Filed Pursuant to Rule 424(b)(5)
Registration Statement No. 333-238056

PROSPECTUS SUPPLEMENT
(TO PROSPECTUS DATED MAY 18, 2020)

17,500,000 Shares

Common Stock

We are offering 17,500,000 shares of common stock, par value $0.00000002 per share. Our common stock is listed on the Nasdaq Capital Market under the symbol “MEIP.” The last reported sale price of our common stock on the Nasdaq Capital Market on December 1, 2021 was $3.03 per share.

An investment in our common stock involves significant risks. You should carefully consider the Risk Factors beginning on page S-14 of this prospectus supplement and page 22 of our Annual Report on Form 10-K filed with the Securities and Exchange Commission on September 2, 2021, before investing in our common stock.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus supplement and the accompanying base prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

	PER SHARE	TOTAL
Public offering price	$ 2.600	$45,500,000
Underwriting discounts (1)	$ 0.156	$ 2,730,000
Proceeds, before expenses, to us	$ 2.444	$42,770,000

(1) See the section entitled “Underwriting” for additional information regarding underwriter compensation.

We have granted the underwriters an option exercisable for up to 30 days from the date of this prospectus supplement to purchase up to 2,625,000 additional shares of common stock at the public offering price less underwriting discounts. If this option were exercised in full, we would receive approximately $6,415,500 of additional proceeds, before expenses.

The underwriters expect to deliver the shares of common stock to the purchasers on or about December 6, 2021.

Joint Book-Running Managers

Jefferies **Stifel** **Wells Fargo Securities**

Co-Managers

LifeSci Capital **H.C. Wainwright & Co.**

The date of this prospectus supplement is December 1, 2021.

TABLE OF CONTENTS

You should rely only on the information contained in or incorporated by reference into this prospectus supplement and the accompanying base prospectus and any free writing prospectuses prepared by us or on our behalf. We have not authorized any person to provide any information or make any statement that differs from what is contained in this prospectus supplement, the accompanying base prospectus and any free writing prospectuses prepared by us or on our behalf. If any person does make a statement that differs from what is in this prospectus supplement, the accompanying base prospectus or any free writing prospectuses, you should not rely on it. This prospectus supplement is not an offer to sell, nor is it a solicitation of an offer to buy, these securities in any jurisdiction in which the offer or sale is not permitted. You should assume that the information contained in this prospectus supplement, the accompanying base prospectus, any free writing prospectus and the documents incorporated by reference is accurate only as of its respective date, regardless of the time of delivery of this prospectus supplement, the accompanying base prospectus, any free writing prospectus or of any sale of shares of our common stock in this offering. Our business, financial condition, results of operations and prospects may have subsequently changed.

ABOUT THIS PROSPECTUS SUPPLEMENT

This prospectus supplement and the accompanying base prospectus are part of a registration statement on Form S-3 that we filed with the Securities and Exchange Commission, or SEC, using a “shelf” registration statement. Under the shelf registration statement, we may offer and sell any combination of securities described in the accompanying base prospectus in one or more offerings. The accompanying base prospectus provides you with a general description of the securities we may offer. Each time we use the accompanying base prospectus to offer securities, we will provide a prospectus supplement that will contain specific information about the terms of that offering. The prospectus supplement may also add, update or change information contained in the accompanying base prospectus.

This prospectus supplement, the accompanying base prospectus and the documents incorporated by reference herein include important information about us, our common stock and other information you should know before investing. This prospectus supplement describes the specific details regarding this offering, including the price, the amount of common stock being offered and the risks of investing in our common stock. The accompanying base prospectus provides general information about us, some of which may not apply to this offering.

To the extent that any statement that we make in this prospectus supplement is inconsistent with statements made in the accompanying base prospectus, the statements made in this prospectus supplement will be deemed to modify or supersede those made in the accompanying base prospectus. You should read both this prospectus supplement and the accompanying base prospectus together with additional information described under the heading, “Where You Can Find More Information.”

CAUTIONARY STATEMENT ABOUT FORWARD-LOOKING STATEMENTS

This prospectus supplement and the documents incorporated by reference herein include forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the "Securities Act") and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). All statements other than statements of historical facts contained in this prospectus supplement and in the documents incorporated by reference herein, including statements regarding the future financial position, business strategy and plans and objectives of management for future operations, are forward-looking statements. The words "believe," "may," "will," "estimate," "continue," "anticipate," "intend," "should," "plan," "expect," and similar expressions, as they relate to us, are intended to identify forward-looking statements. We have based these forward-looking statements largely on current expectations and projections about future events and financial trends that we believe may affect our financial condition, results of operations, business strategy and financial needs. These forward-looking statements are subject to a number of risks, uncertainties and assumptions, including, without limitation, those described in "Risk Factors" in this prospectus supplement and in our Annual Report on Form 10-K for the fiscal year ended June 30, 2021, including, among other things:

- We will need substantial additional funds to progress the clinical trial programs for our drug candidates, to commercialize our drug candidates, and to develop new compounds. The actual amount of funds we will need will be determined by a number of factors, some of which are beyond our control;
- We are a late stage clinical research and development stage company and are likely to incur operating losses for the foreseeable future;
- The results of pre-clinical studies and completed clinical trials are not necessarily predictive of future results, and our current drug candidates may not have favorable results in later studies or trials;
- Final data from our pre-clinical studies and completed clinical trials may differ materially from reported interim data from ongoing studies and trials;
- The outbreak of the novel coronavirus disease, COVID-19, or other pandemic, epidemic or outbreak of an infectious disease may materially and adversely impact our business, including our pre-clinical studies and clinical trials;
- Changes in drug candidate manufacturing or formulation may result in additional costs or delay;
- If KKC or other parties with whom we collaborate on the development and commercialization of our drug candidates do not satisfy their obligations, do not otherwise pursue development or commercialization of our drug candidates or if they terminate their agreements with us, we may not be able to develop or commercialize our drug candidates;
- We are subject to significant obligations to Presage in connection with our license of voruciclib, and we may become subject to significant obligations in connection with future licenses we obtain, which could adversely affect the overall profitability of any products we may seek to commercialize, and such licenses of drug candidates, the development and commercialization for which we are solely responsible, may never become profitable;
- Our business strategy may include entry into additional collaborative or license agreements. We may not be able to enter into collaborative or license agreements or may not be able to negotiate commercially acceptable terms for these agreements;
- Final approval by regulatory authorities of our drug candidates for commercial use may be delayed, limited or prevented, any of which would adversely affect our ability to generate operating revenues;
- The FDA may determine that our drug candidates have undesirable side effects that could delay or prevent their regulatory approval or commercialization;
- If we experience delays or difficulties in the enrolment of patients in clinical trials, our completion of clinical trials and receipt of necessary regulatory approvals could be delayed or prevented;
- Changes in funding for the FDA and other government agencies or future government shutdowns could cause delays in the submission and regulatory review of marketing applications, which could negatively impact our business or prospects;
- Failure to obtain regulatory approval in foreign jurisdictions would prevent us from marketing our products internationally;
- Any designation granted by the FDA for any of our product candidates may not lead to a faster development or regulatory review or approval process, and does not increase the likelihood that our product candidates will receive marketing approval. We may also not be able to obtain or maintain any such designation;
- Any orphan drug designations we receive may not confer marketing exclusivity or other benefits;
- Even if we or our licensees receive regulatory approval to commercialize our drug candidates, our ability to generate revenues from any resulting products will be subject to a variety of risks, many of which are out of our control;
- If any products we develop become subject to unfavorable pricing regulations, third-party reimbursement practices or healthcare reform initiatives, our ability to successfully commercialize our products will be impaired;
- Our drug candidates are subject to ongoing government regulation both before and after regulatory approval;
- We may not be able to establish the contractual arrangements necessary to develop, market and distribute our drug candidates;
- Our commercial opportunity will be reduced or eliminated if competitors develop and market products that are more effective, have fewer side effects or are less expensive than our drug candidates;
- Our product candidates may face competition sooner than anticipated;
- We rely on third parties to conduct our clinical trials and pre-clinical studies. If those parties do not successfully carry out their contractual duties or meet expected deadlines, our drug candidates may not advance in a timely manner or at all;

- We will depend on third party suppliers and contract manufacturers for the manufacturing of our drug candidates and have no direct control over the cost of manufacturing our drug candidates. Increases in the cost of manufacturing our drug candidates would increase our costs of conducting clinical trials and could adversely affect our future profitability;
- We rely on acquisitions or licenses from third parties to expand our pipeline of drug candidates;
- Our commercial success is dependent, in part, on obtaining and maintaining patent protection and preserving trade secrets, which cannot be guaranteed;
- Claims by other companies that we infringe on their proprietary technology may result in liability for damages or stop our development and commercialization efforts;
- We may be subject to claims by third parties asserting that our employees or we have misappropriated their intellectual property, or claiming ownership of what we regard as our own intellectual property;
- We may be subject to substantial costs stemming from our defense against third-party intellectual property infringement claims;
- We face a risk of product liability claims and claims may exceed our insurance limits;
- Our employees, independent contractors, consultants, commercial partners, principal investigators, or CROs may engage in misconduct or other improper activities, including noncompliance with regulatory standards and requirements, which could have a material adverse effect on our business;
- Our business and operations would suffer in the event of system failures;
- Our efforts will be seriously jeopardized if we are unable to retain and attract key employees;
- Negative U.S. and global economic conditions may pose challenges to our business strategy, which relies on funding from the financial markets or collaborators;
- Laws, rules and regulations relating to public companies may be costly and impact our ability to attract and retain directors and executive officers;
- If we fail to establish and maintain proper and effective internal controls, our ability to produce accurate financial statements on a timely basis could be impaired, which would adversely affect our operating results, our ability to operate our business, and our stock price, and could result in litigation or similar actions;
- Security breaches and other disruptions could compromise our information and expose us to liability, which would cause our business and reputation to suffer;
- If we fail to comply with environmental, health and safety laws and regulations, we could become subject to fines or penalties or incur costs that could harm our business;
- We or the third parties upon whom we depend may be adversely affected by natural disasters and our business continuity and disaster recovery plans may not adequately protect us from a serious disaster;
- Limitations on the deductibility of net operating losses could adversely affect our business and financial condition;
- The trading price of the shares of our common stock has been and may continue to be highly volatile and could decline in value and we may incur significant costs from class action litigation;
- Future sales of our common stock, including common stock issued upon exercise of outstanding warrants or options, may depress the market price of our common stock and cause stockholders to experience dilution;
- Because we do not intend to pay, and have not paid, any cash dividends on our shares of common stock, our stockholders will not be able to receive a return on their shares unless the value of our common stock appreciates and they sell their shares;
- We will have broad discretion over the use of the net proceeds from any exercise of outstanding warrants and options;
- We are authorized to issue blank check preferred stock, which could adversely affect the holders of our common stock;
- Anti-takeover provisions contained in our amended and restated certificate of incorporation and third amended and restated bylaws, as well as provisions of Delaware law, could impair a takeover attempt;
- Our third amended and restated bylaws require, to the fullest extent permitted by law, that derivative actions brought in our name, actions against our directors, officers, other employees or stockholders for breach of fiduciary duty and other similar actions may be brought only in the Court of Chancery in the State of Delaware and, if brought outside of Delaware, the stockholder bringing the suit will be deemed to have consented to service of process on such stockholder’s counsel, which may have the effect of discouraging lawsuits against our directors, officers, other employees or stockholders; and
- Our executive officers and directors may sell shares of their stock, and these sales could adversely affect our stock price.

These risks are not exhaustive. Other sections of this prospectus supplement and the documents incorporated by reference herein include additional factors which could adversely impact our business and financial performance. Moreover, we operate in a very competitive and rapidly changing environment. New risk factors emerge from time to time and it is not possible for us to predict all risk factors, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements.

You should not rely upon forward looking statements as predictions of future events. We cannot assure you that the events and circumstances reflected in the forward looking statements will be achieved or occur. Although we believe that the expectations reflected in the forward looking statements are reasonable, we cannot guarantee future results, levels of activity, performance or achievements.

SUMMARY

This summary highlights selected information appearing elsewhere or incorporated by reference in this prospectus supplement and accompanying base prospectus and may not contain all of the information that is important to you. This prospectus supplement and the accompanying base prospectus include or incorporate by reference information about the shares we are offering as well as information regarding our business, risks and detailed financial data. You should read this prospectus supplement and the accompanying base prospectus in their entirety, including the information incorporated by reference.

The Company

We are a late-stage pharmaceutical company committed to the development and commercialization of novel cancer therapies intended to improve outcomes for patients. Our portfolio of drug candidates has three clinical-stage assets, including zandelisib, currently in multiple ongoing clinical studies intended to support marketing applications with the U.S. Food and Drug Administration ("FDA") and other regulatory authorities globally. Our common stock is listed on the NASDAQ Capital Market under the symbol "MEIP."

Our approach to building our pipeline is to license or acquire promising cancer agents and build value in programs through development, commercialization and strategic partnerships, as appropriate.

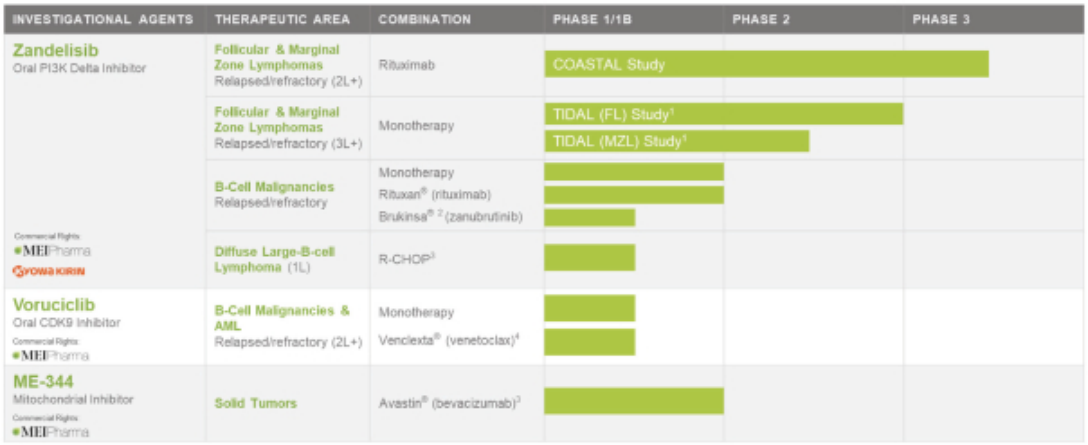
As a result of the ongoing and rapidly evolving COVID-19 pandemic, various public health orders and guidance measures have been implemented across much of the United States, and across the globe, including in the locations of our office, clinical trial sites, key vendors and partners. The COVID-19 virus may continue to mutate into different strains, which could be more contagious or severe or for which current vaccines and treatments are not effective or available.

While we continue to enroll and dose patients in our clinical trials, certain of our clinical trials evaluating zandelisib and voruciclib have been delayed due to COVID-19, and our clinical development program timelines may continue to be subject to potential negative impacts from the ongoing pandemic in the U.S. and globally. The extent to which the ongoing pandemic continues to impact our business, including our pre-clinical studies, chemistry, manufacturing and controls ("CMC") studies, manufacturing, and clinical trials, will depend on future developments, which are highly uncertain and cannot be predicted with confidence including the ultimate geographic spread of the disease, the duration of the pandemic, the development, effectiveness and timing of distribution of treatments and vaccines for COVID-19, travel restrictions and social distancing in the United States and other countries, business closures or business disruptions and the effectiveness of actions taken in the United States and other countries to contain and treat the disease and to minimize its economic impact, including vaccination rates and effectiveness.

Clinical Development Programs

We build our pipeline by licensing or acquiring promising cancer agents and creating value in programs through development, commercialization and strategic partnerships, as appropriate. Our objective is to leverage the mechanisms and properties of our pipeline drug candidates to optimize the balance between efficacy and tolerability to meet the needs of patients with cancer. Our drug candidate pipeline includes:

- Zandelisib (f/k/a ME-401), an oral phosphatidylinositol 3-kinase ("PI3K") delta inhibitor;
- Voruciclib, an oral cyclin-dependent kinase 9 ("CDK9") inhibitor; and
- ME-344, a mitochondrial inhibitor targeting the oxidative phosphorylation ("OXPHOS") complex.



1. Phase 2 study intended to support accelerated approval marketing applications with the FDA, subject to results and discussions with FDA.
2. Study arm initiated under clinical collaboration with BeiGene, Ltd.
3. Investigator-initiated trial.
4. Initiation of clinical studies is subject to opening of a new Investigational New Drug Application (“IND”) with the FDA.

Zandelisib: PI3Kd Inhibitor in Multiple Trials Intended to Support Marketing Approvals in Relapsed or Refractory Follicular and Marginal Zone Lymphomas

Zandelisib is an oral, once-daily, selective PI3Kd inhibitor in clinical development for the treatment of B-cell malignancies. In March 2020, the FDA granted zandelisib Fast Track designation for the treatment of adult patients with relapsed or refractory (“r/r”) follicular lymphoma (“FL”) who have received at least two prior systemic therapies. In November 2021, the FDA granted zandelisib Orphan Drug designation for the treatment of patients with follicular lymphoma.

In April 2020, we entered into a global license, development and commercialization agreement to further develop and commercialize zandelisib with Kyowa Kirin Co., Ltd. (“KKC”). MEI and KKC will co-develop and co-promote zandelisib in the U.S., with MEI recording all revenue from U.S. sales. KKC has exclusive commercialization rights outside of the U.S.

We are conducting multiple ongoing studies evaluating zandelisib. Our studies include TIDAL, a Phase 2 study evaluating zandelisib as a monotherapy in patients with r/r FL and marginal zone lymphoma (“MZL”) patients who have received at least two prior systemic therapies which must have included chemotherapy with an alkylating agent and an anti-CD20 antibody. Enrollment of the MZL arm remains ongoing. Subject to the results and discussions with FDSA, data from TIDAL is intended to support submissions for accelerated approval marketing applications with the FDA in r/r FL and MZL patients receiving at least two prior lines of systemic treatment.

On November 30, 2021, we announced that our pivotal Phase 2 TIDAL study evaluating zandelisib as a single agent for the treatment of FL patients who received at least two prior of lines of systemic therapy demonstrated a 70.3% objective response rate (ORR) as determined by Independent Review Committee (IRC) assessment in the primary efficacy population (n=91). In addition, 35.2% of patients achieved a complete response. The data are currently insufficiently mature to accurately estimate duration of response (DOR). In line with previously reported data from the Phase 1B study, zandelisib was generally well tolerated. With 9.4 months (range: 0.8-24) median duration of follow-up in the total study population (n=121), interim data demonstrated a discontinuation rate due to any drug related adverse event of 9.9%. Patients enrolled in the study will continue to be followed for safety and DOR.

COASTAL, the Phase 3 study evaluating zandelisib in combination with rituximab in patients with r/r FL and MZL who have received at least one prior line of treatment, is intended to support full marketing applications in the U.S. and globally in r/r FL and MZL patients receiving at least one prior line of systemic treatment. COASTAL is also intended (subject to FDA agreement) to potentially act as a confirmatory study if zandelisib receives U.S. accelerated approvals based on the TIDAL study.

We are also conducting a multi-arm, open-label, Phase 1b dose finding and expansion trial evaluating zandelisib as a monotherapy and in combination with other therapies in patients with relapsed or refractory B-cell malignancies. Other initiated studies include Phase 1 and Phase 2 studies being conducted by KKC evaluating zandelisib as a monotherapy in patients in Japan with indolent B-cell malignancy pursuant to our agreement with KKC.

Zandelisib: Potentially Highly Differentiated Pharmaceutical Properties within a Clinically Validated Class of Treatments

While PI3Kd inhibitors as a group are a clinically validated class for the treatment of B-cell malignancies, the FDA approved orally administered products, idelalisib (marketed as Zydelig®), duvelisib (marketed as COPIKTRA®), umbralisib (marketed as UKONIQ™), and the intravenously administered PI3Kd/a inhibitor copanlisib (marketed as Aliqopa®), are challenged by dose-limiting toxicities, modest efficacy and/or inconvenience of administration route. We believe this provides an opportunity for the development of a next-generation candidate with pharmaceutical properties that may better maximize the therapeutic potential of PI3Kd inhibition by limiting toxicities and improving upon modest efficacy, which together hinder clinical utility.

The molecular structure and pharmacodynamic characteristics of zandelisib are distinct from the FDA approved PI3Kd inhibitors. Zandelisib's distinct characteristics include prolonged target binding, preferential cellular accumulation, high volume of distribution throughout the body tissues, and an approximately 28-hour half-life suitable for once daily oral administration. The properties of zandelisib support exploration of flexible dosing regimens such as an intermittent dosing schedule, which has clinically demonstrated to date the potential to maintain clinical benefit while minimizing immune-related toxicities common to other PI3Kd agents, either as a monotherapy or in combination with other therapies.

KKC License, Development and Commercialization Agreement

In April 2020, we entered into a License, Development and Commercialization Agreement with KKC (the "KKC Commercialization Agreement"). We granted to KKC a co-exclusive, sublicensable, payment-bearing license under certain patents and know-how controlled by us to develop and commercialize zandelisib and any pharmaceutical product containing zandelisib for all human indications in the U.S., and an exclusive (subject to certain retained rights to perform obligations under the agreement), sublicensable, payment-bearing, license under certain patents and know-how controlled by us to develop and commercialize zandelisib and any pharmaceutical product containing zandelisib for all human indications in countries outside of the United States (the "Ex-U.S"). KKC grants to us a co-exclusive, sublicensable, license under certain patents and know-how controlled by KKC to develop and commercialize zandelisib for all human indications in the U.S., and a co-exclusive, sublicensable, royalty-free, fully paid license under certain patents and know-how controlled by KKC to perform our obligations in the Ex-U.S. under the KKC Commercialization Agreement. The KKC Commercialization Agreement substantially retains and consolidates the terms of the 2018 license agreement with KKC to develop and commercialize zandelisib in Japan.

KKC will be responsible for the development and commercialization of zandelisib in the Ex-U.S. and, subject to certain exceptions, will be solely responsible for all costs related thereto. We will co-develop and co-promote zandelisib with KKC in the U.S., with the Company recording all revenue from U.S. sales. We will share U.S. profits and costs (including development costs) on a 50-50 basis with KKC. We will also provide to KKC certain drug supplies necessary for the development and commercialization of zandelisib in the Ex-U.S. pursuant to supply agreements to be entered into on customary terms, with the understanding that KKC will assume responsibility for manufacturing for the Ex-U.S. as soon as practicable.

Under the terms of the KKC Commercialization Agreement, KKC paid us an initial payment of $100 million. We may also earn up to approximately $582.5 million in potential development, regulatory and commercialization milestone payments, plus royalties on net sales of zandelisib in the Ex-U.S., which are tiered beginning in the teens.

Zandelisib Scientific Overview: at the Crossroads of B-cell Signaling Pathways

The PI3K/AKT/mTOR pathway is an important signaling pathway for many cellular functions such as cell survival, cell cycle progression and cellular growth. PI3Ks are a family of enzymes within this pathway that have been shown to play a critical role in the proliferation and survival of certain cancer cells.

There are several isoforms of PI3K that are expressed in different types of cells. The PI3Kd isoform is at the crossroads of B-cell receptor signaling pathways that are major drivers of survival and proliferation of many B-cell malignancies. Because the d isoform is often overexpressed in cancer cells of the B-lymphocyte lineage, such as B-cell leukemias and lymphomas, it is understood to be important for survival of these cells. Zandelisib displays high selectivity for the PI3K delta isoform and functions to inhibit its activity.

Clinical Program Overview

We are conducting multiple ongoing studies evaluating zandelisib including TIDAL, a global Phase 2 trial evaluating patients with r/r FL and MZL with at least two prior of lines of therapy that, subject to the results and discussions with FDA, is intended to support FDA marketing applications for accelerated approval. The objective response rate in the FL cohort of TIDAL, the study's primary outcome measure, is 70.3%. In addition, 35.2% of patients achieved a complete response. Evaluation of the FL cohort remains ongoing for duration of response and safety. The study is also continuing to enroll patients for the MZL cohort.

Subject to final results and discussions with the FDA, the TIDAL study is intended to support submissions for accelerated approval marketing applications with the FDA in r/r FL and MZL patients receiving at least two prior lines of systemic treatment.

Also ongoing is COASTAL, a global Phase 3 study evaluating patients with r/r FL and MZL with at least one prior line of therapy. COASTAL is intended to support full marketing applications in the U.S. and globally in r/r FL and MZL patients receiving at least one prior line of systemic treatment. COASTAL is also intended (subject to FDA agreement) to potentially act as a confirmatory study if zandelisib receives U.S. accelerated approvals based on the TIDAL study.

Additionally, we are conducting a multi-arm, open-label, Phase 1b dose escalation and expansion trial as a monotherapy and in combination with other therapies, therapies in patients with FL and other B-cell malignancies. The Phase 1b trial includes an arm exploring zandelisib in combination with rituximab (Rituxan®) and an arm exploring zandelisib in combination with zanubrutinib (marketed as BRUKINSA®), an inhibitor of Bruton's tyrosine kinase developed by BeiGene, Ltd. ("BeiGene"). This study arm completed the safety evaluation stage in patients with B-cell malignancies and has expanded into disease specific B-cell malignancy cohorts. The evaluation of zandelisib in combination with zanubrutinib is conducted under a collaboration established with BeiGene in October 2018, pursuant to which the cost of the combination trial is being equally shared, and each company is supplying its own investigational agent. We retain all commercial rights to zandelisib (subject to the KKC Commercialization Agreement) and BeiGene retains all commercial rights to zanubrutinib.

Ongoing clinical trials also include Phase 1 and Phase 2 studies conducted by KKC evaluating zandelisib as a monotherapy in patients in Japan with indolent B-cell malignancies. The Phase 2 study is intended to support marketing authorization in Japan.

In addition to other planned clinical studies sponsored by us, such as initiation of a Phase 2 study evaluating zandelisib plus venetoclax in patients with chronic lymphocytic leukemia ("CLL"), we also plan to support select investigator-initiated studies, including one being conducted at the Cleveland Clinic evaluating zandelisib combined with standard of care in patients with newly diagnosed diffuse large B-cell lymphoma ("DLBCL").

Phase 1b Multi-arm Trial

In May 2021, we reported updated data from the ongoing Phase 1b clinical trial evaluating zandelisib as a monotherapy and in combination with rituximab in patients with r/r FL and other B-cell malignancies as featured in poster discussions at the American Society of Clinical Oncology ("ASCO") 2021 annual meeting.

Data were reported from 37 patients with r/r FL administered zandelisib 60 mg once daily for two 28-day cycles and then on an intermittent schedule ("IS") of once daily dosing for the first seven days of each subsequent 28-day cycle. The objective of this data presentation was to evaluate the safety, tolerability and efficacy of zandelisib as monotherapy or in combination with rituximab in patients with FL who had disease progression within 24 months after initial chemoimmunotherapy ("POD24") or disease progression beyond 24 months ("non-POD24").

The overall response rate in the 37 patients with r/r FL was 87%, with 27% achieving a complete response. The overall response rate was 78% in 18 patients administered zandelisib as a monotherapy and 95% in 19 patients administered zandelisib in combination with rituximab. The overall response rate in nine evaluable patients with CLL, previously reported separately, was 89%.

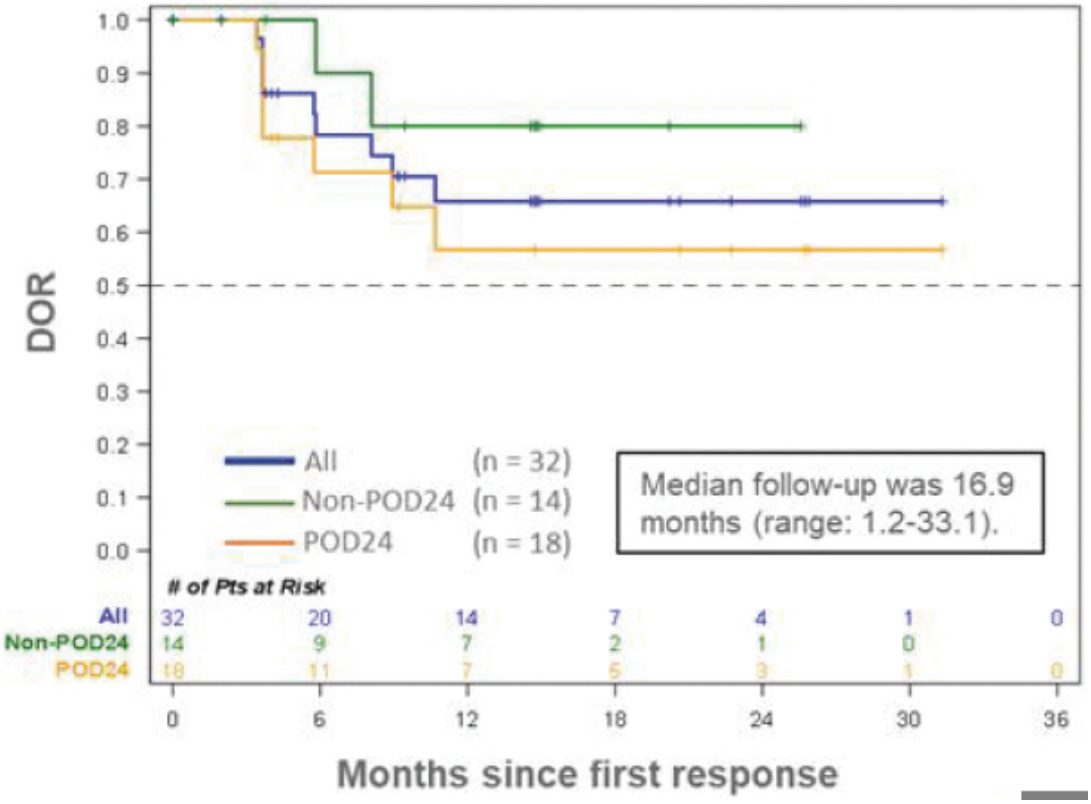
Overall Response Rates

	POD24 n = 22	NON-POD24 n = 15	TOTAL FL n = 37
Overall response rate	18 (82%)	14 (93%)	32 (87%)
Regimen			
Monotherapy	8/11 (73%)	6/7 (86%)	14/18 (78%)
Combination with rituximab	10/11 (91%)	8/8 (100%)	18/19 (95%)
Prior lines of therapy			
1 prior	5/7 (71%)	9/9 (100%)	14/16 (88%)
[3] 2 prior	13/15 (87%)	5/6 (83%)	18/21 (86%)
CR rate, n (%)	4 (18%)	6 (40%)	10 (27%)

Median duration of response in 32 patients with FL who achieved an overall response, as reported in a poster presentation at the 16th International Conference on Malignant Lymphoma, has not yet been reached, and median follow-up was 16.9 months (range: 1.2 to 33.1 months).

Responses appeared durable across both POD24 and non-POD24 groups, despite more heavily pre-treated and refractory disease in the POD24 group. POD24 is defined as progression of disease within 24 months of first-line chemo-immunotherapy. Patients with POD24 had more prior lines of treatment and more refractory disease.

Duration of Response: Follicular Lymphoma Patients



Zandelisib was generally well-tolerated. The rate of drug related grade 3 adverse events of special interest ("AESI"), those adverse caused by immune dysregulation, in the 37 patients with r/r FL was: diarrhea 5% (n=2); colitis 5% (n=2); rash 8% (n=3); alanine aminotransferase ("ALT")/ aspartate aminotransferase ("AST") elevation 8% (n=3) . The discontinuation rate due to adverse events was 8% (n=3).

Data from the arm of the Phase 1b study evaluating 20 patients receiving zandelisib in combination with zanubrutinib was also reported in a poster session at the ASCO 2021 Annual Meeting. In this arm of the study two treatment dosing regimens were explored: Group A received zandelisib 60 mg, oral, daily continuously for eight weeks followed by days 1-7 of each subsequent 28-day cycle, and zanubrutinib, 160 mg oral, twice daily; Group B received zandelisib 60 mg, oral, daily on days 1-7 of each 28-day cycle starting Cycle 1 and zanubrutinib 80 mg, oral, twice daily. Group A enrolled a total of seven patients: one FL, three CLL, one MZL, one mantle cell lymphoma ("MCL"), and one diffuse large B-cell lymphoma/high grade B-cell lymphoma ("DLBCL/HGBCL"). Group B enrolled a total of 13 patients: seven FL, two CLL, one MZL, and three DLBCL/HGBCL. Treatment was continued until disease progression, intolerance or withdrawal of consent.

The ORR in all evaluable patients with r/r indolent B-cell malignancies and CLL was 100%. No response was noted in the two patients with DLBCL/HGBCL. Responses were durable with median follow up for all patients was 6.6 months (0.6 to 21.3 months) with the majority of responders still on treatment.

Overall Response Rate

EVALUABLE n = 18	FL (n = 8)	CLL/SLL (n = 5)	MZL (n = 2)	MCL (n = 1)	DLBCL/HGBCL (n = 2)
ORR*, n (%)	8 (100%)	5 (100%)	2 (100%)	1 (100%)	0 (0%)
Group A	1 (100%)	3 (100%)	1 (100%)	1 (100%)	0 (0%)
Group B	7 (100%)	2 (100%)	1 (100%)	0 (0%)	0 (0%)

* CR/CRi in two of eight patients with FL (25%) and in two of five patients with CLL (40%).

Imaging scans were taken at months 3, 7, 13, and then every six months until disease progression. Response reported based on Lugano criteria and International Workshop on Chronic Lymphocytic Leukemia ("iwCLL"). Two of 20 patients (one in DLBCL and one in HGBCL) did not have on-therapy scans. One patient had clinical progressive disease ("PD") and one patient had adverse events ("AE") due to prior therapy and discontinued early. Median follow-up time was 6.6 months for all patients (range 0.6 to 21.3 months), 3.6 months for Group A (range 0.6 to 21.3 months), and 6.6 months for Group B (range 1.9 to 14.1 months).

Group B, which received zandelisib 60 mg orally, daily on days 1-7 of each 28-day cycle starting Cycle 1 and zanubrutinib 80 mg, orally, twice daily, was well tolerated across the various B-cell malignancies in the completed part of the study. The combination administered on the optimized, Group B, dosing regimen did not result in additive toxicity to each agent alone. One of the two patients with Grade 3 AST/ALT increases in Group B was successfully retreated and continued therapy.

Treatment-Emergent Adverse Events of Special Interest

Grade 3-4 AESI, n (%)	GROUP A (n = 7)	GROUP B (n = 13)
ALT / ALT increased	2 (29%)	2 (15%)
Rash	1 (14%)	0 (0%)
CMV colitis	1 (14%)	0 (0%)
Pneumonia	*1 (14%)	0 (0%)
Diarrhea	0 (0%)	0 (0%)
Atrial fibrillation	0 (0%)	0 (0%)

* 1 DLBCL patient had several Grade 3 AEs on Day 1 attributed to prior therapy and discontinued treatment on Day 17.

The Phase 1b study is continuing to enroll expansion cohorts in r/r FL and r/r MCL to further evaluate the combination of zandelisib 60 mg administered on days 1-7 starting Cycle 1 and zanubrutinib administered at 80 mg twice daily.

TIDAL: A Phase 2 Trial Intended to Support Accelerated Approval of Marketing Applications

TIDAL is a global, open-label, Phase 2 trial evaluating zandelisib as a monotherapy across two study disease cohort: the first cohorts for the treatment of adults with r/r FL and the second cohort for r/r MZL, in both cases after failure of at least two prior systemic therapies including chemotherapy with an alkylating agent and an anti-CD20 antibody. Subject to the results and discussions with the FDA, data from each study arm are intended to be submitted to the FDA to support marketing applications for accelerated approval. The study is evaluating zandelisib administered once daily at 60 mg for two 28-day cycles and then on an intermittent schedule of once daily dosing for the first seven days of each subsequent 28-day cycle (i.e., IS). The primary efficacy endpoint is the rate of objective responses to therapy and other endpoints include duration of response and tolerability of zandelisib. The primary efficacy population sample size for r/r FL is 91 patients and the

primary efficacy population sample size for r/r MZL is 64 patients. Complete enrollment of the FL primary efficacy population of 91 patients for the evaluation of ORR and DOR was announced in April 2021. The total study population in the FL arm is 121 patients to provide additional safety data for the registration application. The median age of patients with FL was 64 years old. Patients enrolled in the FL arm received a median of 3 prior lines of treatment (range: 2-8). Enrollment in the MZL cohort is ongoing.

Efficacy. The ORR in the 91 patients with r/r FL enrolled in the primary efficacy population was 70.3% (n=64), 95% CI=59.8, 79.5, as assessed by IRC after a minimum follow-up of 6 months; the complete response rate was 35.2%, 95% CI=25.4, 45.9. The ORR represents the primary endpoint of the TIDAL study.

As of the data cutoff date, the data are not sufficiently mature to accurately estimate the final DOR in the FL primary efficacy population, a secondary outcome measure of the TIDAL study. However, with a median follow-up time for response of 8.4 months, the median DOR had not been reached. The data cutoff date is approximately 6 months after the last patient in the primary efficacy population received their first dose of zandelisib.

Safety and Tolerability. Based upon interim data, zandelisib appeared generally well-tolerated in the total TIDAL study population through the data cutoff date. The safety data observed in TIDAL was consistent with data previously reported from the Phase 1B study (NCT02914938) evaluating zandelisib in patients with B-cell malignancies as a single agent or in combination with rituximab (Rituxan®).

As of the data cutoff date, with a median follow up of 9.4 months (range: 0.8-24) in the total FL study population, the incidence of Grade ³3 Adverse Events of Special Interest (i.e., those adverse caused by immune dysregulation) were: 1.7% ALT/AST elevation, 1.7% colitis, 5% diarrhea, 2.5% mucositis, 0.8% pneumonitis, and 3.3% rash. The discontinuation rate due to any drug related adverse event in the group was 9.9%, also as of the data cutoff date.

A more complete report of the TIDAL data as of the data cutoff date will be submitted for presentation at upcoming scientific congresses in 2022.

COASTAL: A Phase 3 Trial Intended to Support Full FDA and Global Marketing Authorizations

COASTAL is a global, open-label, randomized, two-arm Phase 3 trial comparing zandelisib plus rituximab to standard of care chemotherapy plus rituximab, in patients with r/r FL or MZL who received at least one prior line of therapy, which must have included an anti-CD20 monoclonal antibody in combination with chemotherapy or lenalidomide. COASTAL is expected to enroll 534 patients. Zandelisib will be administered once daily for two 28-day cycles followed by an intermittent schedule of once daily dosing for seven days of each subsequent 28-day cycle for a total of 24 months, in combination with rituximab (“R”) in the first six months only. The control arm will consist of six cycles of the standard chemoimmunotherapy regimens R-CHOP or R-bendamustine, with rituximab. The primary efficacy endpoint is progression-free survival; secondary endpoints include overall response rate, overall survival, patient reported outcomes assessments, and safety and tolerability.

COASTAL is intended to support full marketing applications in the U.S. and globally in r/r FL and MZL patients who have received at least one prior line of treatment. COASTAL is also intended (subject to FDA agreement) to act as a confirmatory study for the potential U.S. accelerated approval of zandelisib based on the ongoing Phase 2 TIDAL study evaluating patients with r/r FL and MZL patients who have received two or more prior lines of treatment.

Impact of COVID-19 on the TIDAL and COASTAL Studies

The extent to which the COVID-19 pandemic will impact the progress of the zandelisib development program, including the enrollment and completion of the COASTAL and TIDAL studies, is subject to future developments, which are highly uncertain and cannot be predicted with confidence. Currently, we believe that the integrity of the program and individual studies remains intact; however, the pandemic did have a negative impact on the rate of enrollment in the TIDAL study. The development program remains ongoing and is

continuing to enroll patients, although enrollment may potentially occur at a reduced rate. We will continue to closely monitor for potential negative impacts on the development program related to the ongoing COVID-19 pandemic. We will also continue efforts to be proactive in managing the impact from the pandemic, including various actions to communicate with sites and investigators, and making accommodations to patients consistent with FDA guidance and guidance from other regulatory authorities, as we may deem appropriate.

Voruciclib: CDK Inhibitor with CDK9 Inhibition in Phase 1 Studies

Voruciclib is an orally administered CDK inhibitor differentiated by its potent in vitro inhibition of CDK9 in addition to CDK6, 4 and 1. Voruciclib is being evaluated in a Phase 1b trial evaluating dose and schedule in patients with acute myeloid leukemia ("AML") and B-cell malignancies. Voruciclib is also being evaluated in pre-clinical studies to explore the potential synergistic activity in various solid tumor cancers of voruciclib in combination with drug-candidates that directly inhibit KRAS as well as other targets in the RAS signaling pathway.

Voruciclib Scientific Overview: Cell Cycle Signaling

CDK9 has important functions in cell cycle regulation, including the modulation of two therapeutic targets in cancer:

- CDK9 is a transcriptional regulator of the myeloid leukemia cell differentiation protein ("MCL1"), a member of the family of anti-apoptotic proteins which, when elevated, may prevent the cell from undergoing cell death. Inhibition of CDK9 blocks the production of MCL1, which is an established resistance mechanism to the B-cell lymphoma ("BCL2") inhibitor venetoclax (marketed as Venclexta®).
- CDK9 is a transcriptional regulator of the MYC proto-oncogene protein ("MYC") which regulates cell proliferation and growth. Upregulation of MYC is implicated in many human cancers and is frequently associated with poor prognosis and unfavorable patient survival. CDK9, in addition to being a transcription factor for MYC, also decreases phosphorylation of MYC protein that is implicated in stabilizing MYC in KRAS mutant cancers. Targeting MYC directly has historically been difficult, but CDK9 is a promising approach to target this oncogene.

Voruciclib: Inhibition of MCL1

In pre-clinical studies voruciclib shows dose-dependent suppression of MCL1; in December 2017, a study of voruciclib published in the journal *Nature Scientific Reports* reported that the combination of voruciclib plus the BCL-2 inhibitor venetoclax was capable of inhibiting two master regulators of cell survival, MCL-1 and BCL-2, and achieved synergistic antitumor effect in an aggressive subset of DLBCL pre-clinical models.

Additionally, a peer reviewed manuscript published in 2020 by Luedtke et al, concluded that the inhibition of CDK9 by voruciclib synergistically enhances cell death induced by the Bcl-2 selective inhibitor venetoclax in pre-clinical models of acute myeloid leukemia.

The research presented suggests that voruciclib could be an attractive therapeutic target for treating cancers in combination with venetoclax or other BCL-2 inhibitors.

Voruciclib: Inhibition of MYC

KRAS mutated cancers are frequently associated with overexpression of MYC, a transcription factor regulating cell proliferation and growth. CDK9 is a known regulator of MYC transcription and a modulator of MYC protein phosphorylation. Data reported at the American Association for Cancer Research ("AACR") Annual Meeting 2021 in pre-clinical models demonstrates that voruciclib:

- Results in a rapid decrease in the phosphorylation of proteins that promote MYC transcription;
- Rapidly decreases phosphorylation of MYC protein on Ser62, a site implicated in stabilizing MYC in KRAS mutant cancers;
- Possesses single agent activity against multiple KRAS mutant cancer cell lines both *in vitro* and *in vivo;*

- Synergistically inhibits KRAS G12C mutant cancer cell lines in combination with KRAS G12C inhibitors, both *in vitro* and *in vivo.*

The research presented suggests that voruciclib could be an attractive therapeutic target for cancers driven by KRAS mutations.

Clinical Program

We are evaluating patients with hematological malignancies in a Phase 1b clinical trial evaluating the dose and schedule of voruciclib. The trial is initially intended to evaluate the dose and schedule of voruciclib as a monotherapy in patients with relapsed and refractory B-cell malignancies and AML after failure of prior standard therapies to determine the safety, preliminary efficacy and maximum tolerated dose. Once initial dose levels and schedules have been established, we plan in parallel, subject to FDA agreement, to evaluate the dose and schedule of voruciclib in combination with a BCL2 inhibitor such as venetoclax to assess synergies and the opportunity for combination treatments, initially in patients with AML and subsequently across multiple indications.

Preliminary data to date from the Phase 1b study evaluating voruciclib as a monotherapy at the doses studied demonstrates that voruciclib has not been associated with drug related gastrointestinal toxicity or neutropenia. Also, favorable pharmacokinetics have been observed, including a half-life supporting once-a-day oral dosing and dose proportional C-max. Our projections suggest that doses of 150-200 mg may be sufficient to achieve plasma concentrations sufficient to inhibit the molecular target. Early signs of biological activity have also been observed in patients with AML.

Voruciclib was also previously evaluated in more than 70 patients with solid tumors in multiple Phase 1 studies. The totality of the clinical data, along with data from pre-clinical studies, suggests voruciclib's ability to inhibit its molecular target at a projected dose as low as 150 mg daily. In one clinical study, voruciclib was evaluated in combination with vemurafenib (marketed as Zelboraf®) in nine patients with BRAF mutated advanced/inoperable malignant melanoma. Three of three BRAF/MEK naive patients achieved a response: two partial responses and one complete response. In this study voruciclib was dosed at 150 mg daily plus vemurafenib 720 mg or 960 mg twice daily in 28-day cycles. The most common adverse events were fatigue, constipation, diarrhea, arthralgia and headache. One instance of grade 3 fatigue was dose limiting and no serious adverse events related to voruciclib were reported. Other clinical studies evaluated voruciclib at doses up to 850 mg in patients with solid tumors, demonstrating additional evidence of potential biologic activity and an adverse event profile generally consistent with other drugs in its class.

Impact of COVID-19 on the Voruciclib Clinical Development Program

While the extent to which the COVID-19 pandemic will impact the progress of the voruciclib clinical development program, including the ongoing Phase 1b study, is subject to future developments, which are highly uncertain and cannot be predicted with confidence, the study remains ongoing and is continuing to enroll patients; however, the rate of enrollment of patients has been negatively impacted by the pandemic. We will continue efforts to be proactive in managing the impact from the pandemic, including various actions to communicate with sites and investigators, and making accommodations to patients consistent with FDA guidance as we may deem appropriate.

ME-344: Clinical Stage Mitochondrial Inhibitor with Combinatorial Potential

ME-344 is our novel and tumor selective, isoflavone-derived mitochondrial inhibitor drug candidate. It directly targets the OXPHOS complex 1, a pathway involved in adenosine triphosphate ("ATP") production in the mitochondria. ME-344 was studied in an investigator-initiated, multi-center, randomized clinical trial in combination with the vascular endothelial growth factor ("VEGF") inhibitor bevacizumab (marketed as Avastin ®) in a total of 42 patients with human epidermal growth factor receptor 2 ("HER2") negative breast cancer.

ME-344 Scientific Overview: Cancer Metabolism

Tumor cells often display a high metabolic rate to support cell division and growth. This heightened metabolism requires a continual supply of energy in the form of ATP. The two major sources of ATP are the specialized cellular organelles termed mitochondria and through the metabolism of carbohydrates, proteins and lipids.

ME-344 was identified through a screen of more than 400 new chemical structures originally created based on the central design of naturally occurring plant isoflavones. We believe that some of these synthetic compounds, including our drug candidate ME-344, interact with specific mitochondrial enzyme targets, resulting in the inhibition of ATP generation. When these compounds interact with their target, a rapid reduction in ATP occurs, which leads to a cascade of biochemical events within the cell and ultimately to cell death.

Clinical Program

ME-344 demonstrated evidence of single agent activity against refractory solid tumors in a Phase 1 trial, and in pre-clinical studies tumor cells treated with ME-344 resulted in a rapid loss of ATP and cancer cell death. In addition to single agent activity, ME-344 may also have significant potential in combination with anti-angiogenic therapeutics. In pre-clinical studies, it was shown that one outcome of anti-angiogenics was to reduce the rate of glycolysis in tumors as a mechanism to slow tumor growth. However, tumor metabolism was able to shift to mitochondrial metabolism for energy production to support continued tumor proliferation. In such cases of tumor plasticity in the presence of treatment with anti-angiogenics, targeting the alternative metabolic source with ME-344 may open an important therapeutic opportunity.

Support for this combinatorial use of ME-344 was first published in the June 2016 edition of *Cell Reports*; pre-clinical data from a collaboration with the Spanish National Cancer Research Centre in Madrid demonstrated mitochondria-specific effects of ME-344 in cancer cells, including substantially enhanced anti-tumor activity when combined with agents that inhibit the activity of VEGF. These data demonstrating the potential anti-cancer effects of combining ME-344 with a VEGF inhibitor due to an inhibition of both mitochondrial and glycolytic metabolism provided a basis for commencement of an investigator-initiated trial of ME-344 in combination with bevacizumab in HER2 negative breast cancer patients.

Results published in the November 2019 issue of Clinical Cancer Research from a multicenter, investigator-initiated, randomized, open-label, clinical trial that evaluated the combination of ME-344 and bevacizumab in 42 women with early HER2-negative breast cancer further support the combinatorial use of ME-344 with anti-angiogenic therapeutics.

The primary objective of the trial was to show proof of ME-344 biologic activity as measured by Ki67 reductions in the presence of the nuclear protein Ki67 (expression of which is strongly associated with tumor cell proliferation and growth) from days 0 to 28 compared to the control group who received bevacizumab alone. Secondary objectives included determining whether ME-344 biologic activity correlates with vascular normalization. The data demonstrate significant biologic activity in the ME-344 treatment group:

- In ME-344 treated patients, mean absolute Ki67 decreases were 13.3 compared to an increase of 1.1 in the bevacizumab monotherapy group (P=0.01).
- In ME-344 treated patients, mean relative Ki67 decreases were 23% compared to an increase of 186% in the bevacizumab monotherapy group (P < 0.01).
- The mean relative Ki67 reduction in patients experiencing vascular normalization in the ME-344 treated patients was 33%, compared to an increase of 11.8% in normalized patients from the bevacizumab monotherapy group (P=0.09). Approximately one-third of patients in each arm had vascular normalization.

Treatment was generally well tolerated; three grade 3 adverse events of high blood pressure were reported, two in the ME-344 arm and one in the bevacizumab monotherapy arm.

Results from our earlier, first-in-human, single-agent Phase 1 clinical trial of ME-344 in patients with refractory solid tumors were published in the April 1, 2015 issue of *Cancer*. The results indicated that eight of 21 evaluable patients (38%) treated with ME-344 achieved stable disease or better, including five who

experienced progression-free survival that was at least twice the duration of their last prior treatment before entry into the trial. In addition, one of these patients, a heavily pre-treated patient with small cell lung cancer, achieved a confirmed partial response and remained on study for two years. ME-344 was generally well tolerated at doses equal to or less than 10 mg/kg delivered on a weekly schedule for extended durations. Treatment-related adverse events included nausea, dizziness and fatigue. Dose-limiting toxicities were observed at both the 15 mg/kg and 20 mg/kg dose levels, consisting primarily of grade 3 peripheral neuropathy. We are planning to advance ME-344 in combination with the anti-angiogenic antibody bevacizumab in a Phase 2 study evaluating patients with relapsed colorectal cancer.

Corporate Information

Our principal executive offices are located at 11455 El Camino Real, San Diego, CA 92130, and our phone number is (858) 369-7100. Our website is located at www.meipharma.com. Information on or accessible through our website is not part of, or incorporated by reference into, this prospectus supplement, other than documents filed with the SEC that we incorporate by reference.

THE OFFERING

Common stock offered by us pursuant to this prospectus supplement	17,500,000 shares of common stock
Common stock outstanding after the offering (assuming no exercise of the underwriters' option to purchase additional shares)	130,178,498 shares of common stock (1)
Option to purchase additional shares	We have granted the underwriters an option to purchase up to 2,625,000 additional shares of our common stock. This option is exercisable, in whole or in part, for a period of 30 days from the date of this prospectus supplement.
Use of proceeds	We intend to use a portion of the net proceeds from this offering, together with other available funds, to progress our clinical development programs, prepare for and support the commercial launch of zandelisib, subject to receiving FDA marketing approval, and for other general corporate purposes. See "Use of Proceeds" on page S-17.
Nasdaq Capital Market symbol	"MEIP"
Risk factors	This investment involves a high degree of risk. See "Risk Factors" beginning on page S-14 of this prospectus supplement, the risk factors beginning on page 22 of our Annual Report on Form 10-K as filed with the Securities and Exchange Commission on September 2, 2021, as well as the other information included in or incorporated by reference in this prospectus supplement and the accompanying base prospectus for a discussion of risks you should consider carefully before making an investment decision.

(1) Based on 112,678,498 shares of common stock outstanding as of September 30, 2021. Excludes (i) 20,641,523 shares of our common stock subject to outstanding options, with exercise prices ranging from $1.21 to $6.47 per share, (ii) 16,058,985 shares of our common stock subject to outstanding warrants, with an exercise price of $2.54 per share, (iii) restricted stock units for 232,650 shares of common stock, (iv) 7,106,383 shares of our common stock available for awards under our Amended and Restated 2008 Stock Omnibus Equity Compensation Plan, and (v) 1,772,000 shares of our common stock available for awards under our 2021 Inducement Plan, in each case as of September 30, 2021.

Unless otherwise stated, all information contained in this prospectus supplement assumes no exercise of the underwriters' option to purchase up to 2,625,000 additional shares.

RISK FACTORS

Any investment in our common stock involves a high degree of risk. In addition to the other information included or incorporated by reference in this prospectus supplement and the accompanying base prospectus, you should carefully consider the important factors set forth under the heading "Risk Factors" starting on page 22 of our Annual Report on Form 10-K for the fiscal year ended June 30, 2021, and in other reports we file with the SEC from time to time, which are incorporated herein by reference, before investing in our securities. For further details, see the sections entitled "Where You Can Find More Information" and "Incorporation of Certain Information by Reference" in this prospectus supplement.

Any of the risk factors set forth below or referred to above could significantly and negatively affect our business, results of operations or financial condition, which may lower the trading price of our common stock. The risks referred to above are not the only ones that may exist. Additional risks not currently known by us or that we deem immaterial may also impair our business operations. You may lose all or a part of your investment.

Risks Related to our Pre-Clinical and Clinical Data

Final data from our pre-clinical studies and completed clinical trials may differ materially from reported interim data from ongoing studies and trials.

With the exception of our ORR data reported in the primary follicular lymphoma efficacy population of 91 patients, the data reported by us on November 30, 2021 with respect to our pivotal Phase 2 TIDAL study evaluating zandelisib as a single agent for the treatment of FL patients described above under "Prospectus Summary" provides an initial look at the data as of the data cutoff date and is interim and subject to change as more patient data become available with longer follow up. This data is from an ongoing study, and the final data may differ materially from the data reported. Our pre-clinical and clinical data, other information and procedures relating to this drug candidate may not be sufficient to support approval by the FDA or any other U.S. or foreign regulatory authority, or regulatory interpretation of these data and procedures may be unfavorable.

Risks Related to Securities Markets and Investment in our Stock

The trading price of the shares of our common stock has been and may continue to be highly volatile and could decline in value and we may incur significant costs from class action litigation.

The trading price of our common stock could be highly volatile in response to various factors, many of which are beyond our control, including:

- failure to successfully develop our drug candidates;
- design, results and timing of clinical trials and pre-clinical studies;
- announcements of technological innovations by us or our competitors;
- new products introduced or announced by us or our competitors;
- changes in financial estimates by securities analysts;
- actual or anticipated variations in operating results;
- expiration or termination of licenses, research contracts or other collaboration agreements;
- conditions or trends in the regulatory climate and the biotechnology, pharmaceutical and genomics industries;
- instability in the stock market as a result of current or future domestic and global events;
- changes in the market valuations of similar companies;
- the liquidity of any market for our securities; and
- threatened or actual delisting of our common stock from a national stock exchange.

Equity markets in general, and the market for biotechnology and life sciences companies in particular, have experienced substantial price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of companies traded in those markets. In addition, changes in economic conditions in the U.S., Europe or globally, particularly in the context of current global events, could impact upon our ability to grow profitably. Adverse economic changes are outside our control and may result in material adverse impacts on our

business or our results of operations. These broad market and industry factors may materially affect the market price of shares of our common stock, regardless of our development and operating performance. In the past, following periods of volatility in the market price of a company's securities, securities class-action litigation has often been instituted against that company. Such litigation, if instituted against us, could cause us to incur substantial costs and divert management's attention and resources.

Future sales of our common stock, including common stock issued upon exercise of outstanding warrants or options, may depress the market price of our common stock and cause stockholders to experience dilution.

The market price of our common stock could decline as a result of sales of substantial amounts of our common stock in the public market, including upon exercise of outstanding warrants or stock options, and any subsequent sales of such shares. As of September 30, 2021, we had outstanding warrants issued in our May 2018 private placement exercisable to purchase 16,058,985 shares of common stock at an exercise price of $2.54 per share, which expire in May 2023. We also had outstanding options to purchase 20,641,523 shares of common stock and restricted stock units for 232,650 shares of common stock. We may seek additional capital through one or more additional equity transactions in the future; however, such transactions will be subject to market conditions and there can be no assurance any such transactions will be completed. If we sell shares in the future, the prices at which we sell these future shares will vary, and these variations may be significant. Stockholders, including investors in this offering, will experience significant dilution if we sell these future shares at prices significantly below the price at which such stockholders invested.

Investors in this offering will experience immediate and substantial dilution and may experience further dilution in the future.

The public offering price of the common stock offered pursuant to this prospectus supplement is substantially higher than the net tangible book value per share of our common stock. Therefore, if you purchase shares of common stock in this offering, you will incur immediate and substantial dilution in the net tangible book value per share of common stock from the price per share that you pay for the common stock. Furthermore, we expect that we will seek to raise additional capital from time to time in the future. Such financings may involve the issuance of equity and/or securities convertible into or exercisable or exchangeable for our equity securities. We also expect to continue to utilize equity-based compensation. To the extent the warrants and options are exercised or we issue common stock, preferred stock, or securities such as warrants that are convertible into, exercisable or exchangeable for, our common stock or preferred stock in the future, you may experience further dilution.

Because we do not intend to pay, and have not paid, any cash dividends on our shares of common stock, our stockholders will not be able to receive a return on their shares unless the value of our common stock appreciates and they sell their shares.

We have never paid or declared any cash dividends on our common stock, and we intend to retain any future earnings to finance the development and expansion of our business. We do not anticipate paying any cash dividends on our common stock in the foreseeable future. Therefore, our stockholders will not be able to receive a return on their investment unless the value of our common stock appreciates and they sell their shares.

We will have broad discretion over the use of the net proceeds from this offering and upon any exercise of outstanding warrants and options.

We will have broad discretion to use the net proceeds to us from this offering and upon any exercise of outstanding warrants and options, and investors in our stock will be relying on the judgment of our board of directors and management regarding the application of these proceeds. Although we expect to use a substantial portion of the net proceeds from this offering and upon any exercise of the warrants and options for general corporate purposes and progression of our clinical trial programs, we have not allocated these net proceeds for specific purposes.

We are authorized to issue blank check preferred stock, which could adversely affect the holders of our common stock.

Our amended and restated certificate of incorporation allows us to issue blank check preferred stock with rights potentially senior to those of our common stock without any further vote or action by the holders of our common stock. The issuance of a class of preferred stock could decrease the amount of earnings and assets available for distribution to the holders of our common stock or could adversely affect the rights and powers, including voting rights, of such holders. In certain circumstances, such issuance could have the effect of decreasing the market price of our shares, or making a change in control of the Company more difficult.

Our executive officers and directors may sell shares of their stock, and these sales could adversely affect our stock price.

Sales of our stock by our executive officers and directors, or the perception that such sales may occur, could cause the market price of our common stock to decline or could make it more difficult for us to raise funds through the sale of equity in the future.

In connection with this offering, we have entered into a lock-up agreement for a period of 90 days following this offering and our directors and officers have entered into lock-up agreements for a period of 90 days following this offering, in each case, subject to certain exceptions. We and our directors and officers may be released from the lock-up prior to the expiration of the lock-up period at the sole discretion of Jefferies LLC and Stifel, Nicolaus & Company, Incorporated. See “Underwriting.” Upon expiration or earlier release of the lock-up, we and our directors and officers may sell shares into the market, either as part, or outside of trading plans under SEC Rule 10b5-1, which could adversely affect the market price of shares of common stock.

USE OF PROCEEDS

We estimate that the net proceeds from our sale of 17,500,000 shares of our common stock in this offering will be approximately $42,270,000 (or approximately $48,685,500 if the underwriters' option to purchase additional shares is exercised in full), after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

We intend to use a portion of the net proceeds from this offering, together with other available funds, to progress our clinical development programs, prepare for and support the commercial launch of zandelisib, subject to receiving FDA marketing approval, as well as for working capital and other general corporate purposes.

We have not specifically identified the precise amounts we will spend on particular areas or the timing of these expenditures. The amounts actually expended for each purpose may vary significantly depending upon numerous factors, including the amount and timing of the proceeds from this offering, the progress of our clinical trials and other product development activities. In addition, expenditures may also depend on the establishment of new collaborative arrangements with other partners, the availability of other financing and other factors.

We anticipate that we will be required to raise substantial additional capital to continue to fund the clinical development of our drug candidates. We expect to seek to raise additional capital through additional public or private financings, principally through equity issuances.

DILUTION

Our net tangible book value as of September 30, 2021 was approximately $31.8 million, or $0.28 per share of common stock. Net tangible book value per share is equal to our total tangible assets minus total liabilities, all divided by the number of shares of common stock outstanding. After giving effect to the sale by us of 17,500,000 shares of our common stock offered by this prospectus supplement at the public offering price of $2.60 per share, and after deducting the estimated offering commissions and estimated offering expenses payable by us, our adjusted net tangible book value as of September 30, 2021 would have been $74.1 million, or $0.57 per share of common stock. This represents an immediate increase in net tangible book value of approximately $0.29 per share to existing stockholders and an immediate dilution of approximately $2.03 per share to new investors purchasing our common stock in this offering. The following table illustrates this calculation on a per share basis:

Public offering price per share		$2.60
Net tangible book value per share as of September 30, 2021	$0.28	
Increase per share attributable to new investors in this offering	$0.29	
As-adjusted net tangible book value per share as of September 30, 2021, after giving effect to this offering		$0.57
Dilution per share to new investors in this offering		$2.03

The number of shares of common stock shown above to be outstanding after this offering is based on 112,678,498 shares outstanding as of September 30, 2021 and excludes the following shares underlying outstanding securities convertible or exercisable for shares of common stock as of the date hereof:

- options to purchase 20,641,523 shares of common stock at exercise prices from $1.21 to $6.47 per share, which expire at various dates in calendar years 2021 through 2031;
- outstanding warrants to purchase 16,058,985 shares of our common stock. The warrants are fully vested, exercisable at a price of $2.54 per share and expire in May 2023; and
- restricted stock units for 232,650 shares of common stock, which vest in July 2022.

To the extent outstanding warrants or options are exercised, there will be further dilution to new investors. In addition, to the extent we issue additional equity securities in connection with future capital raising activities, our then-existing stockholders may experience dilution.

UNDERWRITING

Subject to the terms and conditions set forth in the underwriting agreement, dated December 1, 2021, between us and Jefferies LLC, Stifel, Nicolaus & Company, Incorporated and Wells Fargo Securities, LLC as the representatives of the underwriters named below, we have agreed to sell to the underwriters, and each of the underwriters has agreed, severally and not jointly, to purchase from us, the respective number of shares of common stock shown opposite its name below:

UNDERWRITER	NUMBER OF SHARES
Jefferies LLC	7,087,500
Stifel, Nicolaus & Company, Incorporated	5,337,500
Wells Fargo Securities, LLC	2,800,000
LifeSci Capital LLC	1,400,000
H.C. Wainwright & Co., LLC	875,000
Total	17,500,000

The underwriting agreement provides that the obligations of the several underwriters are subject to certain conditions precedent such as the receipt by the underwriters of officers' certificates and legal opinions and approval of certain legal matters by their counsel. The underwriting agreement provides that the underwriters will purchase all of the shares of common stock if any of them are purchased. If an underwriter defaults, the underwriting agreement provides that the purchase commitments of the non-defaulting underwriters may be increased or the underwriting agreement may be terminated. We have agreed to indemnify the underwriters and certain of their controlling persons against certain liabilities, including liabilities under the Securities Act, and to contribute to payments that the underwriters may be required to make in respect of those liabilities.

The underwriters have advised us that, following the completion of this offering, they currently intend to make a market in the common stock as permitted by applicable laws and regulations. However, the underwriters are not obligated to do so, and the underwriters may discontinue any market-making activities at any time without notice in their sole discretion. Accordingly, no assurance can be given as to the liquidity of the trading market for the common stock, that you will be able to sell any of the common stock held by you at a particular time or that the prices that you receive when you sell will be favorable.

The underwriters are offering the shares of common stock subject to their acceptance of the shares of common stock from us and subject to prior sale. The underwriters reserve the right to withdraw, cancel or modify offers to the public and to reject orders in whole or in part.

Commission and Expenses

The following table shows the public offering price, the underwriting discounts and commissions that we are to pay the underwriters and the proceeds, before expenses, to us in connection with this offering. Such amounts are shown assuming both no exercise and full exercise of the underwriters' option to purchase additional shares.

	PER SHARE		TOTAL	
	WITHOUT OPTION TO PURCHASE ADDITIONAL SHARES	WITH OPTION TO PURCHASE ADDITIONAL SHARES	WITHOUT OPTION TO PURCHASE ADDITIONAL SHARES	WITH OPTION TO PURCHASE ADDITIONAL SHARES
Public offering price	$ 2.600	$ 2.600	$45,500,000	$52,325,000
Underwriting discounts and commissions paid by us	$ 0.156	$ 0.156	$ 2,730,000	$ 3,139,500
Proceeds to us, before expenses	$ 2.444	$ 2.444	$42,770,000	$49,185,500

We estimate expenses payable by us in connection with this offering, other than the underwriting discounts and commissions referred to above, will be approximately $500,000.

Listing

Our common stock is listed on the Nasdaq Capital Market under the symbol “MEIP.”

Stamp Taxes

If you purchase shares of common stock offered in this prospectus, you may be required to pay stamp taxes and other charges under the laws and practices of the country of purchase, in addition to the offering price listed on the cover page of this prospectus.

Option to Purchase Additional Shares

We have granted to the underwriters an option, exercisable for 30 days from the date of this prospectus, to purchase, from time to time, in whole or in part, up to an aggregate of 2,625,000 shares from us at the public offering price set forth on the cover page of this prospectus, less underwriting discounts and commissions. If the underwriters exercise this option, each underwriter will be obligated, subject to specified conditions, to purchase a number of additional shares proportionate to that underwriter’s initial purchase commitment as indicated in the table above.

No Sales of Similar Securities

We and our officers and directors have agreed, subject to specified exceptions, not to directly or indirectly:

- sell, offer, contract or grant any option to sell (including any short sale), pledge, transfer, establish an open “put equivalent position” within the meaning of Rule 16a-1(h) under the Securities Exchange Act of 1934, as amended, or
- otherwise dispose of any shares of common stock, options or warrants to acquire shares of common stock, or securities exchangeable or exercisable for or convertible into shares of common stock currently or hereafter owned either of record or beneficially, or
- publicly announce an intention to do any of the foregoing,

for a period of 90 days after the date of this prospectus supplement without the prior written consent of Jefferies LLC and Stifel, Nicolaus & Company, Incorporated.

This restriction terminates after the close of trading of the common stock on and including the 90th day after the date of this prospectus supplement.

Jefferies LLC and Stifel, Nicolaus & Company, Incorporated may, in their sole discretion and at any time or from time to time before the termination of the 90-day period release all or any portion of the securities subject to lock-up agreements. There are no existing agreements between the underwriters and any of our officers and directors who will execute a lock-up agreement, providing consent to the sale of shares prior to the expiration of the lock-up period.

Stabilization

The underwriters have advised us that they may engage in short sale transactions, stabilizing transactions, syndicate covering transactions or the imposition of penalty bids in connection with this offering. These activities may have the effect of stabilizing or maintaining the market price of the common stock at a level above that which might otherwise prevail in the open market. Establishing short sales positions may involve either “covered” short sales or “naked” short sales.

“Covered” short sales are sales made in an amount not greater than the underwriters’ option to purchase additional shares of our common stock in this offering. The underwriters may close out any covered short position by either exercising their option to purchase additional shares of our common stock or purchasing shares of our common stock in the open market. In determining the source of shares to close out the covered short position, the underwriters will consider, among other things, the price of shares available for purchase in the open market as compared to the price at which they may purchase shares through the option to purchase additional shares.

“Naked” short sales are sales in excess of the option to purchase additional shares of our common stock. The underwriters must close out any naked short position by purchasing shares in the open market. 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 shares of our common stock in the open market after pricing that could adversely affect investors who purchase in this offering.

A stabilizing bid is a bid for the purchase of shares of common stock on behalf of the underwriters for the purpose of fixing or maintaining the price of the common stock. A syndicate covering transaction is the bid for or the purchase of shares of common stock on behalf of the underwriters to reduce a short position incurred by the underwriters in connection with the offering. Similar to other purchase transactions, the underwriter's purchases to cover the syndicate short sales may have the effect of raising or maintaining the market price of our common stock or preventing or retarding a decline in the market price of our common stock. As a result, the price of our common stock may be higher than the price that might otherwise exist in the open market. A penalty bid is an arrangement permitting the underwriters to reclaim the selling concession otherwise accruing to a syndicate member in connection with the offering if the common stock originally sold by such syndicate member are purchased in a syndicate covering transaction and therefore have not been effectively placed by such syndicate member.

Neither we nor any of the underwriters make any representation or prediction as to the direction or magnitude of any effect that the transactions described above may have on the price of our common stock. The underwriters are not obligated to engage in these activities and, if commenced, any of the activities may be discontinued at any time.

The underwriters may also engage in passive market making transactions in our common stock on The NASDAQ Capital Market in accordance with Rule 103 of Regulation M during a period before the commencement of offers or sales of shares of our common stock in this offering and extending through the completion of distribution. A passive market maker must display its bid at a price not in excess of the highest independent bid of that security. However, if all independent bids are lowered below the passive market maker's bid, that bid must then be lowered when specified purchase limits are exceeded.

Electronic Distribution

A prospectus in electronic format may be made available by e-mail or on the web sites or through online services maintained by one or more of the underwriters or their affiliates. In those cases, prospective investors may view offering terms online and may be allowed to place orders online. The underwriters may agree with us to allocate a specific number of shares of common stock for sale to online brokerage account holders. Any such allocation for online distributions will be made by the underwriters on the same basis as other allocations. Other than the prospectus in electronic format, the information on the underwriters' web sites and any information contained in any other web site maintained by any of the underwriters is not part of this prospectus, has not been approved and/or endorsed by us or the underwriters and should not be relied upon by investors.

Other Activities and Relationships

The underwriters and certain of their respective affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, investment research, principal investment, hedging, financing and brokerage activities. The underwriters and certain of their respective affiliates have, from time to time, performed, and may in the future perform, various commercial and investment banking and financial advisory services for us and our affiliates, for which they received or will receive customary fees and expenses. Stifel, Nicolaus & Company, Incorporated is the sales agent under our "at-the-market" equity offering program, pursuant to which it receives customary fees.

In the ordinary course of their various business activities, the underwriters and certain of their respective affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own account and for the accounts of their customers, and such investment and securities activities may involve securities and/or instruments issued by us and our affiliates. If the underwriters or their respective affiliates have a lending relationship with us, they routinely hedge their credit exposure to us consistent with their customary risk management policies. The underwriters and their respective affiliates may hedge such exposure by entering into transactions which consist of either the purchase of credit default swaps or the creation of short positions in our securities or the securities of our affiliates, including potentially the common stock offered hereby. Any such short positions could adversely affect future trading prices of

the common stock offered hereby. The underwriters and certain of their respective affiliates may also communicate independent investment recommendations, market color or trading ideas and/or publish or express independent research views in respect of such securities or instruments and may at any time hold, or recommend to clients that they acquire, long and/or short positions in such securities and instruments.

Notice to Prospective Investors in the European Economic Area

In relation to each Member State of the European Economic Area (each, a "Relevant Member State"), no offer of shares may be made to the public in that Relevant Member State other than:

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; or

C. in any other circumstances falling within Article 3(2) of the Prospectus Directive,

provided that no such offer of shares shall require the Company or the representatives to publish a prospectus pursuant to Article 3 of the Prospectus Directive or supplement a prospectus pursuant to Article 16 of the Prospectus Directive.

Each person in a Relevant Member State who initially acquires any shares or to whom any offer is made will be deemed to have represented, acknowledged and agreed that it is a "qualified investor" within the meaning of the law in that Relevant Member State implementing Article 2(1)(e) of the Prospectus Directive. In the case of any shares being offered to a financial intermediary as that term is used in Article 3(2) of the Prospectus Directive, each such financial intermediary will be deemed to have represented, acknowledged and agreed that the shares acquired by it in the offer have not been acquired on a non-discretionary basis on behalf of, nor have they been acquired with a view to their offer or resale to, persons in circumstances which may give rise to an offer of any shares to the public other than their offer or resale in a Relevant Member State to qualified investors as so defined or in circumstances in which the prior consent of the representatives has been obtained to each such proposed offer or resale.

The Company, the representatives and their affiliates will rely upon the truth and accuracy of the foregoing representations, acknowledgements and agreements.

This prospectus has been prepared on the basis that any offer of shares in any Relevant Member State will be made pursuant to an exemption under the Prospectus Directive from the requirement to publish a prospectus for offers of shares. Accordingly, any person making or intending to make an offer in that Relevant Member State of shares which are the subject of the offering contemplated in this prospectus may only do so in circumstances in which no obligation arises for the Company or any of the underwriters to publish a prospectus pursuant to Article 3 of the Prospectus Directive in relation to such offer. Neither the Company nor the underwriters have authorized, nor do they authorize, the making of any offer of shares in circumstances in which an obligation arises for the Company or the underwriters to publish a prospectus for such offer.

For the purpose of the above provisions, the expression "an offer to the public" in relation to any shares 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 the shares to be offered so as to enable an investor to decide to purchase or subscribe the shares, as the same may be varied in the Relevant Member State by any measure implementing the Prospectus Directive in the Relevant Member State and the expression "Prospectus Directive" means Directive 2003/71/EC (including the 2010 PD Amending Directive, to the extent implemented in the Relevant Member States) and includes any relevant implementing measure in the Relevant Member State and the expression "2010 PD Amending Directive" means Directive 2010/73/EU.

Notice to Prospective Investors in the United Kingdom

In addition, in the United Kingdom, this document is being distributed only to, and is directed only at, and any offer subsequently made may only be directed at persons who are "qualified investors" (as defined in the Prospectus Directive) (i) who have professional experience in matters relating to investments falling within Article 19 (5) of the

Financial Services and Markets Act 2000 (Financial Promotion) Order 2005, as amended (the "Order") and/or (ii) who are high net worth companies (or persons to whom it may otherwise be lawfully communicated) falling within Article 49(2)(a) to (d) of the Order (all such persons together being referred to as "relevant persons"). This document must not be acted on or relied on in the United Kingdom by persons who are not relevant persons. In the United Kingdom, any investment or investment activity to which this document relates is only available to, and will be engaged in with, relevant persons.

Notice to Prospective Investors in Switzerland

The shares may not be publicly offered in Switzerland and will not be listed on the SIX Swiss Exchange ("SIX") or on any other stock exchange or regulated trading facility in Switzerland. This document has been prepared without regard to the disclosure standards for issuance prospectuses under art. 652a or art. 1156 of the Swiss Code of Obligations or the disclosure standards for listing prospectuses under art. 27 ff. of the SIX Listing Rules or the listing rules of any other stock exchange or regulated trading facility in Switzerland. Neither this document nor any other offering or marketing material relating to the shares or the offering may be publicly distributed or otherwise made publicly available in Switzerland.

Neither this document nor any other offering or marketing material relating to the offering, the Company, the shares have been or will be filed with or approved by any Swiss regulatory authority. In particular, this document will not be filed with, and the offer of shares will not be supervised by, the Swiss Financial Market Supervisory Authority FINMA (FINMA), and the offer of shares has not been and will not be authorized under the Swiss Federal Act on Collective Investment Schemes ("CISA"). The investor protection afforded to acquirers of interests in collective investment schemes under the CISA does not extend to acquirers of shares.

Notice to Prospective Investors in the 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 shares to which this prospectus supplement relates may be illiquid and/or subject to restrictions on their resale. Prospective purchasers of the shares offered should conduct their own due diligence on the shares. If you do not understand the contents of this prospectus supplement you should consult an authorized financial advisor.

Notice to Prospective Investors in Australia

No placement document, prospectus, product disclosure statement or other disclosure document has been lodged with the Australian Securities and Investments Commission ("ASIC"), in relation to the offering.

This prospectus does not constitute a prospectus, product disclosure statement or other disclosure document under the Corporations Act 2001 (the "Corporations Act"), and does not purport to include the information required for a prospectus, product disclosure statement or other disclosure document under the Corporations Act.

Any offer in Australia of the shares may only be made to persons (the "Exempt Investors") who are "sophisticated investors" (within the meaning of section 708(8) of the Corporations Act), "professional investors" (within the meaning of section 708(11) of the Corporations Act) or otherwise pursuant to one or more exemptions contained in section 708 of the Corporations Act so that it is lawful to offer the shares without disclosure to investors under Chapter 6D of the Corporations Act.

The shares applied for by Exempt Investors in Australia must not be offered for sale in Australia in the period of 12 months after the date of allotment under the offering, except in circumstances where disclosure to investors under Chapter 6D of the Corporations Act would not be required pursuant to an exemption under section 708 of the Corporations Act or otherwise or where the offer is pursuant to a disclosure document which complies with Chapter 6D of the Corporations Act. Any person acquiring shares must observe such Australian on-sale restrictions.

This prospectus contains general information only and does not take account of the investment objectives, financial situation or particular needs of any particular person. It does not contain any securities recommendations or financial product advice. Before making an investment decision, investors need to consider whether the information in this prospectus is appropriate to their needs, objectives and circumstances, and, if necessary, seek expert advice on those matters.

Notice to Prospective Investors in Hong Kong

The securities have not been offered or sold and will not be offered or sold in Hong Kong, by means of any document, other than (a) to "professional investors" as defined in the Securities and Futures Ordinance (Cap. 571) of Hong Kong and any rules made under that Ordinance; or (b) in other circumstances which do not result in the document being a "prospectus" as defined in the Companies Ordinance (Cap. 32) of Hong Kong or which do not constitute an offer to the public within the meaning of that Ordinance. No advertisement, invitation or document relating to the securities has been or may be issued or has been or may be in the possession of any person for the purposes of issue, whether in Hong Kong or elsewhere, which is directed at, or the contents of which are likely to be accessed or read by, the public of Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to securities which are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" as defined in the Securities and Futures Ordinance and any rules made under that Ordinance.

Notice to Prospective Investors in Japan

The securities have not been and will not be registered under the Financial Instruments and Exchange Law of Japan (Law No. 25 of 1948, as amended) and, accordingly, will not be offered or sold, directly or indirectly, in Japan, or for the benefit of any Japanese Person or to others for re-offering or resale, directly or indirectly, in Japan or to any Japanese Person, except in compliance with all applicable laws, regulations and ministerial guidelines promulgated by relevant Japanese governmental or regulatory authorities in effect at the relevant time. For the purposes of this paragraph, "Japanese Person" shall mean any person resident in Japan, including any corporation or other entity organized under the laws of Japan.

Notice to Prospective Investors in Singapore

This prospectus has not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, this prospectus and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of Non-CIS Securities may not be circulated or distributed, nor may the Non-CIS Securities be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Singapore other than (i) to an institutional investor under Section 274 of the Securities and Futures Act, Chapter 289 of Singapore (the "SFA"), (ii) to a relevant person pursuant to Section 275(1), or any person pursuant to Section 275(1A), and in accordance with the conditions specified in Section 275, of the SFA, or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

Where the Non-CIS Securities are subscribed or purchased under Section 275 of the SFA by a relevant person which is:

(a) a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or

(b) a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary of the trust is an individual who is an accredited investor,

securities (as defined in Section 239(1) of the SFA) of that corporation or the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferred within six months after that corporation or that trust has acquired the Non-CIS Securities pursuant to an offer made under Section 275 of the SFA except:

(a) to an institutional investor or to a relevant person defined in Section 275(2) of the SFA, or to any person arising from an offer referred to in Section 275(1A) or Section 276(4)(i)(B) of the SFA;

(b) where no consideration is or will be given for the transfer;
(c) where the transfer is by operation of law;
(d) as specified in Section 276(7) of the SFA; or
(e) as specified in Regulation 32 of the Securities and Futures (Offers of Investments) (Shares and Debentures) Regulations 2005 of Singapore.

Canada

This prospectus supplement constitutes an “exempt offering document” as defined in and for the purposes of applicable Canadian securities laws. No prospectus has been filed with any securities commission or similar regulatory authority in Canada in connection with the offer and sale of the common stock. No securities commission or similar regulatory authority in Canada has reviewed or in any way passed upon this prospectus supplement or on the merits of the common stock and any representation to the contrary is an offence.

Canadian investors are advised that this prospectus supplement has been prepared in reliance on section 3A3 of National Instrument 33-105 Underwriting Conflicts (“NI 33-105”). Pursuant to section 3A.3 of NI 33-105, this prospectus supplement is exempt from the requirement that the Company and the underwriter(s) provide investors with certain conflicts of interest disclosure pertaining to “connected issuer” and/or “related issuer” relationships that may exist between the Company and the underwriter(s) as would otherwise be required pursuant to subsection 2.1(1) of NI 33-105.

Resale Restrictions

The offer and sale of the common stock in Canada is being made on a private placement basis only and is exempt from the requirement that the Company prepares and files a prospectus under applicable Canadian securities laws. Any resale of the common stock acquired by a Canadian investor in this offering must be made in accordance with applicable Canadian securities laws, which may vary depending on the relevant jurisdiction, and which may require resales to be made in accordance with Canadian prospectus requirements, pursuant to a statutory exemption from the prospectus requirements, in a transaction exempt from the prospectus requirements or otherwise under a discretionary exemption from the prospectus requirements granted by the applicable local Canadian securities regulatory authority. These resale restrictions may under certain circumstances apply to resales of the common stock outside of Canada.

Representations of Purchasers

Each Canadian investor who purchases the common stock will be deemed to have represented to the Company and the underwriter(s) that the investor (i) is purchasing the common stock as principal, or is deemed to be purchasing as principal in accordance with applicable Canadian securities laws, for investment only and not with a view to resale or redistribution; (ii) is an “accredited investor” as such term is defined in section 1.1 of National Instrument 45-106 Prospectus Exemptions or, in Ontario, as such term is defined in section 73.3(1) of the Securities Act (Ontario); and (iii) is a “permitted client” as such term is defined in section 1.1 of National Instrument 31-103 Registration Requirements, Exemptions and Ongoing Registrant Obligations.

Taxation and Eligibility for Investment

Any discussion of taxation and related matters contained in this prospectus supplement does not purport to be a comprehensive description of all of the tax considerations that may be relevant to a Canadian investor when deciding to purchase the common stock and, in particular, does not a l dress any Canadian tax considerations. No representation or warranty is hereby made as to the tax consequences to a resident, or deemed resident, of Canada of an investment in the common stock or with respect to the eligibility of the common stock for investment by such investor under relevant Canadian federal and provincial legislation and regulations.

Rights of Action for Damages or Rescission

Securities legislation in certain of the Canadian jurisdictions provides certain purchasers of securities pursuant to an offering memorandum (such as this prospectus supplement), including where the distribution involves an “eligible foreign security” as such term is defined in Ontario Securities Commission Rule 45-501 Ontario Prospectus and

Registration Exemptions and in Multilateral Instrument 45-107 Listing Representation and Statutory Rights of Action Disclosure Exemptions, as applicable, with a remedy for damages or rescission, or both, in addition to any other rights they may have at law, where the offering memorandum, or other offering document that constitutes an offering memorandum, and any amendment thereto, contains a "misrepresentation" as defined under applicable Canadian securities laws. These remedies, or notice with respect to these remedies, must be exercised or delivered, as the case may be, by the purchaser within the time limits prescribed under, and are subject to limitations and defenses under, applicable Canadian securities legislation. In addition, these remedies are in addition to and without derogation from any other right or remedy available at law to the investor.

Language of Documents

Upon receipt of this document, each Canadian investor hereby confirms that it has expressly requested that all documents evidencing or relating in any way to the sale of the securities described herein (including for greater certainty any purchase confirmation or any notice) be drawn up in the English language only. *Par la reception de ce document, chaque investisseur Canadien confirme par les presentes qu'il a expressement exige que tour les documents faisant foi ou se rapportant de quelque maniere que ce soit a la vente des valeurs mobilieres decrites aux presences (incluant, pour plus de certitude, toute confirmation d'achat ou tout avis) soient rediges en anglais seulement.*

LEGAL MATTERS

The validity of the issuance of the securities offered hereby will be passed upon for us by Morgan, Lewis & Bockius LLP, New York, New York. Goodwin Procter LLP, New York, New York, is acting as counsel for the underwriters. Certain partners of Morgan, Lewis & Bockius LLP own a number of shares of our common stock which represent less than 0.1% of the total outstanding common stock.

EXPERTS

The financial statements as of June 30, 2021 and 2020, and for each of the three years in the period ended June 30, 2021, incorporated by reference in this prospectus supplement, have been so incorporated in reliance on the report of BDO USA, LLP, an independent registered public accounting firm, incorporated herein by reference, given on the authority of said firm as experts in auditing and accounting.

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports, proxy statements and other information with the SEC. Our SEC filings are available to the public over the Internet at the SEC's website at http://www.sec.gov. The SEC's website contains reports, proxy and information statements and other information regarding issuers, such as us, that file electronically with the SEC.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to "incorporate by reference" into this prospectus supplement the information we have filed with the SEC. The information we incorporate by reference into this prospectus supplement is an important part of this prospectus supplement. Any statement in a document we incorporate by reference into this prospectus supplement or the accompanying base prospectus will be considered to be modified or superseded to the extent a statement contained in this prospectus supplement or any other subsequently filed document that is incorporated by reference into this prospectus supplement modifies or supersedes that statement. The modified or superseded statement will not be considered to be a part of this prospectus supplement or accompanying base prospectus, as applicable, except as modified or superseded.

We incorporate by reference into this prospectus supplement the information contained in the documents listed below, which is considered to be a part of this prospectus supplement:

- our Annual Report on Form 10-K for the fiscal year ended June 30, 2021, filed with the SEC on September 2, 2021;
- our Quarterly Report on Form 10-Q for the quarterly period ended September 30, 2021, filed with the SEC on November 10, 2021;
- our Current Reports on Form 8-K filed with the SEC on August 5, 2021, November 23, 2021 and November 30, 2021;
- the information specifically incorporated by reference into our Annual Report on Form 10-K for the year ended June 30, 2021 from our definitive proxy statement on Schedule 14A (other than information furnished rather than filed), which was filed with the SEC on October 28, 2021; and
- the description of our common stock contained in the Registration Statement on Form 8-A filed on November 26, 2003 and any further amendment or report filed thereafter for the purpose of updating such description.

We also incorporate by reference all documents filed pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of this prospectus supplement and prior to the termination of this offering; provided, however, that we are not incorporating any information furnished under Item 2.02 or Item 7.01 of any current report on Form 8-K we may subsequently file.

Statements made in this prospectus supplement or the accompanying base prospectus or in any document incorporated by reference in this prospectus supplement or the accompanying base prospectus as to the contents of any contract or other document referred to herein or therein are not necessarily complete, and in each instance reference is made to the copy of such contract or other document filed as an exhibit to the documents incorporated by reference, each such statement being qualified in all material respects by such reference.

You may request a copy of these filings, at no cost, by writing or telephoning us at the following address:

MEI Pharma, Inc.
11455 El Camino Real,
San Diego, CA 92130
Tel: (858) 369-7100
Attn: Investor Relations

Copies of these filings are also available, without charge, through the "Investors" section of our website (www.meipharma.com) as soon as reasonably practicable after they are filed electronically with the SEC. The information contained on our website is not a part of this prospectus supplement.

Table of Contents

PROSPECTUS

$200,000,000

MEI PHARMA, INC.

Common Stock
Preferred Stock
Warrants

We may offer up to $200,000,000 aggregate dollar amount of our common stock, preferred stock and warrants to purchase our common stock or preferred stock from time to time in one or more offerings. This prospectus provides you with a general description of the securities.

We may offer these securities at prices and on terms to be set forth in one or more supplements to this prospectus. These securities may be offered directly, through agents on our behalf or through underwriters or dealers.

Our common stock is traded on the Nasdaq Capital Market under the symbol "MEIP." On May 18, 2020, the closing price of our common stock on the Nasdaq Capital Market was $2.94 per share.

An investment in our securities involves significant risks. See "Risk Factors" on page 3 of this prospectus and in any applicable prospectus supplement and in the documents incorporated by reference in this prospectus for a discussion of factors you should carefully consider before deciding to purchase 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 of this prospectus. Any representation to the contrary is a criminal offense.

The date of this prospectus is May 18, 2020.

TABLE OF CONTENTS

ABOUT THIS PROSPECTUS

Unless we have indicated otherwise, references in this prospectus to “MEI Pharma,” “we,” “us” and “our” or similar terms are to MEI Pharma, Inc., a Delaware corporation. References in this prospectus to “FDA” refer to the United States Food and Drug Administration.

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission, or SEC, utilizing a “shelf” registration statement. This prospectus provides you with a general description of the securities we may offer. We will describe the specific terms of those securities, as necessary, in supplements that we attach to this prospectus for each offering. Each supplement will also contain specific information about the terms of the offering it describes. The supplements may also add to, update or change information contained in this prospectus. In addition, as we describe in the sections entitled “Incorporation of Certain Information by Reference” and “Where You Can Find More Information,” we have filed and plan to continue to file other documents with the SEC that contain information about us. Before you decide whether to invest in our securities, you should read this prospectus, the supplement that further describes the offering of those securities and the information we otherwise file with the SEC.

The registration statement that contains this prospectus, including the exhibits to the registration statement, contains additional information about us and the securities being offered under this prospectus. You should read the registration statement and the accompanying exhibits for further information. The registration statement and exhibits can be read and are available to the public over the Internet at the SEC’s website at http: //www.sec.gov.

You should rely only on the information contained or incorporated by reference in this prospectus and in any prospectus supplement. We have not authorized any person to provide any information or make any statement that differs from what is contained in this prospectus. If any person does make a statement that differs from what is in this prospectus, you should not rely on it. This prospectus is not an offer to sell, nor is it a solicitation of an offer to buy, these securities in any state in which the offer or sale is not permitted. The information in this prospectus is accurate as of its date, but the information may change after that date. You should not assume that the information in this prospectus is accurate as of any date after its date.

SUMMARY

The Company

We are a late-stage pharmaceutical company focused on leveraging our extensive development and oncology expertise to identify and advance new therapies intended to meaningfully improve the treatment of cancer. Our portfolio of drug candidates contains four clinical-stage candidates, including one candidate in an ongoing Phase 3 global registration trial and another candidate in an ongoing Phase 2 clinical trial that we intend to submit to the U.S. Food and Drug Administration ("FDA") to support accelerated approval of a marketing application. Our common stock is listed on the NASDAQ Capital Market under the symbol "MEIP".

Our approach to building our pipeline is to license promising cancer agents and build value in programs through development, commercialization and strategic partnerships, as appropriate.

Corporate Information

Our principal executive offices are located at 3611 Valley Centre Drive, Suite 500, San Diego, CA 92130, and our phone number is (858) 369-7100.

RISK FACTORS

Any investment in our securities involves a high degree of risk. In addition to the other information included or incorporated by reference in this prospectus and any accompanying prospectus supplement, you should carefully consider the important factors set forth under the heading "Risk Factors" in our Annual Report on Form 10-K for the fiscal year ended June 30, 2019, our Quarterly Report on Form 10-Q for the quarter ended March 31, 2020, and in our subsequent annual reports on Form 10-K and in other reports we file with the SEC from time to time, which are incorporated herein by reference, before investing in our securities. Any of the risk factors referred to above could significantly and negatively affect our business, results of operations or financial condition, which may lower the trading price of our common stock. The risks referred to above are not the only ones that may exist. Additional risks not currently known by us or that we deem immaterial may also impair our business operations. You may lose all or a part of your investment. For further details, see the sections entitled "Where You Can Find More Information" and "Incorporation of Certain Information by Reference."

CAUTIONARY STATEMENT ABOUT FORWARD-LOOKING STATEMENTS

This prospectus and the documents incorporated by reference herein include forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the "Securities Act") and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). All statements other than statements of historical facts contained in this prospectus and in the documents incorporated by reference herein, including statements regarding the future financial position, business strategy and plans and objectives of management for future operations, are forward-looking statements. The words "believe," "may," "will," "estimate," "continue," "anticipate," "intend," "should," "plan," "expect," and similar expressions, as they relate to us, are intended to identify forward-looking statements. We have based these forward-looking statements largely on current expectations and projections about future events and financial trends that we believe may affect our financial condition, results of operations, business strategy and financial needs. These forward-looking statements are subject to a number of risks, uncertainties and assumptions, including, without limitation, those described in "Risk Factors" and elsewhere in this prospectus and the documents incorporated by reference herein, including, among other things:

- costs and delays in our clinical development programs, including delays in patient enrollment relating to the COVID-19 pandemic, and/or receipt of FDA or other required foreign and domestic governmental or regulatory approvals, or the failure to obtain such approvals, for our product candidates;
- our inability to obtain required additional financing or financing available to us on acceptable terms, or at all, whether as a result of weaknesses in the capital markets or otherwise, which may cause us to delay, scale-back or eliminate plans related to development of our drug candidates;
- Kyowa Kirin Company ("KKC"), Helsinn Healthcare SA ("Helsinn") and other parties with which we have entered into collaboration, license, development and/or commercialization agreements may not satisfy their obligations under the agreements which could impact future revenues;
- our payment obligations under the Presage Biosciences, Inc. License Agreement and the S*Bio Purchase Agreement, which may reduce our cash available for other development efforts, and other obligations and risks related to the Presage License Agreement and the S*Bio Purchase Agreement;
- clinical studies by their nature typically have a high level of risk and may not produce successful results;
- the results of pre-clinical studies and completed clinical trials are not necessarily predictive of future results, and our current drug candidates may not have favorable results in later studies or trials;
- our inability to maintain or enter into, and the risks resulting from our dependence upon, contractual arrangements necessary for the clinical development, manufacture, commercialization, marketing, sales and distribution of our product candidates;

- the FDA's interpretation and our interpretation of data from preclinical and clinical studies may differ significantly;
- our failure to successfully commercialize our product candidates;
- pricing regulations, third-party reimbursement practices and healthcare reform initiatives;
- the failure of any products to gain market acceptance;
- our reliance on third parties to conduct our clinical trials and manufacture our products;
- our inability to control the costs of manufacturing our products;
- our reliance on acquisitions or licenses from third parties to expand our pipeline of drug candidates;
- competition and competitive factors;
- our inability to protect our patents or proprietary rights and obtain necessary rights to third party patents and intellectual property to operate our business;
- our inability to operate our business without infringing the patents and proprietary rights of others;
- costs stemming from our defense against third party intellectual property infringement claims;
- our exposure to potential product liability claims and other claims may exceed our insurance limits;
- our ability to attract and retain key employees;
- technological changes;
- cybersecurity;
- general economic conditions;
- government regulation generally;
- changes in industry practice; and
- one-time events.

These risks are not exhaustive. Other sections of this report and our other filings with the SEC include additional factors which could adversely impact our business and financial performance. Moreover, we operate in a very competitive and rapidly changing environment. There is substantial uncertainty regarding the impact of the COVID-19 on our business, industry, global economic conditions and government policy. New risk factors emerge from time to time and it is not possible for us to predict all risk factors, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements.

You should not rely upon forward looking statements as predictions of future events. We cannot assure you that the events and circumstances reflected in the forward looking statements will be achieved or occur. Although we believe that the expectations reflected in the forward looking statements are reasonable, we cannot guarantee future results, levels of activity, performance or achievements.

SECURITIES OFFERED BY THIS PROSPECTUS

Using this prospectus, we may offer from time to time, in one or more series, together or separately, at prices and terms to be determined at the time of offering:

- shares of common stock, $0.00000002 par value;
- shares of preferred stock, $0.01 par value; and
- warrants to purchase shares of common stock or preferred stock.

The shares of preferred stock may be convertible into or exchangeable for shares of our common stock or preferred stock issued by us.

See “Description of Securities” for a description of the terms of the common stock, preferred stock and warrants.

USE OF PROCEEDS

Although we expect to use a substantial portion of the net proceeds from the sale of securities under this prospectus for general corporate purposes, including to progress our clinical trial programs, we have not allocated these net proceeds for specific purposes. If, as of the date of any prospectus supplement, we have identified any additional use for the net proceeds, we will describe them in the prospectus supplement. The amount of securities offered from time to time pursuant to this prospectus and any prospectus supplement, and the precise amount of the net proceeds we will receive from the sale of such securities, as well as the timing of receipt of those proceeds, will depend upon our funding requirements. If we elect at the time of an issuance of securities to make different or more specific uses of the proceeds than as set forth herein, we will describe those uses in the applicable prospectus supplement.

PLAN OF DISTRIBUTION

We may sell the securities included in this prospectus (i) through agents, (ii) through underwriters, (iii) through dealers, (iv) directly to a limited number of purchasers or to a single purchaser, or (v) through a combination of any such methods of sale.

The distribution of the securities may be effected from time to time in one or more transactions, including block transactions and transactions on the Nasdaq Capital Market or any other organized market where the securities may be traded:

- at a fixed price or at final prices, which may be changed;
- at market prices prevailing at the time of sale;
- at prices related to such prevailing market prices; or
- at negotiated prices.

Offers to purchase securities may be solicited directly by us, or by agents designated by us, from time to time. Any such agent, which may be deemed to be an underwriter as that term is defined in the Securities Act, as amended, involved in the offer or sale of the securities in respect of which this prospectus is delivered will be named, and any commissions payable by us to such agent will be set forth, in the applicable prospectus supplement.

If an underwriter is, or underwriters are, utilized in the offer and sale of securities in respect of which this prospectus and the applicable prospectus supplement are delivered, we will execute an underwriting agreement with such underwriter(s) for the sale to it or them and the name(s) of the underwriter(s) and the terms of the transaction, including any underwriting discounts and other items constituting compensation of the underwriters and dealers, if any, will be set forth in such prospectus supplement, which will be used by the underwriter(s) to make resales of the securities in respect of which this prospectus and such prospectus supplement are delivered to the public. The securities will be acquired by the underwriters for their own accounts and may be resold 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. Any initial public offering price and any discounts or concessions allowed or reallowed or paid to dealers may be changed from time to time.

If a dealer is utilized in the sale of the securities in respect of which this prospectus is delivered, we will sell such securities to the dealer, as principal. The dealer may then resell such securities to the public at varying prices to be determined by such dealer at the time of resale. The name of the dealer and the terms of the transaction will be identified in the applicable prospectus supplement.

If an agent is used in an offering of securities being offered by this prospectus, the agent will be named, and the terms of the agency will be described, in the applicable prospectus supplement relating to the offering. Unless otherwise indicated in the prospectus supplement, an agent will act on a best efforts basis for the period of its appointment.

If indicated in the applicable prospectus supplement, we will authorize underwriters or their other agents to solicit offers by certain institutional investors to purchase securities from us pursuant to contracts providing for payment and delivery at a future date. Institutional investors with which these contracts may be made include commercial and savings banks, insurance companies, pension funds, investment companies, educational and charitable institutions and others. In all cases, these purchasers must be approved by us. The obligations of any purchaser under any of these contracts will not be subject to any conditions except that (a) the purchase of the securities must not at the time of delivery be prohibited under the laws of any jurisdiction to which that purchaser is subject, and (b) if the securities are also being sold to underwriters, we must have sold to these underwriters the securities not subject to delayed delivery. Underwriters and other agents will not have any responsibility in respect of the validity or performance of these contracts.

Certain of the underwriters, dealers or agents utilized by us in any offering hereby may be customers of, including borrowers from, engage in transactions with, and perform services for us or one or more of our affiliates in the ordinary course of business. Underwriters, dealers, agents and other persons may be entitled, under agreements which may be entered into with us, to indemnification against certain civil liabilities, including liabilities under the Securities Act.

Until the distribution of the securities is completed, rules of the SEC may limit the ability of the underwriters and certain selling group members, if any, to bid for and purchase the securities. As an exception to these rules, the representatives of the underwriters, if any, are permitted to engage in certain transactions that stabilize the price of the securities. Such transactions may consist of bids or purchases for the purpose of pegging, fixing or maintaining the price of the securities.

If underwriters create a short position in the securities in connection with the offering thereof (in other words, if they sell more securities than are set forth on the cover page of the applicable prospectus supplement), the representatives of such underwriters may reduce that short position by purchasing securities in the open market. Any such representatives also may elect to reduce any short position by exercising all or part of any over-allotment option described in the applicable prospectus supplement.

Any such representatives also may impose a penalty bid on certain underwriters and selling group members. This means that if the representatives purchase securities in the open market to reduce the underwriters' short position or to stabilize the price of the securities, they may reclaim the amount of the selling concession from the underwriters and selling group members who sold those shares as part of the offering thereof.

In general, purchases of a security for the purpose of stabilization or to reduce a syndicate short position could cause the price of the security to be higher than it might otherwise be in the absence of such purchases. The imposition of a penalty bid might have an effect on the price of a security to the extent that it was to discourage resales of the security by purchasers in the offering.

Neither we nor any of the underwriters, if any, makes any representation or prediction as to the direction or magnitude of any effect that the transactions described above may have on the price of the securities. In addition, neither we nor any of the underwriters, if any, makes any representation that the representatives of the underwriters, if any, will engage in such transactions or that such transactions, once commenced, will not be discontinued without notice.

The anticipated date of delivery of the securities offered by this prospectus will be described in the applicable prospectus supplement relating to the offering. The securities offered by this prospectus may or may not be listed on a national securities exchange or a foreign securities exchange. We cannot give any assurances that there will be a market for any of the securities offered by this prospectus and any prospectus supplement.

We will bear costs relating to all of the securities being registered under this prospectus, other than underwriters' discounts and commissions.

DESCRIPTION OF SECURITIES

Securities We May Offer Under this Prospectus

Common Stock

For a description of our common stock, please see the Description of Capital Stock of MEI Pharma, Inc. filed as Exhibit 4.3 to Amendment No. 1 to our Annual Report on Form 10-K for the fiscal year ended June 30, 2019, filed with the SEC on December 6, 2019, and any future description of capital stock filed thereafter for the purpose of updating such description.

Preferred Stock

The material terms of any series of preferred stock that we offer through a prospectus supplement will be described in that prospectus supplement. Our board of directors is authorized to provide for the issuance of blank check preferred stock in one or more series with designations as may be stated in the resolution or resolutions providing for the issue of such preferred shares. At the time that any series of our preferred stock is authorized, our board of directors will fix the dividend rights, any conversion rights, any voting rights, redemption provisions, liquidation preferences and any other rights, preferences, privileges and restrictions of that series, as well as the number of shares constituting that series and their designation. Our board of directors could, without stockholder approval, cause us to issue preferred stock which has voting, conversion and other rights that could adversely affect the holders of our common stock or make it more difficult to effect a change in control. Our preferred stock could be used to dilute the share ownership of persons seeking to obtain control of us and thereby hinder a possible takeover attempt which, if our stockholders were offered a premium over the market value of their shares, might be viewed as being beneficial to our stockholders. In addition, our preferred stock could be issued with voting, conversion and other rights and preferences which would adversely affect the voting power and other rights of holders of our common stock.

Warrants

We may issue warrants to purchase our common stock or preferred stock. Warrants may be issued independently or together with any other securities and may be attached to, or separate from, such securities. Each series of warrants will be issued under a separate warrant agreement to be entered into between us and a warrant agent. The terms of any warrants to be issued and a description of the material provisions of the applicable warrant agreement will be set forth in the applicable prospectus supplement.

The applicable prospectus supplement will describe the following terms of any warrants in respect of which this prospectus is being delivered:

- the title of such warrants;
- the aggregate number of such warrants;
- the price or prices at which such warrants will be issued;
- the currency or currencies, in which the price of such warrants will be payable;

- the securities purchasable upon exercise of such warrants;
- the price at which and the currency or currencies in which the securities or other rights purchasable upon exercise of such warrants may be purchased;
- the date on which the right to exercise such warrants shall commence and the date on which such right shall expire;
- if applicable, the minimum or maximum amount of such warrants which may be exercised at any one time;
- if applicable, the designation and terms of the securities with which such warrants are issued and the number of such warrants issued with each such security;
- if applicable, the date on and after which such warrants and the related securities will be separately transferable;
- information with respect to book-entry procedures, if any;
- if applicable, a discussion of any material United States federal income tax considerations; and
- any other terms of such warrants, including terms, procedures and limitations relating to the exchange and exercise of such warrants.

Description of Share Capital

We are authorized to issue 226,000,000 shares of common stock, par value $0.00000002 per share, and 100,000 shares of preferred stock, par value $0.01 per share. As of May 1, 2020, we had 105,998,677 shares of common stock outstanding and no shares of preferred stock outstanding. Also as of May 1, 2020, we had outstanding (i) 11,159,988 shares of our common stock subject to outstanding options, with exercise prices ranging from $1.21 to $6.47 per share, (ii) 16,061,602 shares of our common stock subject to outstanding warrants, with an exercise price of $2.54 per share, and (iii) 6,637,150 shares of our common stock available for awards under our Amended and Restated 2008 Stock Omnibus Equity Compensation Plan.

LEGAL MATTERS

The validity of the securities described herein will be passed upon for us by Morgan, Lewis & Bockius LLP, New York, New York. Certain partners of Morgan, Lewis & Bockius LLP own a number of shares of our common stock which represent less than 0.1% of the total outstanding common stock.

EXPERTS

The financial statements as of June 30, 2019 and 2018, and for each of the three years in the period ended June 30, 2019, and management’s assessment of the effectiveness of internal control over financial reporting as of June 30, 2019, incorporated by reference in this Prospectus, have been so incorporated in reliance on the reports of BDO USA, LLP, an independent registered public accounting firm, incorporated herein by reference, given on the authority of said firm as experts in auditing and accounting.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to “incorporate by reference” into this prospectus and any accompanying prospectus supplement the information we have filed with the SEC. The information we incorporate by reference into this prospectus is an important part of this prospectus. Any statement in a document we incorporate by reference into

this prospectus will be considered to be modified or superseded to the extent a statement contained in this prospectus, any accompanying prospectus supplement or any other subsequently filed document that is incorporated by reference into this prospectus or any accompanying prospectus supplement modifies or supersedes that statement. The modified or superseded statement will not be considered to be a part of this prospectus or any accompanying prospectus supplement, as applicable, except as modified or superseded.

We incorporate by reference into this prospectus the information contained in the documents listed below, which are considered to be a part of this prospectus:

- our Annual Report on Form 10-K for the fiscal year ended June 30, 2019, as amended by the Form 10-K/A filed on December 6, 2019;
- our Quarterly Reports on Form 10-Q for the quarters ended September 30, 2019, December 31, 2019 and March 31, 2020;
- our Current Reports on Form 8-K filed with the SEC on July 3, 2019, December 6, 2019, December 18, 2019, March 20, 2020, the Current Report on Form 8-K filed with the SEC on April 14, 2020 with respect to Items 1.01, 1.02, and 9.01 and the Current Report on Form 8-K filed with the SEC on April 14, 2020 with respect to Items 5.02, 8.01 and 9.01; and
- the description of our common stock contained in the Description of Capital Stock of MEI Pharma, Inc. filed as Exhibit 4.3 to Amendment No. 1 to our Annual Report on Form 10-K for the fiscal year ended June 30, 2019 and any further Description of Capital Stock of MEI Pharma, Inc. filed thereafter for the purpose of updating such description.

We also incorporate by reference all documents filed pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act after (i) the date of the initial registration statement and prior to the effectiveness of the registration statement and (ii) the date of this prospectus and prior to the termination of the offering of the securities under this Registration Statement (except in each case for the information contained in such documents that is deemed to be “furnished” and not “filed”).

Statements made in this prospectus or any accompanying prospectus supplement or in any document incorporated by reference in this prospectus or any accompanying prospectus supplement as to the contents of any contract or other document referred to herein or therein are not necessarily complete, and in each instance reference is made to the copy of such contract or other document filed as an exhibit to the documents incorporated by reference, each such statement being qualified in all material respects by such reference.

You may request a copy of these filings, at no cost, by writing or telephoning us at the following address:

MEI Pharma, Inc.
3611 Valley Centre Drive, Suite 500
San Diego, California 92130
Tel: (858) 792-6300
Attn: Investor Relations

Copies of these filings are also available, without charge, through the “Investors” section of our website (www.meipharma.com) as soon as reasonably practicable after they are filed electronically with the SEC. The information contained on our website is not a part of this prospectus.

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports, proxy statements and other information with the SEC. Our SEC filings are available to the public over the Internet at the SEC’s website at http://www.sec.gov. The SEC’s website contains reports, proxy and information statements and other information regarding issuers, such as us, that file electronically with the SEC.

17,500,000 Shares

Common Stock

PROSPECTUS SUPPLEMENT

Jefferies
Stifel
Wells Fargo Securities
LifeSci Capital
H.C. Wainwright & Co.

December 1, 2021