Filed by Akers Biosciences, Inc.
Pursuant to Rule 425 of the Securities Act of 1933
and deemed filed pursuant to Rule 14a-12
of the Securities Exchange Act of 1934
Subject Company: MyMD Pharmaceuticals, Inc.
Commission File No.: 001-36268

Important Information for Investors and Stockholders

This communication does not constitute an offer to sell or the solicitation of an offer to sell or the solicitation of an offer to buy any securities, nor shall there be any sale of securities in any jurisdiction in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any such jurisdiction. No public offer of securities shall be made except by means of a prospectus meeting the requirements of Section 10 of the Securities Act of 1933, as amended.

In connection with the proposed transaction between Akers Biosciences, Inc. ("Akers") and MyMD Pharmaceuticals, Inc. ("MyMD"), Akers intends to file relevant materials with the SEC, including a registration statement that will contain a proxy statement and prospectus. AKERS URGES INVESTORS AND STOCKHOLDERS TO READ THESE MATERIALS CAREFULLY AND IN THEIR ENTIRETY WHEN THEY BECOME AVAILABLE BECAUSE THEY WILL CONTAIN IMPORTANT INFORMATION ABOUT AKERS, THE PROPOSED TRANSACTION AND RELATED MATTERS. Investors and shareholders will be able to obtain free copies of the proxy statement, prospectus and other documents filed by Akers with the SEC (when they become available) through the website maintained by the SEC at www.sec.gov. In addition, investors and shareholders will be able to obtain free copies of the proxy statement, prospectus and other documents filed by Akers with the SEC by contacting Investor Relations by mail at Akers Biosciences, Inc., Attn: Investor Relations, 201 Grove Road, West Deptford, NJ 08086. Investors and stockholders are urged to read the proxy statement, prospectus and the other relevant materials when they become available before making any voting or investment decision with respect to the proposed transaction.

Participants in the Solicitation

Akers and MyMD, and each of their respective directors and executive officers and certain of their other members of management and employees, may be deemed to be participants in the solicitation of proxies in connection with the proposed transaction. Information about Akers' directors and executive officers is included in Akers' Annual Report on Form 10-K for the year ended December 31, 2019, filed with the SEC on March 25, 2020, as amended on October 21, 2020, and the proxy statement for Akers' 2020 annual meeting of stockholders, filed with the SEC on July 29, 2020. Additional information regarding these persons and their interests in the transaction will be included in the proxy statement relating to the transaction when it is filed with the SEC. These documents can be obtained free of charge from the sources indicated above.

Cautionary Statement Regarding Forward-Looking Statements

Certain statements contained in this communication regarding matters that are not historical facts are forward-looking statements within the meaning of Section 21E of the Securities and Exchange Act of 1934, as amended, and the Private Securities Litigation Reform Act of 1995, known as the PSLRA. These include statements regarding management's intentions, plans, beliefs, expectations or forecasts for the future, and, therefore, you are cautioned not to place undue reliance on them. No forward-looking statement can be guaranteed, and actual results may differ materially from those projected. Akers and MyMD undertake no obligation to publicly update any forward-looking statement, whether as a result of new information, future events or otherwise, except to the extent required by law. We use words such as "anticipates," "believes," "plans," "expects," "projects," "future," "intends," "may," "will," "should," "could," "estimates," "predicts," "potential," "continue," "guidance," and similar expressions to identify these forward-looking statements that are intended to be covered by the safe-harbor provisions of the PSLRA. Such forward-looking statements are based on our expectations and involve risks and uncertainties; consequently, actual results may differ materially from those expressed or implied in the statements due to a number of factors, including, but not limited to, risks relating to the completion of the merger, including the need for stockholder approval and the satisfaction of closing conditions; the cash balances of the combined company following the closing of the merger; the ability of Akers to remain listed on the Nasdaq Capital Market in connection with the merger; and expected merger-related cash outlays, including the timing and amount of those outlays. Risks and uncertainties related to MyMD that may cause actual results to differ materially from those expressed or implied in any forward-looking statement include, but are not limited to: the timing of, and MyMD's ability to, obtain and maintain regulatory approvals for clinical trials or eventual marketing of MyMD's pharmaceutical candidates; the timing and results of MyMD's planned clinical trials for its pharmaceutical candidates; the amount of funds MyMD requires for its pharmaceutical candidates; increased levels of competition; changes in political, economic or regulatory conditions generally and in the markets in which MyMD operates; MyMD's ability to retain and attract senior management and other key employees; MyMD's ability to quickly and effectively respond to new technological developments; MyMD's ability to protect its trade secrets or other proprietary rights, operate without infringing upon the proprietary rights of others and prevent others from infringing on MyMD's proprietary rights; and the impact of the ongoing COVID-19 pandemic on MyMD's results of operations, business plan and the global economy.

New factors emerge from time to time and it is not possible for us to predict all such factors, nor can we assess the impact of each such factor on the 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. These risks, as well as other risks associated with the combination, will be more fully discussed in the proxy statement/prospectus that will be included in the registration statement that will be filed with the SEC in connection with the proposed transaction. Additional risks and uncertainties are identified and discussed in the "Risk Factors" section of Akers' Annual Report on Form 10-K, Quarterly Reports on Form 10-Q and other documents filed from time to time with the SEC. Forward-looking statements included in this release are based on information available to Akers and MyMD as of the date of this release. Neither Akers nor MyMD undertakes any obligation to update such forward- looking statements to reflect events or circumstances after the date of this release.

Company Overview

- MyMD is developing novel immunotherapies focused on aging disorders and autoimmune diseases
- Two drug candidates
  - MYMD-1, a clinical-stage immunometabolic regulator
  - SUPERA-R1, a preclinical patented synthetic cannabidiol derivative
- Phase 2 clinical trials at Johns Hopkins University in Q1 2021
- # peer-reviewed publications from distinguished institutions, including The Journal of Immunology and the Journal of Neuroimmunology, by researchers from Johns Hopkins University, with additional pending publications
- Management team come from renowned organizations including Johns Hopkins University, IQVIA, etc.

Peer Reviewed Published Data

The Journal of Immunology

MYMD-1, a Novel Immunometabolic Regulator, Ameliorates Autoimmune Thyroiditis via Suppression of Th1 Responses and TNF-α Release

Journal of Neuroimmunology

MYMD-1, a Novel Alkaloid Compound, Ameliorates The Course of Experimental Autoimmune Encephalomyelitis

MYMD-1: At A Glance

A first-in-class drug being developed to treat autoimmune and age-related diseases, including extending the human lifespan

Seeks to Target the cause, not the symptoms

- Eliminates the underlying source of inflammation (immunometabolic dysregulation leading to the production and release of unwanted TNF-α), before symptoms even begin. By inhibiting initial production of TNF-α before release, there's no need to chase down and control its damage.

Non-toxic

- At doses used, there is minimal impact expected on cell viability, as opposed to significant detrimental side effects triggered by leading alternative molecules.

Small enough to reach the brain

- At only about 146 Daltons, We believe MYMD-1 is the **first oral TNF-*α* regulator capable of crossing the blood-brain barrier**, which should enable it to address Alzheimer's and other brain-related diseases.

Age-Related Diseases

- Age-related diseases such as heart disease, cancer, Alzheimer's disease, rheumatoid arthritis and diabetes are immunometabolic diseases
- 80% of older adults have at least one chronic disease, and 77% have at least two
- The market for drugs treating aging is estimated to reach $87.2 billion by 2024
- The U.S. and global population aged 65+ is 52 million and 700 million, respectively

Autoimmune Diseases

- 23 million Americans suffer from autoimmune diseases
- There are more than 80 autoimmune diseases, including diabetes, multiple sclerosis, lupus and rheumatoid arthritis
- Diabetes affects 12.2 million Americans aged 60+
- The global drug market for autoimmune diseases is estimated at $100 billion
- The diabetes care drugs market reached $69.7 billion in 2019

SUPERA-1R: At A Glance

A drug platform based on a patented synthetic derivative of cannabidiol (CBD) that targets numerous key cannabinoid receptors, being developed to address pain, anxiety, sleep disorders and seizures

Potentially more effective than Epidiolex

- Early studies show it is potentially 7-8 times more effective than Epidiolex or plant-derived CBD in reducing MAO-A and MAO-B (which play a role in substance addiction) in a dose-dependent manner.

Similar safety profile to plant-based CBD

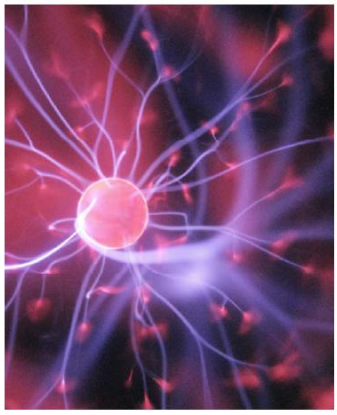
- Initial studies have demonstrated that SUPERA-1R has a similar safety and toxicity profile to plant-based CBD.

Robust platform

- Complete platform for supporting multiple indications. De-risked commercialization as compared to other drug candidates. FDA's declared receptiveness to moving forward in this space. Positioned to become a prescription drug alternative to unregulated CBD.

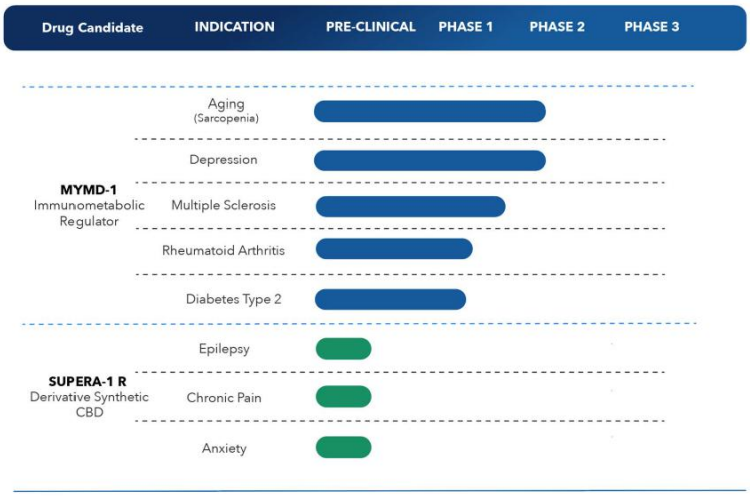
The Science of Immunometabolic Regulation

- MYMD-1 is being developed as an immunometabolic regulator designed to regulate the release of inflammatory cytokines, including tumor necrosis factor-α (TNF-α).
- Immunometabolic regulation is the science of regulating inflammatory cytokines, including TNF-α, to prevent and treat age-related and autoimmune diseases.
- TNF-α blockers are first generation drugs designed to treat immunometabolic dysfunction.
- TNF-α blockers are the most prescribed drugs by revenue, globally $40 billion per year (e.g. Humira, Enbrel and Remicade).



MYMD-1 is seeking to be the next generation immunometabolic regulator

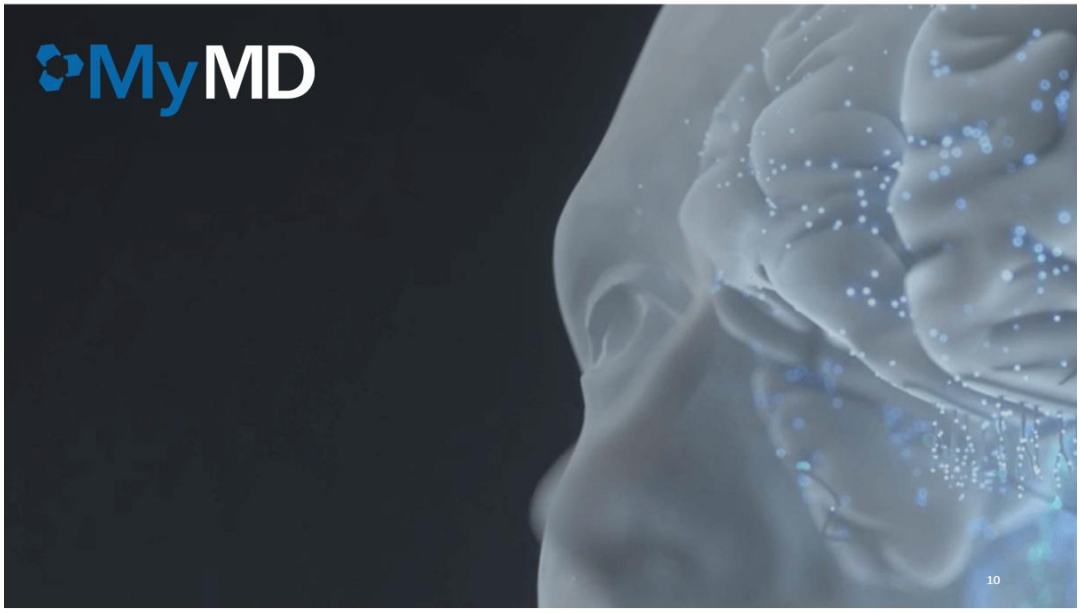
Projected Pipeline



Aging Study Journal Publication Expected by Q1 2021

Initiation of Two Phase 2 Trials Expected by Q1 2021

Phase 2 Data Results Expected by Year End 2021


MyMD
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