CALCULATION OF REGISTRATION FEE

Title of Securities	Proposed Maximum Aggregate	Amount of Registration
to be Registered	Offering Price	Fee
Common stock, par value \$0.0001 per share	\$150,000,000	\$ 16,365(1)

⁽¹⁾ The filing fee is calculated and being paid pursuant to Rule 457(r) under the Securities Act of 1933, as amended, or the Securities Act, based on the proposed maximum aggregate offering price, and relates to the registrant's Registration Statement on Form S-3 (File No. 333-255833) in accordance with Rules 456(b) and 457(r) under the Securities Act.

PROSPECTUS SUPPLEMENT

(To Prospectus dated May 6, 2021)



Common Stock

We have entered into an Open Market Sale AgreementSM (sales agreement) with Jefferies LLC (Jefferies) relating to the sale of shares of our common stock offered by this prospectus supplement and the accompanying prospectus. In accordance with the terms of the sales agreement, under this prospectus supplement, we may offer and sell shares of our common stock, \$0.0001 par value per share, having an aggregate offering price of up to \$150,000,000 from time to time through Jefferies acting as our sales agent.

Our common stock is listed on the Nasdaq Global Select Market under the symbol "ORIC." On May 5, 2021, the last reported sale price of our common stock on the Nasdaq Global Select Market was \$23.39 per share.

Sales of our common stock, if any, under this prospectus supplement and the accompanying prospectus will be made in sales deemed to be an "at the market offering" as defined in Rule 415(a)(4) promulgated under the Securities Act of 1933, as amended (the Securities Act). Jefferies is not required to sell any specific amount of securities, but will act as our sales agent using commercially reasonable efforts consistent with its normal trading and sales practices, on mutually agreed terms between Jefferies and us. There is no arrangement for funds to be received in any escrow, trust or similar arrangement.

Jefferies will be entitled to compensation at a commission rate of up to 3.0% of the gross proceeds of any shares of common stock sold under the sales agreement. In connection with the sale of the common stock on our behalf, Jefferies will be deemed to be an "underwriter" within the meaning of the Securities Act and the compensation of Jefferies will be deemed to be underwriting commissions or discounts. We have also agreed to provide indemnification and contribution to Jefferies with respect to certain liabilities, including liabilities under the Securities Act or the Securities Exchange Act of 1934, as amended (the Exchange Act). See "Plan of Distribution" beginning on page S-10 for additional information regarding the compensation to be paid to Jefferies.

Investing in our common stock involves risks. See "Risk Factors" beginning on page S-3 of this prospectus supplement, page 3 of the accompanying prospectus and in the reports we file with the Securities and Exchange Commission pursuant to the Securities Exchange Act of 1934, as amended, incorporated by reference in this prospectus supplement, before making a decision to invest in our common stock.

The Securities and Exchange Commission and state securities regulators have not approved or disapproved of these securities, or determined if this prospectus supplement is truthful or complete. Any representation to the contrary is a criminal offense.

Jefferies

The date of this prospectus supplement is May 6, 2021.

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ABOUT THIS PROSPECTUS SUPPLEMENT

This document is in two parts. The first part is this prospectus supplement, which describes the specific terms of this offering and also adds to and updates information contained in the accompanying prospectus and the documents incorporated by reference into this prospectus supplement and the accompanying prospectus. The second part is the accompanying prospectus, which gives more general information, some of which may not apply to this offering. Generally, when we refer to this prospectus, we are referring to both the prospectus supplement and the accompanying prospectus. In this prospectus supplement, as permitted by law, we "incorporate by reference" information from other documents that we file with the Securities and Exchange Commission (the SEC). This means that we can disclose important information to you from those documents which we may file with the SEC from time to time. The information incorporated by reference is considered to be a part of this prospectus supplement and the accompanying prospectus and should be read with the same care. When we update the information contained in documents that have been incorporated by reference by making future filings with the SEC, the information included or incorporated by reference in this prospectus supplement is considered to be automatically updated and superseded. In other words, in case of a conflict or inconsistency between information contained in this prospectus supplement, you should rely on the information contained in the document that was filed later.

You should not consider any information in this prospectus supplement or the accompanying prospectus to be investment, legal or tax advice. You should consult your own counsel, accountants and other advisers for legal, tax, business, financial and related advice regarding the purchase of the common stock offered by this prospectus supplement. If the description of the offering varies between this prospectus supplement and the accompanying prospectus, you should rely on the information contained in this prospectus supplement.

You should rely only on the information contained or incorporated by reference in this prospectus supplement and the accompanying prospectus. We have not, and Jefferies has not, authorized anyone to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. We are not, and Jefferies is not, making an offer of these securities in any state where the offer is not permitted or in which the person making such offer or solicitation is not qualified to do so or to any person to whom it is unlawful to make such offer or solicitation. You should not assume that the information in this prospectus supplement, the accompanying prospectus or any document incorporated by reference is accurate as of any date other than the dates of the respective documents. Our business, financial condition, results of operations and prospects may have changed since that date.

PROSPECTUS SUPPLEMENT SUMMARY

This summary highlights selected information contained elsewhere in this prospectus. This summary does not contain all of the information you should consider before investing in our common stock. You should read this entire prospectus carefully, especially the section in this prospectus supplement titled "Risk factors," and our financial statements and the related notes incorporated by reference into this prospectus, before making an investment decision. As used in this prospectus supplement, unless the context otherwise requires, references to "we," "us," "our," "our company," and "ORIC" refer to ORIC Pharmaceuticals, Inc.

Overview

ORIC Pharmaceuticals is a clinical-stage biopharmaceutical company dedicated to improving patients' lives by *Overcoming Resistance In Cancer.*

Profound advancements in oncology drug development have expanded the treatment options available to patients, yet therapeutic resistance and relapse continue to limit the efficacy and duration of clinical benefit of such treatments. Collectively, our founders and management team have a decades-long heritage of identifying and characterizing resistance mechanisms in oncology, having discovered and developed groundbreaking medicines at companies such as Ignyta, Medivation, Aragon and Genentech.

ORIC's lead product candidate, ORIC-101, is a potent and selective small molecule antagonist of the glucocorticoid receptor, which has been linked to resistance to multiple classes of cancer therapeutics across a variety of solid tumors. ORIC-101 is currently in two separate Phase 1b trials in combination with (1) Abraxane (nab-paclitaxel) in advanced or metastatic solid tumors and (2) Xtandi (enzalutamide) in metastatic prostate cancer. ORIC's other product candidates include (1) ORIC-533, an orally bioavailable small molecule inhibitor of CD73, a key node in the adenosine pathway believed to play a central role in resistance to chemotherapy- and immunotherapy-based treatment regimens, (2) ORIC-944, an allosteric inhibitor of the polycomb repressive complex 2 (PRC2) via the embryonic ectoderm development (EED) subunit, being developed for prostate cancer, and (3) ORIC-114, a brain penetrant inhibitor designed to selectively target EGFR and HER2 with high potency against exon 20 insertion mutations, being developed across multiple genetically defined cancers. Beyond these four product candidates, ORIC is also developing multiple precision medicines targeting other hallmark cancer resistance mechanisms.

Corporate information

We were incorporated in Delaware in August 2014. Our principal executive offices are located at 240 E. Grand Avenue, 2nd Floor, South San Francisco, California 94080. Our telephone number is (650) 388-5600. Our website address is www.oricpharma.com. Information contained on the website is not incorporated by reference into this prospectus and should not be considered to be part of this prospectus.

We use the ORIC Pharmaceuticals logo and other marks as trademarks in the United States and other countries. This prospectus contains references to our trademarks and service marks and to those belonging to other entities. Solely for convenience, trademarks and trade names referred to in this prospectus, including logos, artwork and other visual displays, may appear without the TM symbol, but such references are not intended to indicate in any way that we will not assert, to the fullest extent under applicable law, our rights or the rights of the applicable licensor to these trademarks and trade names. We do not intend our use or display of other entities' trade names, trademarks or service marks to imply a relationship with, or endorsement or sponsorship of us by, any other entity.

THE OFFERING

Common stock offered by us

Shares of our common stock having an aggregate offering price of up to \$150.0 million.

Common stock to be outstanding immediately after this offering

Up to 43,103,823 shares (as more fully described in the notes following this table), assuming sales of 6,412,997 shares of our common stock in this offering at an offering price of \$23.39 per share, which was the last reported sale price of our common shares on the Nasdaq Global Select Market on May 5, 2021. The actual number of shares issued will vary depending on the sales price under this offering.

Plan of Distribution

"At the market offering" that may be made from time to time through the sales agent, Jefferies. See "Plan of Distribution" on page S-10 of this prospectus supplement.

Use of Proceeds

We currently intend to use the net proceeds from this offering, together with our existing cash, cash equivalents and short-term investments, as follows: to fund the development of ORIC-101, to fund the development of ORIC-533, to fund the development of ORIC-944, to fund the development of ORIC-114, to fund other research and development activities including the potential acquisition of and drug development activities related to new programs, as well as for working capital and other general corporate purposes. See the section titled "Use of Proceeds" for more information.

Risk Factors

Investing in our common stock involves significant risks. Before making an investment decision, please read the information contained in and incorporated by reference under the heading "Risk Factors" on page S-3 of this prospectus supplement, and under similar headings in other documents that are incorporated by reference into this prospectus supplement and the accompanying prospectus.

"ORIC"

The Nasdaq Global Select Market symbol

The number of shares of our common stock shown above to be outstanding after this offering is based on 36,690,826 shares of common stock outstanding as of March 31, 2021, and exclude:

- 5,062,744 shares of common stock issuable upon the exercise of options outstanding as of March 31, 2021, with a weighted-average exercise price of \$13.58 per share;
- 4,486 shares of common stock issued upon the early exercise of certain options, which are subject to a right of repurchase by us as
 of March 31, 2021;
- 114,800 shares of common stock issuable upon the exercise of options that we granted after March 31, 2021, with a weighted-average exercise price of \$23.44 per share;
- 2,174,521 shares of common stock reserved for future issuance under our 2020 Equity Incentive Plan (2020 Plan) as of March 31,
 2021, as well as automatic increases in the number of shares of our common stock reserved for future issuance under this plan; and
- 290,000 shares of common stock reserved for future issuance under our 2020 Employee Stock Purchase Plan as of March 31, 2021, as well as any automatic increases in the number of our common stock reserved for future issuances under this plan.

RISK FACTORS

Investing in our common stock involves a high degree of risk. Before making a decision to invest in our common stock, you should consider carefully the risks and uncertainties described under the heading "Risk Factors" contained or incorporated by reference in this prospectus supplement and the accompanying prospectus, including the risk factors incorporated by reference herein from our most recent Quarterly Report on Form 10-Q, as may be updated by our subsequent annual reports, quarterly reports and other filings we make with the SEC. The risks described in these documents are not the only ones we face. There may be other unknown or unpredictable economic, business, competitive, regulatory or other factors that could harm our future results. Past financial performance may not be a reliable indicator of future performance, and historical trends should not be used to anticipate results or trends in future periods. If any of these risks actually occurs, our business, financial condition, results of operations or cash flow could be harmed. This could cause the trading price of our common stock to decline, resulting in a loss of all or part of your investment. Please also read carefully the section below titled "Special Note Regarding Forward-Looking Statements."

Additional risks related to the offering

We will have broad discretion in the use of the net proceeds from this offering and may not use them effectively.

We cannot specify with certainty the particular uses of the net proceeds we will receive from this offering. Our management will have broad discretion in the application of the net proceeds. We currently intend to use the net proceeds from this offering, if any, together with our existing cash, cash equivalents and short-term investments, to fund the development of ORIC-101, to fund the development of ORIC-533, to fund the development of ORIC-944, to fund the development of ORIC-114, to fund other research and development activities including the potential acquisition of and drug development activities related to new programs, as well as for working capital and other general corporate purposes. Our management may spend a portion or all of the net proceeds from this offering in ways that our stockholders may not desire or that may not yield a favorable return. The failure by our management to apply these funds effectively could harm our business, financial condition, results of operations and prospects. Pending their use, we may invest the net proceeds from this offering in a manner that does not produce income or that loses value.

If you purchase our common stock in this offering, you may experience immediate and substantial dilution in the net tangible book value of your shares.

The offering price per share in this offering may exceed the net tangible book value per share of our common stock outstanding prior to this offering. Assuming that an aggregate of 6,412,997 shares of our common stock are sold at a price of \$23.39 per share, the last reported sale price of our common stock on the Nasdaq Global Select Market on May 5, 2021, for aggregate gross proceeds of \$150.0 million, and after deducting commissions and estimated offering expenses payable by us, you would experience immediate dilution of \$13.61 per share, representing the difference between our as adjusted net tangible book value per share as of March 31, 2021 after giving effect to this offering and the assumed public offering price. The exercise of outstanding stock options would result in further dilution of your investment. See the section titled "Dilution" below for a more detailed illustration of the dilution you would incur if you participate in this offering. Because the sales of the shares offered hereby will be made directly into the market or in negotiated transactions, the prices at which we sell these shares will vary and these variations may be significant. Purchasers of the shares we sell, as well as our existing stockholders, will experience significant dilution if we sell shares at prices significantly below the price at which they invested.

Future sales or issuances of our common stock in the public markets, or the perception of such sales, could depress the trading price of our common stock.

The sale of a substantial number of shares of our common stock or other equity-related securities in the public markets, or the perception that such sales could occur, could depress the market price of our common stock and impair our ability to raise capital through the sale of additional equity securities. We may sell large quantities of our common stock at any time pursuant to this prospectus supplement or in one or more separate offerings. We cannot predict the effect that future sales of common stock or other equity-related securities would have on the market price of our common stock.

It is not possible to predict the actual number of shares we will sell under the sales agreement, or the gross proceeds resulting from those sales.

Subject to certain limitations in the sales agreement and compliance with applicable law, we have the discretion to deliver instruction to Jefferies to sell shares of our common stock at any time throughout the term of the sales agreement. The number of shares, if any, that are sold through Jefferies after our instruction will fluctuate based on a number of factors, including the market price of our common stock during the sales period, the limits we set with Jefferies in any instruction to sell shares, and the demand for our common stock during the sales period. Because the price per share of each share sold, if any, will fluctuate during this offering, it is not currently possible to predict the number of shares that will be sold or the gross proceeds to be raised in connection with those sales.

The common stock offered hereby will be sold in "at the market" offerings, and investors who buy shares at different times will likely pay different prices.

Investors who purchase shares in this offering at different times will likely pay different prices, and so may experience different outcomes in their investment results. We will have discretion, subject to market demand, to vary the timing, prices, and numbers of shares sold, and there is no predetermined minimum or maximum sales price. Investors may experience a decline in the value of their shares as a result of share sales made at prices lower than the prices they paid.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus supplement and the accompanying prospectus, including the documents incorporated or deemed to be incorporated by reference into this prospectus supplement and the accompanying prospectus, contain forward-looking statements. All statements other than statements of historical facts contained in this prospectus supplement and the accompanying prospectus, including statements regarding our future results of operations and financial position, business strategy, development plans, planned preclinical studies and clinical trials, future results of clinical trials, expected research and development costs, regulatory strategy, timing and likelihood of success, as well as plans and objectives of management for future operations, are forward-looking statements. In some cases, you can identify forward-looking statements by terms such as "may," "will," "should," "would," "expect," "plan," "anticipate," "could," "intend," "target," "project," "contemplate," "believe," "estimate," "predict," "potential" or "continue" or the negative of these terms or other similar expressions. Forward-looking statements contained in this prospectus include, but are not limited to, statements about:

- the ability of our clinical trials to demonstrate safety and efficacy of our product candidates, and other positive results;
- the timing, progress and results of preclinical studies and clinical trials for ORIC-101, ORIC-533, ORIC-944, ORIC-114 and other product candidates we may develop, including statements regarding the timing of initiation and completion of studies or trials and related preparatory work, the period during which the results of the trials will become available, and our research and development programs;
- the timing, scope and likelihood of regulatory filings and approvals, including timing of Investigational New Drug, or IND, or Clinical Trial Application, or CTA, applications and final Food and Drug Administration, or FDA, approval of ORIC-101, ORIC-533, ORIC-944, ORIC-114 and any other future product candidates;
- the timing, scope or likelihood of foreign regulatory filings and approvals;
- our ability to develop and advance our current product candidates and programs into, and successfully complete, clinical studies;
- our manufacturing, commercialization, and marketing capabilities and strategy;
- our plans relating to commercializing our product candidates, if approved, including the geographic areas of focus and sales strategy;
- the need to hire additional personnel and our ability to attract and retain such personnel;
- our expectations regarding the impact of the COVID-19 pandemic on our business;
- the size of the market opportunity for our product candidates, including our estimates of the number of patients who suffer from the diseases we are targeting;
- our expectations regarding the approval and use of our product candidates in combination with other drugs;
- our competitive position and the success of competing therapies that are or may become available;
- our estimates of the number of patients that we will enroll in our clinical trials;
- the beneficial characteristics, safety, efficacy and therapeutic effects of our product candidates;
- our ability to obtain and maintain regulatory approval of our product candidates:
- our plans relating to the further development of our product candidates, including additional indications we may pursue;
- existing regulations and regulatory developments in the United States, Europe and other jurisdictions;
- our intellectual property position, including the scope of protection we are able to establish and maintain for intellectual property rights
 covering ORIC-101, ORIC-533, ORIC-944, ORIC-114 and other product candidates we may develop, including the extensions of existing
 patent terms where available, the validity of intellectual property rights held by third parties, and our ability not to infringe, misappropriate
 or otherwise violate any third-party intellectual property rights;
- our continued reliance on third parties to conduct additional clinical trials of our product candidates, and for the manufacture of our product candidates for preclinical studies and clinical trials;
- our ability to obtain, and negotiate favorable terms of, any collaboration, licensing or other arrangements that may be necessary or desirable to develop, manufacture or commercialize our product candidates;

- the pricing and reimbursement of ORIC-101, ORIC-533, ORIC-944, ORIC-114 and other product candidates we may develop, if approved:
- the rate and degree of market acceptance and clinical utility of ORIC-101, ORIC-533, ORIC-944, ORIC-114 and other product candidates we may develop;
- our estimates regarding expenses, future revenue, capital requirements and needs for additional financing;
- our financial performance;
- the period over which we estimate our existing cash, cash equivalents and short-term investments will be sufficient to fund our future operating expenses and capital expenditure requirements;
- the impact of laws and regulations;
- our expectations regarding the period during which we will qualify as an emerging growth company under the JOBS Act; and
- our anticipated use of proceeds from this offering.

We have based these forward-looking statements largely on our current expectations and projections about our business, the industry in which we operate and financial trends that we believe may affect our business, financial condition, results of operations and prospects, and these forward-looking statements are not guarantees of future performance or development. These forward-looking statements speak only as of the date of this prospectus supplement and are subject to a number of risks, uncertainties and assumptions described in the section titled "Risk Factors" and elsewhere in this prospectus supplement, accompanying prospectus and other public filings. Because forward-looking statements are inherently subject to risks and uncertainties, some of which cannot be predicted or quantified, you should not rely on these forward-looking statements as predictions of future events. The events and circumstances reflected in our forward-looking statements may not be achieved or occur and actual results could differ materially from those projected in the forward-looking statements. Except as required by applicable law, we do not plan to publicly update or revise any forward-looking statements contained herein, whether as a result of any new information, future events or otherwise.

In addition, statements that "we believe" and similar statements reflect our beliefs and opinions on the relevant subject. These statements are based upon information available to us as of the date of this prospectus supplement, and while we believe such information forms a reasonable basis for such statements, such information may be limited or incomplete, and our statements should not be read to indicate that we have conducted an exhaustive inquiry into, or review of, all potentially available relevant information. These statements are inherently uncertain and you are cautioned not to unduly rely upon these statements.

USE OF PROCEEDS

We may issue and sell shares of our common stock having aggregate sales proceeds of up to \$150.0 million from time to time. Because there is no minimum offering price for the shares that we may offer from time to time, the actual total public offering amount, commissions and proceeds to us, if any, are not determinable at this time. There can be no assurance that we will sell any shares under or fully utilize the sales agreement with Jefferies as a source of financing.

We currently intend to use the net proceeds from this offering, if any, together with our existing cash, cash equivalents and short-term investments, to fund the development of ORIC-101, to fund the development of ORIC-533, to fund the development of ORIC-944, to fund the development of ORIC-114, to fund other research and development activities including the potential acquisition of and drug development activities related to new programs, as well as for working capital and other general corporate purposes.

As of the date of this prospectus, we cannot predict with certainty all of the particular uses for the net proceeds from this offering or the amounts that we will actually spend on the uses set forth above. As a result, our management will have broad discretion regarding the timing and application of the net proceeds from this offering. Pending their use, we intend to invest the net proceeds of this offering in short- and intermediate-term, interest-bearing obligations, investment-grade instruments, certificates of deposit or direct or guaranteed obligations of the U.S. government.

DILUTION

Our net tangible book value as of March 31, 2021 was approximately \$276.1 million, or \$7.52 per share. Net tangible book value is total assets minus the sum of liabilities and intangible assets. Net tangible book value per share is net tangible book value divided by the total number of shares of common stock outstanding as of March 31, 2021.

After giving effect to the sale of up to 6,412,997 shares of our common stock in this offering at an assumed public offering price of \$23.39 per share, the last reported sale price of our common stock on The Nasdaq Global Select Market on May 5, 2021, and after deducting commissions and estimated offering expenses payable by us, our as adjusted net tangible book value as of March 31, 2021 would have been approximately \$421.8 million, or \$9.78 per share. This represents an immediate increase in net tangible book value of \$2.26 per share to existing stockholders and immediate dilution of \$13.61 per share to investors purchasing our common stock in this offering at the assumed public offering price.

The following table illustrates this dilution on a per share basis. The as adjusted information is illustrative only and will change based on the actual price to the public, the actual number of shares sold and other terms of the offering determined at the time shares of our common stock are sold pursuant to this prospectus supplement. The as adjusted information assumes that all of our common stock in the aggregate amount of \$150.0 million is sold at the assumed public offering price of \$23.39 per share, the last reported sale price of our common stock on The Nasdaq Global Select Market on May 5, 2021. The shares sold in this offering, if any, will be sold from time to time at various prices.

Assumed public offering price per share		\$23.39
Net tangible book value per share of as March 31, 2021	\$7.52	
Increase in net tangible book value per share attributable to this offering	\$2.26	
As adjusted net tangible book value per share as of March 31, 2021, after giving effect to this offering		\$ 9.78
Dilution per share to new investors purchasing our common stock in this offering		\$13.61
As adjusted net tangible book value per share as of March 31, 2021, after giving effect to this offering		

An increase of \$1.00 per share in the price at which the shares are sold from the assumed public offering price of \$23.39 per share shown in the table above, assuming all of our common stock in the aggregate amount of \$150.0 million during the term of the sales agreement with Jefferies is sold at that price, would increase our as adjusted net tangible book value per share to \$9.84 per share and would increase the dilution in net tangible book value per share to new investors in this offering to \$14.55 per share, after deducting commissions and estimated offering expenses payable by us. A decrease of \$1.00 per share in the price at which the shares are sold from the assumed public offering price of \$23.39 per share shown in the table above, assuming all of our common stock in the aggregate amount of \$150.0 million during the term of the sales agreement with Jefferies is sold at that price, would decrease our as adjusted net tangible book value per share and would decrease the dilution in net tangible book value per share to new investors in this offering to \$12.67 per share, after deducting commissions and estimated offering expenses payable by us. The information discussed above is illustrative only and will adjust based on the actual public offering price, the actual number of shares that we offer in this offering, and other terms of this offering determined at the time of each offer and sale.

The above discussion and table are based on 36,690,826 shares of common stock outstanding as of March 31, 2021, and exclude:

- 5,062,744 shares of common stock issuable upon the exercise of options outstanding as of March 31, 2021, with a weighted-average exercise price of \$13.58 per share;
- 4,486 shares of common stock issued upon the early exercise of certain options, which are subject to a right of repurchase by us as of March 31, 2021;

- 114,800 shares of common stock issuable upon the exercise of options that we granted after March 31, 2021, with a weighted-average exercise price of \$23.44 per share;
- 2,174,521 shares of common stock reserved for future issuance under our 2020 Equity Incentive Plan (2020 Plan) as of March 31, 2021, as well as automatic increases in the number of shares of our common stock reserved for future issuance under this plan; and
- 290,000 shares of common stock reserved for future issuance under our 2020 Employee Stock Purchase Plan as of March 31, 2021, as well as any automatic increases in the number of our common stock reserved for future issuances under this plan.

To the extent that options outstanding as of March 31, 2021 have been or may be exercised, or other shares issued, investors purchasing our common stock in this offering may experience further dilution. In addition, we may choose to raise additional capital due to market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans. To the extent that additional capital is raised through the sale of equity or convertible debt securities, the issuance of these securities could result in further dilution to investors in this offering.

PLAN OF DISTRIBUTION

We have entered into a sales agreement with Jefferies, under which we may offer and sell up to \$150,000,000 of our shares of common stock from time to time through Jefferies acting as agent. Sales of our shares of common stock, if any, under this prospectus supplement and the accompanying prospectus will be made by any method that is deemed to be an "at the market offering" as defined in Rule 415(a)(4) under the Securities Act.

Each time we wish to issue and sell our shares of common stock under the sales agreement, we will notify Jefferies of the number of shares to be issued, the dates on which such sales are anticipated to be made, any limitation on the number of shares to be sold in any one day and any minimum price below which sales may not be made. Once we have so instructed Jefferies, unless Jefferies declines to accept the terms of such notice, Jefferies has agreed to use its commercially reasonable efforts consistent with its normal trading and sales practices to sell such shares up to the amount specified on such terms. The obligations of Jefferies under the sales agreement to sell our shares of common stock are subject to a number of conditions that we must meet.

The settlement of sales of shares between us and Jefferies is generally anticipated to occur on the second trading day following the date on which the sale was made. Sales of our shares of common stock as contemplated in this prospectus supplement will be settled through the facilities of The Depository Trust Company or by such other means as we and Jefferies may agree upon. There is no arrangement for funds to be received in an escrow, trust or similar arrangement.

We will pay Jefferies a commission of up to 3.0% of the aggregate gross proceeds we receive from each sale of our shares of common stock. Because there is no minimum offering amount required as a condition to close this offering, the actual total public offering amount, commissions and proceeds to us, if any, are not determinable at this time. In addition, we have agreed to reimburse Jefferies for the fees and disbursements of its counsel, payable upon execution of the sales agreement, in an amount not to exceed \$50,000, in addition to certain ongoing disbursements of its legal counsel, unless we and Jefferies otherwise agree. We estimate that the total expenses for the offering, excluding any commissions or expense reimbursement payable to Jefferies under the terms of the sales agreement, will be approximately \$380,000. The remaining sale proceeds, after deducting any other transaction fees, will equal our net proceeds from the sale of such shares.

Jefferies will provide written confirmation to us before the open on the Nasdaq Global Select Market on the day following each day on which our shares of common stock are sold under the sales agreement. Each confirmation will include the number of shares sold on that day, the aggregate gross proceeds of such sales and the proceeds to us.

In connection with the sale of our shares of common stock on our behalf, Jefferies will be deemed to be an "underwriter" within the meaning of the Securities Act, and the compensation of Jefferies will be deemed to be underwriting commissions or discounts. We have agreed to indemnify Jefferies against certain civil liabilities, including liabilities under the Securities Act. We have also agreed to contribute to payments Jefferies may be required to make in respect of such liabilities.

The offering of our shares of common stock pursuant to the sales agreement will terminate upon the earlier of (i) the sale of all shares of common stock subject to the sales agreement and (ii) the termination of the sales agreement as permitted therein.

This summary of the material provisions of the sales agreement does not purport to be a complete statement of its terms and conditions. A copy of the sales agreement will be filed as an exhibit to a current report on Form 8-K filed under the Exchange Act and incorporated by reference in this prospectus supplement.

Jefferies and its affiliates may in the future provide various investment banking, commercial banking, financial advisory and other financial services for us and our affiliates, for which services they may in the future receive customary fees. In the course of its business, Jefferies may actively trade our securities for its own account or for the accounts of customers, and, accordingly, Jefferies may at any time hold long or short positions in such securities.

A prospectus supplement and the accompanying prospectus in electronic format may be made available on a website maintained by Jefferies, and Jefferies may distribute the prospectus supplement and the accompanying prospectus electronically.

LEGAL MATTERS

The validity of the shares of common stock offered by this prospectus supplement will be passed upon for us by Wilson Sonsini Goodrich & Rosati, P.C., Palo Alto, California. Certain members of, and investment partnerships comprised of members of, and persons associated with, Wilson Sonsini Goodrich & Rosati, P.C., own an aggregate of 16,562 shares of our common stock. Jefferies LLC is being represented in connection with this offering by Cooley LLP, New York, New York.

EXPERTS

The financial statements of ORIC Pharmaceuticals, Inc. as of December 31, 2020 and 2019, and for each of the years in the three-year period ended December 31, 2020, have been incorporated by reference herein and in the registration statement in reliance upon the report of KPMG LLP, independent registered public accounting firm, incorporated by reference herein, and upon the authority of said firm as experts in accounting and auditing.

WHERE YOU CAN FIND ADDITIONAL INFORMATION

We file periodic and current reports, proxy statements and other information with the SEC. The SEC maintains a website that contains periodic and current reports, proxy and information statements and other information about issuers, such as us, who file electronically with the SEC. The address of that website is www.sec.gov.

Our website address is oricpharma.com. The information on our website, or that can be accessed through our website, however, is not, and should not be deemed to be, a part of this prospectus.

This prospectus supplement and the accompany prospectus are part of a registration statement that we filed with the SEC and do not contain all of the information in the registration statement. The full registration statement may be obtained from the SEC or us, as provided in the section titled "Incorporation by Reference." Whenever a reference is made in this prospectus supplement or the accompanying prospectus to any of our contracts, agreements or other documents, the reference may not be complete and you should refer to the exhibits that are a part of the registration statement or the exhibits to the reports or other documents incorporated by reference into this prospectus supplement and the accompanying prospectus for a copy of such contract, agreement or other document.

INCORPORATION BY REFERENCE

The SEC's rules allow us to "incorporate by reference" information into this prospectus, which means that we can disclose important information to you by referring you to another document filed separately with the SEC. The information incorporated by reference is deemed to be part of this prospectus, and subsequent information that we file with the SEC will automatically update and supersede that information. Any statement contained in a previously filed document incorporated by reference will be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in this prospectus, or in a subsequently filed document also incorporated by reference herein, modifies or replaces that statement.

We incorporate by reference our 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 Exchange Act, between the date of this prospectus supplement and the termination of the offering of the securities described in this prospectus supplement. We are not, however, incorporating by reference any documents or portions thereof, whether specifically listed below or filed in the future, that are not deemed "filed" with the SEC, including any information furnished pursuant to Items 2.02 or 7.01 of Form 8-K or related exhibits furnished pursuant to Item 9.01 of Form 8-K.

This prospectus supplement and the accompanying prospectus incorporate by reference the documents set forth below that have previously been filed with the SEC:

- our Annual Report on Form 10-K for the year ended December 31, 2020, filed with the SEC on March 23, 2021;
- the sections of our <u>Definitive Proxy Statement</u> on Schedule 14A for the 2020 Annual Meeting of Stockholders filed with the SEC on April 26, 2021 incorporated by reference in our 2020 Annual Report;
- our Quarterly Report on Form 10-Q for the quarter ended on March 31, 2021, filed with the SEC on May 6, 2021; and
- the description of our Common Stock set forth in our Registration Statement on Form 8-A (File No. 001-39269), filed with the SEC on April 20, 2020, including any amendments or reports filed for the purpose of updated such description.

We will provide to each person, including any beneficial owner, to whom this prospectus supplement and accompanying prospectus is delivered, upon written or oral request, at no cost to the requester, any of the documents incorporated by reference in this prospectus supplement and accompanying prospectus (other than exhibits, unless they are specifically incorporated by reference in the documents).

Requests for such documents should be directed to:

ORIC Pharmaceuticals, Inc. 240 E. Grand Ave, 2nd Floor South San Francisco, CA 94080 (650) 388-5600 Attn: Investor Relations info@oricpharma.com

Exhibits to the filings will not be sent, however, unless those exhibits have specifically been incorporated by reference in this prospectus supplement.

The information accessible through any website referred to in this prospectus supplement or any document incorporated herein is not, and should not be deemed to be, a part of this prospectus supplement.

Prospectus



Common stock
Preferred stock
Depositary shares
Warrants
Debt securities
Purchase contracts
Subscription rights
Units

The securities covered by this prospectus may be sold by ORIC Pharmaceuticals, Inc. from time to time. This prospectus provides you with a general description of the securities.

Each time we offer and sell securities, we will provide a supplement to this prospectus that contains specific information about the offering and the amounts, prices and terms of the securities. We may also authorize one or more free writing prospectuses to be provided to you in connection with these offerings. The supplement and any related free writing prospectus may also add, update or change information contained in this prospectus with respect to that offering. You should carefully read this prospectus, the applicable prospectus supplement and any related free writing prospectus, together with any documents incorporated by reference, before you invest in any of our securities.

We may offer and sell the securities described in this prospectus, any prospectus supplement and any related free writing prospectus to or through one or more underwriters, dealers and agents, or directly to purchasers, or through a combination of these methods on a continuous or delayed basis. If any underwriters, dealers or agents are involved in the sale of any of the securities, their names and any applicable purchase price, fee, commission or discount arrangement between or among them will be set forth, or will be calculable from the information set forth, in the applicable prospectus supplement. The price of our public securities and the net proceeds we expect to receive from the sale of such securities will also be set forth in a prospectus supplement. See the sections of this prospectus entitled "About this Prospectus" and "Plan of Distribution" for more information.

The common stock of ORIC Pharmaceuticals, Inc. is listed on The Nasdag Global Select Market ("Nasdag") under the symbol "ORIC."

INVESTING IN OUR SECURITIES INVOLVES A HIGH DEGREE OF RISK. SEE "RISK FACTORS" BEGINNING ON PAGE 3 OF THIS PROSPECTUS AND IN ANY SIMILAR SECTION CONTAINED IN OR INCORPORATED BY REFERENCE HEREIN OR IN THE APPLICABLE PROSPECTUS SUPPLEMENT CONCERNING FACTORS YOU SHOULD CONSIDER BEFORE INVESTING IN OUR SECURITIES.

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. Any representation to the contrary is a criminal offense.

No securities may be sold without delivery of this prospectus and the applicable prospectus supplement describing the method and terms of the offering of such securities.

The date of this prospectus is May 6, 2021.

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About this prospectus

This prospectus is part of a registration statement that we filed with the U.S. Securities and Exchange Commission (the "SEC") as a "well-known seasoned issuer" as defined in Rule 405 under the Securities Act of 1933, as amended (the "Securities Act"), using a "shelf" registration process. By using a shelf registration statement, we may sell securities from time to time and in one or more offerings as described in this prospectus. Each time that we offer and sell securities pursuant to this prospectus, we will provide a prospectus supplement to this prospectus that contains specific information about the securities being offered and sold and the specific terms of that offering and, to the extent appropriate, any updates to the information about us contained in this prospectus. We may also authorize one or more free writing prospectuses to be provided to you that may contain material information relating to these offerings. The prospectus supplement may also add, update or change information contained in this prospectus with respect to that offering. If there is any inconsistency between the information in this prospectus and the applicable prospectus supplement and any related free writing prospectus. Before purchasing any securities, you should carefully read both this prospectus, the applicable prospectus supplement and any related free writing prospectus, together with the additional information described under the heading "Where You Can Find Additional Information; Incorporation by Reference."

We have not authorized anyone to provide you with any information or to make any representations other than those contained or incorporated by reference in this prospectus, any applicable prospectus supplement or 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, the applicable prospectus supplement to this prospectus and any related free writing prospectus is accurate as of the date on its respective cover or as otherwise specified therein and that any information incorporated by reference is accurate only as of the date of the document incorporated by reference, unless we indicate otherwise. Our business, financial condition, results of operations and prospects may have changed since those dates. This prospectus incorporates by reference, and any prospectus supplement or free writing prospectus may contain and incorporate by reference, market data and industry statistics and forecasts that are based on independent industry publications and other publicly available information. Although we believe these sources are reliable, we do not guarantee the accuracy or completeness of this information and we have not independently verified this information. Although we are not aware of any misstatements regarding the market and industry data presented in this prospectus and the documents incorporated by reference in this prospectus, these estimates involve risks and uncertainties and are subject to change based on various factors, including those discussed under the heading "Risk Factors" contained or incorporated by reference in this prospectus, the applicable prospectus supplement and any related free writing prospectus and under similar headings in other documents that are incorporated by reference into this prospectus or the applicable prospectus supplement. Accordingly, investors should not place undue reliance on this information.

When we refer to "we," "our," "us" and the "Company" in this prospectus, we mean ORIC Pharmaceuticals, Inc. unless the context indicates otherwise or unless otherwise specified. When we refer to "you," we mean the holders of the applicable series of securities.

Prospectus summary

This summary highlights selected information contained elsewhere in this prospectus or incorporated by reference in this prospectus, and does not contain all of the information that you need to consider in making your investment decision. You should carefully read the entire prospectus, the applicable prospectus supplement and any related free writing prospectus, including the risks of investing in our securities discussed under the heading "Risk Factors" contained in the applicable prospectus supplement and any related free writing prospectus, and under similar headings in the other documents that are incorporated by reference into this prospectus. You should also carefully read the information incorporated by reference into this prospectus, including our financial statements, and the exhibits to the registration statement of which this prospectus is a part.

Company overview

ORIC Pharmaceuticals is a clinical-stage biopharmaceutical company dedicated to improving patients' lives by *Qvercoming Resistance In Cancer.*

Profound advancements in oncology drug development have expanded the treatment options available to patients, yet therapeutic resistance and relapse continue to limit the efficacy and duration of clinical benefit of such treatments. Collectively, our founders and management team have a decades-long heritage of identifying and characterizing resistance mechanisms in oncology, having discovered and developed groundbreaking medicines at companies such as Ignyta, Medivation, Aragon and Genentech.

ORIC's lead product candidate, ORIC-101, is a potent and selective small molecule antagonist of the glucocorticoid receptor, which has been linked to resistance to multiple classes of cancer therapeutics across a variety of solid tumors. ORIC-101 is currently in two separate Phase 1b trials in combination with (1) Abraxane (nab-paclitaxel) in advanced or metastatic solid tumors and (2) Xtandi (enzalutamide) in metastatic prostate cancer. ORIC's other product candidates include (1) ORIC-533, an orally bioavailable small molecule inhibitor of CD73, a key node in the adenosine pathway believed to play a central role in resistance to chemotherapy- and immunotherapy-based treatment regimens, (2) ORIC-944, an allosteric inhibitor of the polycomb repressive complex 2 (PRC2) via the embryonic ectoderm development (EED) subunit, being developed for prostate cancer, and (3) ORIC-114, a brain penetrant inhibitor designed to selectively target EGFR and HER2 with high potency against exon 20 insertion mutations, being developed across multiple genetically defined cancers. Beyond these four product candidates, ORIC is also developing multiple precision medicines targeting other hallmark cancer resistance mechanisms.

Corporate information

We were incorporated in Delaware in August 2014. Our principal executive offices are located at 240 E. Grand Avenue, 2nd Floor, South San Francisco, California 94080. Our telephone number is (650) 388-5600. Our website address is www.oricpharma.com. Information contained on the website is not incorporated by reference into this prospectus and should not be considered to be part of this prospectus.

We use the ORIC Pharmaceuticals logo and other marks as trademarks in the United States and other countries. This prospectus contains references to our trademarks and service marks and to those belonging to other entities. Solely for convenience, trademarks and trade names referred to in this prospectus, including logos, artwork and other visual displays, may appear without the TM symbol, but such references are not intended to indicate in any way that we will not assert, to the fullest extent under applicable law, our rights or the rights of the applicable licensor to these trademarks and trade names. We do not intend our use or display of other entities' trade names, trademarks or service marks to imply a relationship with, or endorsement or sponsorship of us by, any other entity.

Risk factors

Investing in our securities involves a high degree of risk. Before making a decision to invest in our securities, in addition to carefully considering the other information contained in this prospectus, in any accompanying prospectus supplement and incorporated by reference herein or therein, you should carefully consider the risks described under the caption "Risk Factors" contained in the applicable prospectus supplement, and any related free writing prospectus, and the risks discussed under the caption "Risk Factors" contained in our most recent annual report on Form 10-K, and in any of our quarterly reports on Form 10-Q since our most recent annual report on Form 10-K and any of our current reports on Form 8-K, as well as any amendments thereto, which are incorporated by reference into this prospectus or the applicable prospectus supplement in their entirety, together with other information in this prospectus, any prospectus supplement, the documents incorporated by reference, and any free writing prospectus that we may authorize for use in connection with a specific offering. See "Where You Can Find Additional Information; Incorporation by Reference."

Use of proceeds

We will set forth in the prospectus supplement our intended use for the net proceeds received from the sale of any securities. We will retain broad discretion over the use of the net proceeds to us from the sale of our securities under this prospectus. Pending our use of the net proceeds from the sale of our securities, we intend to invest the net proceeds in bank deposits, money market funds, treasury obligations, and investment-grade securities.

Description of capital stock

The following descriptions of our capital stock and certain provisions of our amended and restated certificate of incorporation and amended and restated bylaws are summaries and are qualified by reference to the amended and restated certificate of incorporation and the amended and restated bylaws. Copies of these documents have been filed with the SEC and referenced in the exhibits to our registration statement, of which this prospectus forms a part.

Our authorized capital stock consists of 1,000,000,000 shares of common stock, par value \$0.0001 per share, and 200,000,000 shares of preferred stock, par value \$0.0001 per share.

Common stock

Voting rights

Each holder of common stock is entitled to one vote for each share on all matters submitted to a vote of the stockholders, including the election of directors. Our amended and restated certificate of incorporation and amended and restated bylaws do not provide for cumulative voting rights. Because of this, the holders of a plurality of the shares of common stock entitled to vote in any election of directors can elect all of the directors standing for election, if they should so choose. With respect to matters other than the election of directors, at any meeting of the stockholders at which a quorum is present or represented, the affirmative vote of a majority of the voting power of the shares present in person or represented by proxy at such meeting and entitled to vote on the subject matter shall be the act of the stockholders, except as otherwise required by law. The holders of a majority of the stock issued and outstanding and entitled to vote, present in person or represented by proxy, shall constitute a quorum for the transaction of business at all meetings of the stockholders.

Dividends

Subject to preferences that may be applicable to any then-outstanding preferred stock, holders of our common stock are entitled to receive dividends, if any, as may be declared from time to time by our board of directors out of legally available funds.

Liquidation

In the event of our liquidation, dissolution or winding up, holders of our common stock will be entitled to share ratably in the net assets legally available for distribution to stockholders after the payment of all of our debts and other liabilities and the satisfaction of any liquidation preference granted to the holders of any then-outstanding shares of preferred stock.

Rights and preferences

Holders of our common stock have no preemptive, conversion, subscription or other rights, and there are no redemption or sinking fund provisions applicable to our common stock. The rights, preferences and privileges of the holders of our common stock are subject to and may be adversely affected by the rights of the holders of shares of any series of our preferred stock that we may designate in the future.

Fully paid and nonassessable

All of our outstanding shares of common stock are fully paid and nonassessable.

Preferred stock

Our board of directors has the authority, without further action by the stockholders, to issue up to 200,000,000 shares of preferred stock in one or more series and to fix the rights, preferences, privileges and restrictions thereof. These rights, preferences and privileges could include dividend

rights, conversion rights, voting rights, redemption rights, liquidation preferences, sinking fund terms and the number of shares constituting any series or the designation of such series, any or all of which may be greater than the rights of common stock. The issuance of preferred stock could adversely affect the voting power of holders of common stock and the likelihood that such holders will receive dividend payments upon liquidation. In addition, the issuance of preferred stock could have the effect of delaying, deferring or preventing a change in our control or other corporate action.

Registration rights

Certain holders of our common stock are entitled to certain registration rights pursuant to our investors' rights agreement, as amended. Holders of such shares of our common stock have the right to require us to register the offer and sale of their shares or to include their shares in any registration statement we file, in each case as described below. In addition, with respect to the shares of our common stock issued pursuant to a license agreement with Mirati Therapeutics (Mirati) dated August 3, 2020, Mirati and we agreed to negotiate and enter into a registration rights agreement.

Demand registration rights

Certain holders of shares of our common stock are entitled to certain demand registration rights. At any time beginning after 180 days following the date of our initial public offering, the holders of at least 50% of the shares having registration rights can request that we file a registration statement to register the offer and sale of their shares. We are only obligated to effect up to two such registrations. Each such request for registration must cover securities the anticipated aggregate gross proceeds of which, before deducting underwriting discounts and expenses, is at least \$10 million. These demand registration rights are subject to specified conditions and limitations, including the right of the underwriters to limit the number of shares included in any such registration under certain circumstances. If we determine that it would be materially detrimental to us and our stockholders to effect such a demand registration, we have the right to defer such registration, not more than once in any twelve month period, for a period of up to 90 days.

Form S-3 registration rights

Certain holders of shares of our common stock are entitled to certain Form S-3 registration rights. When we are eligible to file a registration statement on Form S-3, the holders of the shares having these rights can request that we register the offer and sale of their shares of our common stock on a registration statement on Form S-3 so long as the request covers securities the anticipated aggregate public offering price of which is at least \$1 million. These stockholders may make an unlimited number of requests for registration on a registration statement on Form S-3. However, we will not be required to effect a registration on Form S-3 if we have effected two such registrations within the twelve month period preceding the date of the request. These Form S-3 registration rights are subject to specified conditions and limitations, including the right of the underwriters to limit the number of shares included in any such registration under certain circumstances. Additionally, if we determine that it would be seriously detrimental to us and our stockholders to effect such a demand registration, we have the right to defer such registration, not more than once in any twelve month period, for a period of up to 90 days.

Piggyback registration rights

Certain holders of shares of our common stock are entitled to certain "piggyback" registration rights. If we propose to register the offer and sale of shares of our common stock under the Securities Act, the holders of these shares can request that we include their shares in such registration, subject to certain marketing and other limitations, including the right of the underwriters to limit the number of shares included in any such registration statement under certain circumstances. As a result, whenever we propose to file a registration statement under the Securities Act, other than with respect to (1) a registration related to any employee benefit plan or a corporate reorganization or other transaction

covered by Rule 145 promulgated under the Securities Act, (2) a registration relating to the offer and sale of debt securities, (3) a registration on any registration form that does not permit secondary sales or (4) a registration pursuant to the demand or Form S-3 registration rights described in the preceding two paragraphs above, the holders of these shares are entitled to notice of the registration and have the right, subject to certain limitations, to include their shares in the registration.

Expenses of registration

We will pay all expenses relating to any demand registrations, Form S-3 registrations and piggyback registrations, subject to specified exceptions.

Termination

The registration rights terminate upon the earliest of (1) the date that is four years after the closing of our initial public offering, (2) immediately prior to the closing of certain liquidation events and (3) as to a given holder of registration rights, the date after the closing of our initial public offering when such holder of registration rights can sell all of such holder's registrable securities during any 90-day period pursuant to Rule 144 promulgated under the Securities Act.

Anti-takeover effects of certain provisions of Delaware law, our amended and restated certificate of incorporation and our amended and restated bylaws

Certain provisions of Delaware law and certain provisions of our amended and restated certificate of incorporation and amended and restated bylaws summarized below may be deemed to have an anti-takeover effect and may delay, deter or prevent a tender offer or takeover attempt that a stockholder might consider to be in its best interests, including attempts that might result in a premium being paid over the market price for the shares held by stockholders.

Preferred stock

Our amended and restated certificate of incorporation contains provisions that permit our board of directors to issue, without any further vote or action by the stockholders, shares of preferred stock in one or more series and, with respect to each such series, to fix the number of shares constituting the series and the designation of the series, the voting rights (if any) of the shares of the series and the powers, preferences or relative, participation, optional and other special rights, if any, and any qualifications, limitations or restrictions, of the shares of such series.

Classified board

Our amended and restated certificate of incorporation provides that our board of directors is divided into three classes, designated Class I, Class II and Class III. Each class will be an equal number of directors, as nearly as possible, consisting of one third of the total number of directors constituting the entire board of directors. The term of initial Class I directors terminates on the date of the 2021 annual meeting, the term of the initial Class II directors terminates on the date of the 2023 annual meeting, and the term of the initial Class III directors terminates on the date of the 2023 annual meeting. At each annual meeting of stockholders beginning in 2021, the class of directors whose term expires at that annual meeting will be subject to reelection for a three-year term.

Removal of directors

Our amended and restated certificate of incorporation provides that stockholders may only remove a director for cause by a vote of no less than a majority of the shares present in person or by proxy at the meeting and entitled to vote.

Director vacancies

Our amended and restated certificate of incorporation authorizes only our board of directors to fill vacant directorships.

No cumulative voting

Our amended and restated certificate of incorporation provides that stockholders do not have the right to cumulate votes in the election of directors.

Special meetings of stockholders

Our amended and restated certificate of incorporation and amended and restated bylaws provide that, except as otherwise required by law, special meetings of the stockholders may be called only by the Chairperson of our board of directors, by the majority of the board of directors or by our Chief Executive Officer or our President.

Advance notice procedures for director nominations

Our amended and restated bylaws provide that stockholders seeking to nominate candidates for election as directors at an annual or special meeting of stockholders must provide timely notice thereof in writing. To be timely, a stockholder's notice generally must be delivered to and received at our principal executive offices before notice of the meeting is issued by the secretary of the Company, with such notice being served not less than 90 nor more than 120 days before the meeting. Although the amended and restated bylaws do not give the board of directors the power to approve or disapprove stockholder nominations of candidates to be elected at an annual meeting, the amended and restated bylaws may have the effect of precluding the conduct of certain business at a meeting if the proper procedures are not followed or may discourage or deter a potential acquirer from conducting a solicitation of proxies to elect its own slate of directors or otherwise attempting to obtain control of the Company.

Action by written consent

Our amended and restated certificate of incorporation and amended and restated bylaws provide that any action to be taken by the stockholders must be effected at a duly called annual or special meeting of stockholders and may not be effected by written consent.

Amending our certificate of incorporation and bylaws

Our amended and restated certificate of incorporation may be amended or altered in any manner provided by the Delaware General Corporation Law (DGCL). Our amended and restated bylaws may be adopted, amended, altered or repealed by stockholders only upon approval of at least majority of the voting power of all the then outstanding shares of the common stock, except for any amendment of the above provisions, which would require the approval of a two-thirds majority of our then outstanding common stock. Additionally, our amended and restated certificate of incorporation provides that our bylaws may be amended, altered or repealed by the board of directors.

Authorized but unissued shares

Our authorized but unissued shares of common stock and preferred stock are available for future issuances without stockholder approval, except as required by the listing standards of Nasdaq, and may be utilized for a variety of corporate purposes, including future offerings to raise additional capital, acquisitions and employee benefit plans. The existence of authorized but unissued and unreserved common stock and preferred stock may render more difficult or discourage an attempt to obtain control of the Company by means of a proxy contest, tender offer, merger or otherwise.

Exclusive jurisdiction

Our amended and restated bylaws provide that, unless we consent to the selection of an alternative forum, the Court of Chancery of the State of Delaware shall be the sole and exclusive forum for any derivative action or proceeding brought on our behalf, any action asserting a claim of breach of fiduciary duty, any action asserting a claim arising pursuant to the DGCL, any action regarding our amended and restated certificate of incorporation or amended and restated bylaws, or any action asserting a claim against us that is governed by the internal affairs doctrine. Our amended and restated bylaws further provide that the federal district courts of the United States of America will be the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act. Any person or entity purchasing or otherwise acquiring any interest in our securities shall be deemed to have notice of and consented to these provisions. Although we believe these provisions benefit us by providing increased consistency in the application of law for the specified types of actions and proceedings, the provisions may have the effect of discouraging lawsuits against us or our directors and officers.

Nothing in our amended and restated bylaws precludes stockholders that assert claims under the Exchange Act from bringing such claims in federal court, subject to applicable law. We note that stockholders cannot waive compliance (or consent to non-compliance) with the federal securities laws and the rules and regulations thereunder.

Business combinations with interested stockholders

We are governed by Section 203 of the DGCL. Subject to certain exceptions, Section 203 of the DGCL prohibits a public Delaware corporation from engaging in a business combination (as defined in such section) with an "interested stockholder" (defined generally as any person who beneficially owns 15% or more of the outstanding voting stock of such corporation or any person affiliated with such person) for a period of three years following the time that such stockholder became an interested stockholder, unless (1) prior to such time the board of directors of such corporation approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder; (2) upon consummation of the transaction that resulted in the stockholder becoming an interested stockholder owned at least 85% of the voting stock of such corporation at the time the transaction commenced (excluding for purposes of determining the voting stock of such corporation outstanding (but not the outstanding voting stock owned by the interested stockholder) those shares owned (a) by persons who are directors and also officers of such corporation and (b) 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 (3) at or subsequent to such time the business combination is approved by the board of directors of such corporation and authorized at a meeting of stockholders (and not by written consent) by the affirmative vote of at least 66 2/3% of the outstanding voting stock of such corporation not owned by the interested stockholder.

Our amended and restated certificate of incorporation and our amended and restated bylaws provide that we must indemnify our directors and officers to the fullest extent authorized by the DGCL. We are expressly authorized to, and do, carry directors' and officers' insurance providing coverage for our directors, officers and certain employees for some liabilities. In addition to the indemnification required in our amended and restated certificate of incorporation and amended and restated bylaws, we have entered into an indemnification agreement with each member of our board of directors and each of our officers. These agreements provide for the indemnification of our directors and officers for certain expenses and liabilities incurred in connection with any action, suit, proceeding or alternative dispute resolution mechanism or hearing, inquiry or investigation that may lead to the foregoing, to which they are a party, or are threatened to be made a party, by reason of the fact that they are or were a director, officer, employee, agent or fiduciary of our company, or any of our subsidiaries, by reason of any action or inaction by them while serving as an officer, director, agent or fiduciary, or by reason of the fact that they were serving at our request as a director, officer, employee, agent or fiduciary of another entity. In the case of an action or proceeding by or in the right of our company or any of our subsidiaries, no indemnification will be provided for any claim where a court determines that the indemnified party is prohibited from receiving

indemnification. We believe that these indemnification provisions and insurance are useful to attract and retain qualified directors and executive officers.

The limitation on liability and indemnification provisions in our certificate of incorporation and bylaws may discourage stockholders from bringing a lawsuit against directors for breach of their fiduciary duty. These provisions may also have the effect of reducing the likelihood of derivative litigation against directors and officers, even though such an action, if successful, might otherwise benefit us and our stockholders. In addition, your investment may be adversely affected to the extent we pay the costs of settlement and damage awards against directors and officers pursuant to these indemnification provisions.

Listing

Our common stock is listed on the Nasdaq Global Select Market under the symbol "ORIC."

Transfer agent and registrar

The transfer agent and registrar for our common stock is Computershare Trust Company, N.A. The transfer agent and registrar's address is 150 Royall Street, Canton, MA 02021, and its telephone number is (800) 736-3001.

Description of securities

In addition to common stock and preferred stock, we may issue from time to time, in one or more offerings, the following securities:

- · depositary shares;
- warrants to purchase from us shares of our common stock or preferred stock or other securities;
- debt securities, which may be senior or subordinated, and which may be convertible into our common stock or be non-convertible;
- purchase contracts;
- subscription rights; and
- units representing two or more of the foregoing securities.

We will set forth in the applicable prospectus supplement and/or free writing prospectus a description of the securities that may be offered by us under this prospectus. The terms of the offering of securities, the offering price and the net proceeds to us will be contained in the prospectus supplement, and other offering material, relating to such offer.

Plan of distribution

We may sell our securities from time to time in one or more transactions. We may sell our securities to or through agents, underwriters, dealers, remarketing firms or other third parties or directly to one or more purchasers or through a combination of any of these methods. We may issue common stock as a distribution or dividend, if legally permitted. In some cases, we or dealers acting with us or on behalf of us may also purchase our securities and reoffer them to the public. We may also offer and sell, or agree to deliver, our securities pursuant to, or in connection with, any option agreement or other contractual arrangement.

Agents whom we designate may solicit offers to purchase our securities.

- We will name any agent involved in offering or selling our securities and disclose any commissions that we will pay to the
 agent, in the applicable prospectus supplement.
- Unless we indicate otherwise in the applicable prospectus supplement, agents will act on a best efforts basis for the period of their appointment.
- Agents may be deemed to be underwriters under the Securities Act of any of our securities that they offer or sell.

We may use an underwriter or underwriters in the offer or sale of our securities.

- If we use an underwriter or underwriters, we will execute an underwriting agreement with the underwriter or underwriters at the time that we reach an agreement for the sale of our securities.
- We will include the names of the specific managing underwriter or underwriters, as well as the names of any other
 underwriters, and the terms of the transactions, including the compensation the underwriters and dealers will receive, in the
 applicable prospectus supplement.
- The underwriters will use the applicable prospectus supplement, together with this prospectus, to sell our securities.

We may use a dealer to sell our securities.

- If we use a dealer, we will sell our securities to the dealer, as principal.
- The dealer will then sell our securities to the public at varying prices that the dealer will determine at the time it sells our securities.
- We will include the name of the dealer and the terms of the transactions with the dealer in the applicable prospectus supplement.

We may solicit directly offers to purchase our securities, and we may directly sell our securities to institutional or other investors. We will describe the terms of direct sales in the applicable prospectus supplement.

We may engage in at the market offerings into an existing trading market in accordance with Rule 415(a)(4) of the Securities Act.

We may indemnify agents, underwriters and dealers against certain liabilities, including liabilities under the Securities Act. Agents, underwriters and dealers, or their affiliates, may be customers of, engage in transactions with, or perform services for us or our respective affiliates in the ordinary course of business.

We may authorize agents and underwriters to solicit offers by certain institutions to purchase our securities at the public offering price under delayed delivery contracts.

If we use delayed delivery contracts, we will disclose that we are using them in the prospectus supplement and will tell you
when we will demand payment and when delivery of our securities will be made under the delayed delivery contracts.

- These delayed delivery contracts will be subject only to the conditions that we describe in the prospectus supplement.
- We will describe in the applicable prospectus supplement the commission that underwriters and agents soliciting purchases of our securities under delayed delivery contracts will be entitled to receive.

Any underwriter, agent or dealer that is a Financial Industry Regulatory Authority member is not permitted to sell our securities in an offering to accounts over which it exercises discretionary authority without the prior specific written approval of its customer.

Unless otherwise specified in connection with a particular underwritten offering of our securities, the underwriters will not be obligated to purchase offered securities unless specified conditions are satisfied, and if the underwriters do purchase any offered securities, they will purchase all offered securities.

We may effect sales of securities in connection with forward sale, option or other types of agreements with third parties. Any distribution of securities pursuant to any forward sale agreement may be effected from time to time in one or more transactions that may take place through a stock exchange, including block trades or ordinary broker's transactions, or through broker-dealers acting either as principal or agent, or through privately-negotiated transactions, or through an underwritten public offering, or through a combination of any such methods of sale, at market prices prevailing at the time of sale, at prices relating to such prevailing market prices or at negotiated or fixed prices.

The specific terms of the lock-up provisions, if any, in respect of any given offering will be described in the applicable prospectus supplement.

Legal matters

Wilson Sonsini Goodrich & Rosati, P.C., Palo Alto, California, will pass upon certain legal matters relating to the issuance and sale of the securities offered hereby on behalf of ORIC Pharmaceuticals, Inc. Certain members of, and investment partnerships comprised of members of, and persons associated with, Wilson Sonsini Goodrich & Rosati, P.C., own an aggregate of 16,562 shares of our common stock. Additional legal matters may be passed upon for us or any underwriters, dealers or agents, by counsel that we will name in the applicable prospectus supplement.

Experts

The financial statements of ORIC Pharmaceuticals, Inc. as of December 31, 2020 and 2019, and for each of the years in the three-year period ended December 31, 2020, have been incorporated by reference herein and in the registration statement in reliance upon the report of KPMG LLP, independent registered public accounting firm, incorporated by reference herein, and upon the authority of said firm as experts in accounting and auditing.

Where you can find additional information; Incorporation by reference

Available information

We file periodic and current reports, proxy statements and other information with the SEC. The SEC maintains a website that contains periodic and current reports, proxy and information statements and other information about issuers, such as us, who file electronically with the SEC. The address of that website is http://www.sec.gov.

Our website address is http://oricpharma.com. The information on our website, or that can be accessed through our website, however, is not, and should not be deemed to be, a part of this prospectus.

This prospectus and any prospectus supplement are part of a registration statement that we filed with the SEC and do not contain all of the information in the registration statement. The full registration statement may be obtained from the SEC or us, as provided below. Forms of the indenture and other documents establishing the terms of the offered securities are or may be filed as exhibits to the registration statement. Statements in this prospectus or any prospectus supplement about these documents are summaries and each statement is qualified in all respects by reference to the document to which it refers. You should refer to the actual documents for a more complete description of the relevant matters.

Incorporation by reference

The SEC's rules allow us to "incorporate by reference" information into this prospectus, which means that we can disclose important information to you by referring you to another document filed separately with the SEC. The information incorporated by reference is deemed to be part of this prospectus, and subsequent information that we file with the SEC will automatically update and supersede that information. Any statement contained in a previously filed document incorporated by reference will be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in this prospectus, or in a subsequently filed document also incorporated by reference herein, modifies or replaces that statement.

We incorporate by reference our 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 Exchange Act, between the date of this prospectus and the termination of the offering of the securities described in this prospectus. We are not, however, incorporating by reference any documents or portions thereof, whether specifically listed below or filed in the future, that are not deemed "filed" with the SEC, including any information furnished pursuant to Items 2.02 or 7.01 of Form 8-K or related exhibits furnished pursuant to Item 9.01 of Form 8-K.

This prospectus incorporates by reference the documents set forth below that have previously been filed with the SEC:

- our Annual Report on Form 10-K for the year ended December 31, 2020, filed with the SEC on March 23, 2021;
- the sections of our <u>Definitive Proxy Statement</u> on Schedule 14A for the 2020 Annual Meeting of Stockholders filed with the SEC on April 26, 2021 incorporated by reference in our 2020 Annual Report;
- our Quarterly Report on Form 10-Q for the quarter ended on March 31, 2021, filed with the SEC on May 6, 2021; and
- the description of our Common Stock set forth in our Registration Statement on Form 8-A (File No. 001-39269), filed with the SEC on April 20, 2020, including any amendments or reports filed for the purpose of updated such description.

We will provide to each person, including any beneficial owner, to whom this prospectus is delivered, upon written or oral request, at no cost to the requester, any of the documents incorporated by reference in this prospectus (other than exhibits, unless they are specifically incorporated by reference in the documents).

Requests for such documents should be directed to:

ORIC Pharmaceuticals, Inc. 240 E. Grand Ave, 2nd Floor South San Francisco, CA 94080 (650) 388-5600 Attn: Investor Relations info@oricpharma.com

Exhibits to the filings will not be sent, however, unless those exhibits have specifically been incorporated by reference in this prospectus and any accompanying prospectus supplement.

The information accessible through any website referred to in this prospectus or any document incorporated herein is not, and should not be deemed to be, a part of this prospectus.



Up to \$150,000,000

Common Stock

PROSPECTUS SUPPLEMENT

Jefferies

May 6, 2021