of preferred stock, while providing flexibility in connection with possible acquisitions and other corporate purposes, could, among other things, have the effect of delaying, deferring or preventing a change in control of Ironwood and might harm the market price of our common stock. We have no current plans to issue any shares of preferred stock.

Registration Rights

The holders of our Class B common stock issued upon conversion of our preferred stock at our initial public offering are entitled to rights with respect to the registration under the Securities Act of shares of Class A common stock into which their shares of Class B common stock converts. These registration rights are contained in our eighth amended and restated investors' rights agreement and are described below. The registration rights under the investors' rights agreement will expire five years following the completion of our initial public offering, or, with respect to an individual holder, when such holder holds less than 1% of the number of outstanding shares of Class B common stock and is able to sell all of its shares pursuant to Rule 144 under the Securities Act in any 90 day period.

Demand Registration Rights

The holders of shares of common stock having demand registration rights under the investors' rights agreement have the right to require that we register their shares of Class A common stock into which their shares of Class B common stock converts, provided such registration relates to not less than 20% in aggregate of our then outstanding shares of Class B common stock having demand registration rights and the anticipated aggregate offering price to the public is at least \$5,000,000. In response to these demand registration rights, we are only obligated to effect two registrations for each series of our outstanding preferred stock that were converted into Class B common stock upon the completion of our initial public offering. We may postpone the filing of a registration statement for up to 90 days once in any 12-month period if our board of directors determines in good faith that the filing would be seriously detrimental to our stockholders or us. The underwriters of any underwritten offering have the right to limit the number of shares to be included in a registration statement filed in response to the exercise of these demand registration rights. We must pay all expenses, except for underwriters' discounts and commissions, incurred in connection with the exercise of these demand registration rights.

Piggyback Registration Rights

If we register any securities for public sale, the stockholders with piggyback registration rights under the investors' rights agreement have the right to include their shares in the registration, subject to specified exceptions. In accordance with the terms of the investors' rights agreement, we have received a waiver of these piggyback registration rights with respect to the registration for this offering. The underwriters of any underwritten offering have the right to limit the number of shares registered by these stockholders due to marketing reasons. We must pay all expenses, except for underwriters' discounts and commissions, incurred in connection with the exercise of these piggyback registration rights.

Table of Contents

S-3 Registration Rights

If we are eligible to file a registration statement on Form S-3, the stockholders with S-3 registration rights under the investors' rights agreement can request that we register their shares, provided that the total price of the shares of common stock offered to the public is at least \$500,000. These S-3 registration rights are wholly distinct from the demand registration rights and piggyback registration rights described above. A holder of S-3 registration rights may not require us to file a registration statement on Form S-3 if we have already effected two registrations on Form S-3 at the request of such holder in the last 12-month period. We may postpone the filing of a Form S-3 registration statement for up to 90 days once in any 12-month period if our board of directors determines in good faith that the filing would be seriously detrimental to our stockholders or us. The holders of S-3 registration rights must pay all expenses associated with any registrations on Form S-3 after the first six registrations on Form S-3.

Anti-Takeover Effects of our Certificate of Incorporation and Bylaws and Delaware Law

Certain provisions of Delaware law, our certificate of incorporation and our bylaws could have the effect of delaying, deferring or discouraging another party from acquiring control of us. In particular, our dual class common stock structure will concentrate ownership of our voting stock in the hands of our founders, board members and pre-initial public offering employees. These provisions, which are summarized below, encourage persons seeking to acquire control of us to first negotiate with our board of directors and the holders of our capital stock.

Dual Class Common Stock Structure

As discussed above, our Class B common stock has ten votes per share in change of control transactions, while our Class A common stock has one vote per share. Because of our dual class common stock structure, holders of our Class B common stock (and their affiliates) will continue to be able to control all matters submitted to our stockholders for approval even if they come to own significantly less than 50% of the shares of our outstanding common stock. This concentrated control could discourage others from initiating any potential merger, takeover or other change of control transaction that other stockholders may view as beneficial.

Undesignated Preferred Stock

The ability to authorize undesignated preferred stock makes it possible for our board of directors to issue preferred stock with voting or other rights or preferences that could impede the success of any attempt to acquire us. These and other provisions may have the effect of deferring hostile takeovers or delaying changes in control or management of our company.

Limits on Ability of Stockholders to Act by Written Consent

We have provided in our certificate of incorporation that our stockholders may not act by written consent other than in matters that require a separate series vote of the Class B common stock. In addition, our certificate of incorporation also requires that special meetings of stockholders be called only by our board of directors, our chairman, our chief executive officer or our president if there is no chief executive officer. This limit on the ability of our stockholders to act by written consent or to call a special meeting may lengthen the amount of time required to take stockholder actions. As a result, a holder controlling a majority of our capital stock would not be able to amend our bylaws or remove directors without holding a stockholders meeting.

Table of Contents

Requirements for Advance Notification of Stockholder Nominations and Proposals

Our bylaws establish advance notice procedures with respect to stockholder proposals and the nomination of candidates for election as directors, other than nominations made by or at the direction of the board of directors or a committee of the board of directors. The bylaws do not give the board of directors the power to approve or disapprove stockholder nominations of candidates or proposals regarding business to be conducted at a special or annual meeting of the stockholders. However, our bylaws may have the effect of precluding the conduct of certain business at a meeting if the proper procedures are not followed. These provisions may also discourage or deter a potential acquirer from conducting a solicitation of proxies to elect the acquirer's own slate of directors or otherwise attempting to obtain control of our company.

Staggered Board of Directors

Nine individuals currently serve on our board of directors, which is divided into three classes. At each annual meeting of stockholders, a class of directors is to be elected for a three-year term to succeed the directors of the same class whose terms are then expiring. As a result, a portion of our board of directors will be elected each year. Our certificate of incorporation authorizes our board of directors to fix the number of directors from time to time by a resolution of the majority of our board of directors. Any additional directorships resulting from an increase in the number of directors will be distributed among the three classes so that, as nearly as possible, each class shall consist of one-third of the directors. The division of our board of directors into three classes with staggered three-year terms may delay or prevent a change of our management or a change in control. Between stockholder meetings, directors may be removed by our stockholders only for cause, and the board of directors may appoint new directors to fill the vacancies. These provisions may prevent a stockholder from removing incumbent directors and simultaneously gaining control of the board of directors by filling the resulting vacancies with its own nominees. Consequently, the existence of these provisions may have the effect of deterring hostile takeovers, which could depress the market price of our Class A common stock.

Delaware Anti-Takeover Statute

We are subject to Section 203 of the Delaware General Corporation Law. This statute regulating corporate takeovers prohibits a Delaware corporation from engaging in any business combination with any interested stockholder for three years following the date that the stockholder became an interested stockholder, unless:

prior to the date of the transaction, the board of directors of the corporation approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;

upon completion of the transaction that resulted in the interested stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the number of shares outstanding (a) shares owned by persons who are directors and also officers, and (b) shares owned by employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or

on or subsequent to the date of the transaction, the business combination is approved by the board of directors and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least 66²/₃% of the outstanding voting stock which is not owned by the interested stockholder.

Table of Contents

Generally, a business combination includes a merger, asset or stock sale, or other transaction resulting in a financial benefit to the interested stockholder. An interested stockholder is any person who, together with such person's affiliates and associates (i) owns 15% or more of a corporation's voting securities or (ii) is an affiliate or associate of a corporation and was the owner of 15% or more of the corporation's voting securities at any time within the three year period immediately preceding a business combination of the corporation governed by Section 203. We expect the existence of this provision to have an anti-takeover effect with respect to transactions our board of directors does not approve in advance. We also anticipate that Section 203 may discourage takeover attempts that might result in a premium over the market price for the shares of Class A common stock held by our stockholders.

Transfer Agent and Registrar

The transfer agent and registrar for our Class A common stock is Computershare Trust Company, N.A.

Listing

Our Class A common stock is listed on The NASDAQ Global Select Market under the symbol "IRWD."

Table of Contents

**MATERIAL U.S. FEDERAL TAX CONSIDERATIONS FOR NON-U.S.
HOLDERS OF COMMON STOCK**

The following is a summary of certain material U.S. federal income and estate tax considerations relating to the purchase, ownership and disposition of our common stock by Non-U.S. Holders (defined below), but does not purport to be a complete analysis of all the potential tax considerations. This summary is based upon the Internal Revenue Code of 1986, as amended (the "Code"), the Treasury regulations promulgated or proposed thereunder and administrative and judicial interpretations thereof, all as of the date hereof and all of which are subject to change at any time, possibly on a retroactive basis. This summary is limited to the tax consequences to those persons who hold our common stock as capital assets within the meaning of Section 1221 of the Code.

This summary does not purport to deal with all aspects of U.S. federal income and estate taxation that might be relevant to particular Non-U.S. Holders in light of their particular investment circumstances or status, nor does it address specific tax considerations that may be relevant to particular persons (including, for example, financial institutions, broker-dealers, insurance companies, partnerships or other pass-through entities, certain U.S. expatriates, tax-exempt organizations, "controlled foreign corporations," "passive foreign investment companies," corporations that accumulate earnings to avoid U.S. federal income tax, or persons in special situations, such as those who have elected to mark securities to market or those who hold common stock as part of a straddle, hedge, conversion transaction or other integrated investment). In addition, this summary does not address U.S. federal alternative minimum, certain estate and gift tax considerations or considerations under the tax laws of any state, local or non-U.S. jurisdiction.

This summary is for general information only. Non-U.S. Holders are urged to consult their tax advisors concerning the U.S. federal income and estate taxation, state, local and non-U.S. taxation and other tax consequences to them of the purchase, ownership and disposition of our common stock, as well as the application of state, local and non-U.S. income and other tax laws.

For purposes of this summary, a "Non-U.S. Holder" means a beneficial owner of common stock that for U.S. federal income tax purposes is not:

an individual who is a citizen or resident of the U.S.,

a corporation (or other entity taxable as a corporation) created or organized under the laws of the U.S., any state thereof, or the District of Columbia,

an estate the income of which is subject to U.S. federal income tax regardless of its source, or

a trust if (a) a court within the U.S. is able to exercise primary supervision over the administration of the trust, and one or more U.S. persons have the authority to control all substantial decisions of the trust, or (b) a valid election to be treated as a U.S. person is in effect with respect to such trust.

If a partnership, or an entity or arrangement treated as a partnership for U.S. federal income tax purposes, holds common stock, the tax treatment of a partner in the partnership generally will depend upon the partner's tax status and upon the activities of the partnership. Accordingly, partnerships and other entities that are classified as partnerships for U.S. federal income tax purposes that hold our common stock and partners in such partnerships should consult their tax advisors.

Distributions on Our Common Stock

As discussed under "Dividends" above, we do not currently expect to pay dividends. In the event that we do make a distribution of cash or property with respect to our common stock, any such distributions will be treated as a dividend for U.S. federal income tax purposes to the extent paid from our current or accumulated earnings and profits (as determined under U.S. federal income tax

Table of Contents

principles). If a distribution exceeds our current and accumulated earnings and profits, the excess will be treated first as a tax-free return of capital to the extent of the Non-U.S. Holder's tax basis in our common stock and thereafter as capital gain from the sale or exchange of such stock. Any such distribution would also be subject to the discussion below under the section titled "Additional withholding and information reporting requirements." Dividends paid to a Non-U.S. Holder generally will be subject to a 30% U.S. federal withholding tax unless such Non-U.S. Holder provides us or our agent, as the case may be, with a properly executed:

1. IRS Form W-8BEN (or successor form) claiming, under penalties of perjury, a reduction in withholding under an applicable income tax treaty, or
2. IRS Form W-8ECI (or successor form) stating that a dividend paid on common stock is not subject to withholding tax because it is effectively connected with a U.S. trade or business of the Non-U.S. Holder (in which case such dividend generally will be subject to regular graduated U.S. tax rates as described below).

The certification requirement described above also may require a Non-U.S. Holder that provides an IRS form or that claims treaty benefits to provide its U.S. taxpayer identification number. Special certification and other requirements apply in the case of certain Non-U.S. Holders that are intermediaries or pass-through entities for U.S. federal income tax purposes.

Each Non-U.S. Holder is urged to consult its own tax advisor about the specific methods for satisfying these requirements. A claim for exemption will not be valid if the person receiving the applicable form has actual knowledge or reason to know that the statements on the form are false.

If dividends are effectively connected with a U.S. trade or business of the Non-U.S. Holder (and, if required by an applicable income tax treaty, attributable to a U.S. permanent establishment), the Non-U.S. Holder, although exempt from the withholding tax described above (provided that the certifications described above are satisfied), will be subject to U.S. federal income tax on such dividends on a net income basis in the same manner as if it were a resident of the United States. In addition, if such Non-U.S. Holder is a non-U.S. corporation and dividends are effectively connected with its U.S. trade or business (and, if required by an applicable income tax treaty, attributable to a U.S. permanent establishment), such Non-U.S. Holder may be subject to an additional "branch profits tax" equal to 30% (unless reduced by an applicable income treaty) in respect of such effectively-connected income.

If a Non-U.S. Holder is eligible for a reduced rate of U.S. federal withholding tax pursuant to an income tax treaty, such holder may obtain a refund or credit of any excess amount withheld by timely filing an appropriate claim for refund with the IRS.

Disposition of Our Common Stock

Subject to the discussion below under the section titled "Additional withholding and information reporting requirements", in general, a Non-U.S. Holder will not be subject to U.S. federal income tax or withholding tax on gain recognized on a sale, exchange or other taxable disposition of a share of our common stock, unless:

the gain is effectively connected with a trade or business of the Non-U.S. Holder in the United States (and, if required by an applicable income tax treaty, attributable to a U.S. permanent establishment);

the Non-U.S. Holder is a nonresident alien who is present in the United States for 183 days or more in the taxable year of the disposition and meets certain other conditions; or

we are or have been a "United States real property holding corporation," as defined in the Code (a "USRPHC"), at any time within the shorter of the five-year period preceding the disposition and the Non-U.S. Holder's holding period in the share of our common stock.

Table of Contents

We believe that we are not, and do not anticipate becoming, a USRPHC. However, because the determination of whether we are a USRPHC depends on the fair market value of our U.S. real property relative to the fair market value of other business assets, there can be no assurance that we will not become a USRPHC in the future. Even if we become a USRPHC, a Non-U.S. Holder would not be subject to U.S. federal income tax on a sale, exchange or other taxable disposition of our common stock so long as our common stock continues to be regularly traded on an established securities market and such Non-U.S. Holder does not own and is not deemed to own (directly, indirectly or constructively) more than 5% of our common stock at any time during the shorter of the five year period ending on the date of disposition and the holder's holding period.

If a Non-U.S. Holder is engaged in a trade or business in the U.S. and gain recognized by the Non-U.S. Holder on a sale or other disposition of our common stock is effectively connected with the conduct of such trade or business, the Non-U.S. Holder will generally be subject to regular U.S. income tax as if the Non-U.S. Holder were a U.S. person, subject to an applicable income tax treaty providing otherwise. Additionally, a non-U.S. corporation may also, under certain circumstances, be subject to an additional "branch profits tax" imposed at a rate of 30% (or, if applicable, a lower income tax treaty rate). Non-U.S. Holders whose gain from dispositions of our common stock may be effectively connected with the conduct of a trade or business in the United States are urged to consult their own tax advisors with respect to the U.S. tax consequences of the purchase, ownership and disposition of our common stock.

A nonresident alien who is subject to U.S. federal income tax because such individual was present in the United States for 183 days or more in the taxable year of the taxable disposition of our common stock will be subject to a flat 30% tax on the gain derived from such disposition, which may be offset by U.S. source capital loss.

Additional withholding and information reporting requirements

Recent legislation generally will impose withholding at a rate of 30% on payments to certain foreign entities (including financial intermediaries), including dividends on and the gross proceeds from dispositions of U.S. common stock, unless various U.S. information reporting and due diligence requirements that are different from, and in addition to, the certification requirements described above under "Distributions on Our Common Stock" have been satisfied (generally relating to ownership by U.S. persons of interests in or accounts with those entities). The withholding rules apply to payments of dividends on U.S. common stock beginning January 1, 2014, and to gross proceeds from dispositions of U.S. common stock beginning January 1, 2015. The IRS's guidance with respect to these rules is only preliminary, and the scope of these rules remains unclear and potentially subject to material changes. Non-U.S. Holders should consult their tax advisors regarding the possible implications of this legislation on their investment in our common stock.

Backup Withholding and Information Reporting

Generally, we must report annually to the IRS and to each Non-U.S. Holder certain information including the Non-U.S. Holder's name, address and taxpayer identification number, the aggregate amount of distributions on our common stock paid to that Non-U.S. Holder during the calendar year and the amount of tax withheld, if any.

Backup withholding tax is imposed on dividends and certain other types of payments to certain U.S. persons (currently at a rate of 28% and scheduled to increase to 31% for taxable years 2013 and thereafter). In general, backup withholding tax will not apply to payments of dividends on common stock or proceeds from the sale of common stock payable to a Non-U.S. Holder if the certification described above in "Distributions on Our Common Stock" is duly provided by such Non-U.S. Holder or the Non-U.S. Holder otherwise establishes an exemption, provided that the payor does not have

Table of Contents

actual knowledge or reason to know that the Non-U.S. Holder is a U.S. person or that the conditions of any claimed exemption are not satisfied. Certain information reporting may still apply to distributions even if an exemption from backup withholding is established. Copies of any information returns reporting the distributions to a Non-U.S. Holder and any withholding also may be made available to the tax authorities in the country in which a Non-U.S. Holder resides under the provisions of an applicable income tax treaty.

Backup withholding is not an additional tax and any amounts withheld under the backup withholding tax rules from a payment to a Non-U.S. Holder will be allowed as a refund or a credit against such Non-U.S. Holder's U.S. federal income tax liability, provided that the requisite procedures are followed.

Non-U.S. Holders are urged to consult their own tax advisors regarding their particular circumstances and the availability of and procedure for obtaining an exemption from backup withholding.

U.S. Federal Estate Tax

Common stock owned or treated as owned by an individual who is a Non-U.S. Holder at the time of death generally will be included in the individual's gross estate for U.S. federal estate tax purposes and may be subject to U.S. federal estate tax unless an applicable estate or other tax treaty provides otherwise.

Table of Contents

PLAN OF DISTRIBUTION

General

The shares may be sold:

to or through underwriting syndicates represented by managing underwriters;

to or through one or more underwriters without a syndicate;

through dealers or agents; or

to investors directly in negotiated sales or in competitively bid transactions.

The prospectus supplement for each offering will describe, to the extent required, information with respect to that offering, including:

the name or names of any underwriters and the respective amounts underwritten;

the sale price and the proceeds from the sale;

any underwriting discounts and other items constituting underwriters' compensation;

any public offering price and any discounts or concessions allowed or reallocated or paid to dealers; and

any material relationships with the underwriters.

Underwriters

If underwriters are used in the sale, we will execute an underwriting agreement with those underwriters relating to the sale of the shares. Unless otherwise set forth in the applicable prospectus supplement, the obligations of the underwriters to purchase these shares will be subject to conditions, and the underwriters will be obligated to purchase all of these shares if any are purchased.

The shares subject to an underwriting agreement will be acquired by the underwriters for their own account and may be resold by them from time to time in one or more transactions, including negotiated transactions, at a fixed public offering price or at varying prices determined at the time of sale. Underwriters may be deemed to have received compensation in the form of underwriting discounts or commissions and may also receive commissions from the purchasers of these shares for whom they may act as agent. Underwriters may sell these shares to or through dealers. These dealers may receive compensation in the form of discounts, concessions or commissions from the underwriters and/or commissions from the purchasers for whom they may act as agent. Any public offering price and any discounts or concessions allowed or reallocated or paid to dealers may be changed from time to time.

Agents

We may sell shares through agents designated by us from time to time. We will name any agent involved in the offer or sale of these shares and will list commissions payable by us to these agents in the applicable prospectus supplement. These agents will be acting on a best efforts basis to solicit purchases for the period of its appointment, unless we state otherwise in the applicable prospectus supplement.

Direct Sales

We may sell shares directly to purchasers. In this case, we will not engage underwriters or agents in the offer and sale of the applicable shares.

Table of Contents

Indemnification

We may indemnify underwriters, dealers or agents who participate in the distribution of shares against certain liabilities, including liabilities under the Securities Act, and agree to contribute to payments which these underwriters, dealers or agents may be required to make.

Secondary Sales

Shares of our Class A common stock may be sold from time to time by selling stockholders, through public or private transactions at prevailing market prices or at privately negotiated prices, as described in the applicable prospectus supplement.

LEGAL MATTERS

Unless the applicable prospectus supplement indicates otherwise, our counsel Ropes & Gray, LLP, Boston Massachusetts, will pass upon the validity of the shares of Class A common stock offered by this prospectus.

EXPERTS

Ernst & Young LLP, independent registered public accounting firm, has audited our consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2010, as set forth in their report, which is incorporated by reference in this prospectus and elsewhere in the registration statement. Our financial statements as of December 31, 2010 are incorporated by reference in reliance on Ernst & Young LLP's report, given on their authority as experts in accounting and auditing.

Table of Contents

