NEWS RELEASE

Marinus Pharmaceuticals Submits New Drug Application (NDA) to FDA for Ganaxolone for the Treatment of Seizures Associated with CDKL5 Deficiency Disorder and Provides Pipeline Update

8/3/2021

RADNOR, Pa.--(BUSINESS WIRE)-- **Marinus Pharmaceuticals, Inc.** (Nasdaq: MRNS), a pharmaceutical company dedicated to the development of innovative therapeutics to treat seizure disorders, today announced the submission of a New Drug Application (NDA) to the U.S. Food and Drug Administration (FDA) for the use of its lead product candidate ganaxolone, to treat seizures associated with CDKL5 deficiency disorder (CDD), a rare, genetic epilepsy. An NDA filing notification letter from the FDA is expected before the end of Q3 2021. If the NDA is accepted for filing by the FDA, this will enable the company to draw $30 million of additional cash under its credit financing agreement with Oaktree Capital Management, L.P., on or before December 31, 2021, subject to the satisfaction of certain customary conditions described in the credit agreement.

“We have been diligently focused on advancing ganaxolone’s clinical development for patients suffering from CDD, a devastating disease with high unmet medical need, and are pleased to have reached this important milestone,” said Joseph Hulihan, M.D., Chief Medical Officer of Marinus. “We look forward to working with the FDA in their review process and remain focused on preparing for the anticipated U.S. launch. With our European commercial partner in place, we are equally committed to advancing ganaxolone for CDD patients in markets outside the U.S. and plan to submit a marketing authorization application to the European Medicines Agency later this year.”

The NDA is supported by data from the Phase 3 Marigold trial, a double-blind placebo-controlled trial in which 101 patients treated with ganaxolone showed a 30.7% median reduction in 28-day major motor seizure frequency, compared to a 6.9% reduction for those receiving placebo, achieving the trial’s primary endpoint (p=0.0036).

Patients in the Marigold open label extension study treated with ganaxolone for at least 12 months (n=48) experienced a median 49.6% reduction in major motor seizure frequency. Ganaxolone was generally well-tolerated with a safety profile consistent with previous clinical trials, with the most frequent adverse event being somnolence.

The NDA includes a request for Priority Review, which, if granted, accelerates the timing of the FDA's goal for review of the application to six months following the end of the 60-day filing review period rather than the standard 10 month review. Priority Review status is designated for drugs that may offer a significant improvement in the safety or effectiveness of the treatment, diagnosis, or prevention of a serious condition.

The NDA also includes a request for a Rare Pediatric Disease Priority Review Voucher (PRV). The PRV program is designed to encourage development of new drugs and biologics for the prevention or treatment of rare pediatric diseases. Marinus received Rare Pediatric Disease (RPD) Designation from the FDA for ganaxolone for the treatment of seizures associated with CDD in July 2020. If the ganaxolone application is approved and the PRV is granted, Marinus may use it to obtain priority review for a subsequent human drug or biologic application or can sell or transfer the PRV to a third party.

Pipeline and Corporate Update

Due to COVID-19 priorities in several academic medical centers participating in the Phase 3 RAndomized Therapy In Status Epilepticus (RAISE) trial, including staff turnover and the need for clinical sites to devote significant resources to patients with COVID-19, the trial has experienced site initiation and enrollment delays. Given these most recent challenges, which heightened in the second quarter of this year, Marinus is shifting its top-line data readout for the RAISE trial to 2H 2022. The company now expects the vast majority of sites to be open by end of Q3 2021.

Marinus recently announced an agreement with Finland-based pharmaceutical company, Orion Corporation, in which Orion received exclusive rights to commercialize the oral and intravenous (IV) dose formulations of ganaxolone in Europe for CDKL5 deficiency disorder, tuberous sclerosis complex and refractory status epilepticus. Under the agreement, Orion will pay Marinus €25 million (~$30 million) in cash as an upfront fee. Marinus is eligible to receive up to an additional €97 million (~$115 million) in R&D reimbursement and cash milestone payments based on specific clinical and commercial achievements, as well as tiered royalty payments based on net sales that could reach the high teens for the oral programs and low 20s for the IV program. Further details are available in Marinus' press release distributed August 3, 2021 (Marinus Pharmaceuticals Announces Exclusive Collaboration with Orion Corporation for European Commercialization of Ganaxolone).

About CDKL5 Deficiency Disorder

CDKL5 deficiency disorder (CDD) is a serious and rare genetic disorder that is caused by a mutation of the

cyclin-dependent kinase-like 5 (CDKL5) gene, located on the X chromosome. CDD is characterized by early-onset, difficult-to-control seizures and severe neuro-developmental impairment. Most children affected by CDD cannot walk, talk, or feed themselves. Currently, there are no therapies approved specifically for CDD.

About Ganaxolone

Ganaxolone, a positive allosteric modulator of GABAA receptors, is an investigational product being developed in intravenous and oral formulations intended to maximize therapeutic reach to adult and pediatric patient populations in both acute and chronic care settings. Ganaxolone exhibits anti-seizure and anti-anxiety activity via its effects on synaptic and extrasynaptic GABAA receptors. Ganaxolone has been studied in more than 1,800 pediatric and adult subjects across various indications at therapeutically relevant dose levels and treatment regimens for up to more than two years.

About Marinus Pharmaceuticals

Marinus Pharmaceuticals, Inc. is a pharmaceutical company dedicated to the development of innovative therapeutics to treat seizure disorders. Ganaxolone is a positive allosteric modulator of GABAA receptors that acts on a well-characterized target in the brain known to have anti-seizure, antidepressant and anti-anxiety effects. Ganaxolone is being developed in IV and oral dose formulations intended to maximize therapeutic reach to adult and pediatric patient populations in both acute and chronic care settings. Marinus completed the first ever Phase 3 pivotal trial in children with CDKL5 deficiency disorder last year and is conducting a Phase 2 trial in tuberous sclerosis complex and a Phase 3 trial in refractory status epilepticus. For more information visit **www.marinuspharma.com**.

Forward-Looking Statements

To the extent that statements contained in this press release are not descriptions of historical facts regarding Marinus, they are forward-looking statements reflecting the current beliefs and expectations of management made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. Words such as “may”, “will”, “expect”, “anticipate”, “estimate”, “intend”, “believe”, and similar expressions (as well as other words or expressions referencing future events, conditions or circumstances) are intended to identify forward-looking statements. Examples of forward-looking statements contained in this press release include, among others, statements regarding the potential timeline for FDA review of the NDA for ganaxolone in CDD, including whether and when the FDA will determine that the NDA is acceptable for filing; the timing of submission of an MAA for ganaxolone to the EMA; the potential for the receipt of Priority Review from the FDA; our expectation regarding the opening of clinical trial sites by the end of Q3 2021; our expectations regarding the Orion collaboration, including the expected benefits of such collaboration and receipt of an upfront fee and potential R&D reimbursement and

milestone and royalty payments thereunder; our expectations with respect to our clinical development plans, regulatory communications and submissions and product launches for ganaxolone, and the timing thereof; and the potential safety and efficacy of ganaxolone, as well as its therapeutic potential in a number of indications.

Forward-looking statements in this press release involve substantial risks and uncertainties that could cause our clinical development programs, future results, performance or achievements to differ significantly from those expressed or implied by the forward-looking statements. Such risks and uncertainties include, among others, the risk that the timing of FDA's review of the NDA will be delayed or that the NDA is not accepted for filing by the FDA; the risk that the FDA will require additional clinical trials or data; any delays in acceptance and review of the NDA submission by the FDA for any reason, including the COVID-19 pandemic; the timing of regulatory filings, including the timing of filing the ganaxolone MAA with the EMA; the potential that regulatory authorities, including the FDA and EMA, may not grant or may delay approval for our product candidate; uncertainties and delays relating to the design, enrollment, completion, and results of clinical trials; unanticipated costs and expenses; early clinical trials may not be indicative of the results in later clinical trials; clinical trial results may not support regulatory approval or further development in a specified indication or at all; actions or advice of the FDA or EMA may affect the design, initiation, timing, continuation and/or progress of clinical trials or result in the need for additional clinical trials; our ability to obtain and maintain regulatory approval for our product candidate; our ability to obtain, maintain, protect and defend intellectual property for our product candidates; the potential negative impact of third party patents on our ability to commercialize ganaxolone; delays, interruptions or failures in the manufacture and supply of our product candidate; the size and growth potential of the markets for the company's product candidates, and the company's ability to service those markets; the company's cash and cash equivalents may not be sufficient to support its operating plan for as long as anticipated; the company's expectations, projections and estimates regarding expenses, future revenue, capital requirements, and the availability of and the need for additional financing; the company's ability to obtain additional funding to support its clinical development programs; the company's ability to develop sales and marketing capabilities, whether alone or with potential future collaborators; the rate and degree of market acceptance of the company's product candidates; the potential for Orion to breach the collaboration or terminate the agreement in accordance with its terms; the potential for Orion to recoup a percentage of the upfront fee depending on the additional pre-clinical testing expected to be completed in Q1 2022; the effect of the COVID-19 pandemic on our business, the medical community, regulators and the global economy; and the availability or potential availability of alternative products or treatments for conditions targeted by us that could affect the availability or commercial potential of our product candidate. This list is not exhaustive and these and other risks are described in the company's periodic reports, including the annual report on Form 10-K, quarterly reports on Form 10-Q and current reports on Form 8-K, filed with or furnished to the Securities and Exchange Commission. and available at **www.sec.gov**. Any forward-looking statements that the company makes in this press release speak only as of the date of this press release. The company assumes no obligation to update forward-looking statements whether as a result of new information, future events or otherwise, after the date of

this press release.

View source version on **businesswire.com**: **https://www.businesswire.com/news/home/20210803005573/en/**

Company Contact

Sasha Damouni Ellis
Vice President, Corporate Affairs & Investor Relations
Marinus Pharmaceuticals, Inc.
484-253-6792
sdamouni@marinuspharma.com

Source: Marinus Pharmaceuticals