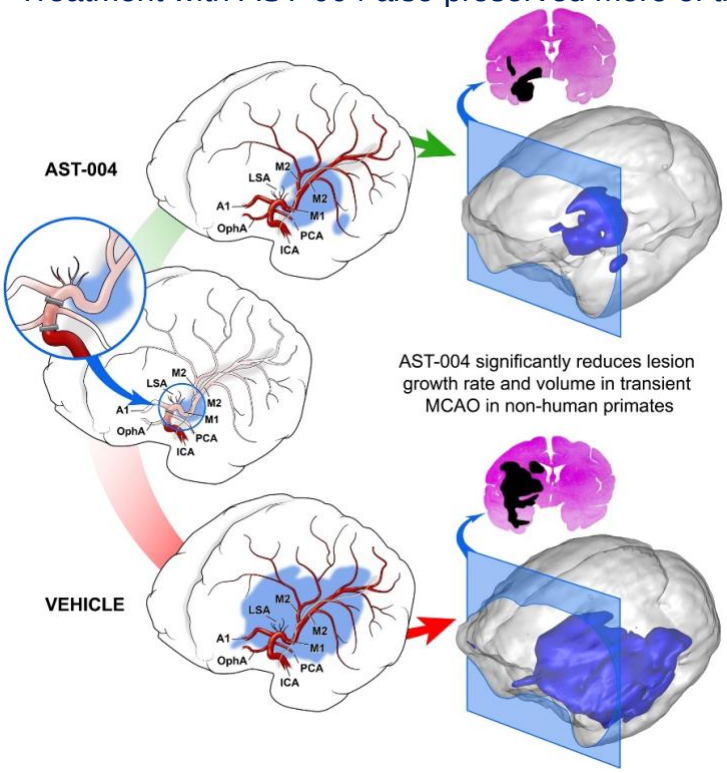
Astrocyte Pharmaceuticals 2021 Q4 Investor Update

To all Astrocyte Pharmaceuticals Shareholders,

First, to the many of you who celebrated the Thanksgiving holiday, we wish you had a joyous and healthy occasion with your families and friends! At Astrocyte, we are very thankful to have this opportunity to be advancing a potentially world-changing medicine and are thankful for your shared enthusiasm and support in this endeavor!

The past quarter has quite busy for Astrocyte on a variety of fronts. Our scientific research continues to progress, and this science has been recognized with three new publications in the past few months. Our early research studying the cerebroprotective effects of AST-004 in mouse models of TBI was published in October in *Neurotherapeutics*. Our chemistry research that developed a new synthetic route that more than doubles our yields and reduces the amount of an expensive starting material by 3x, was published in the *Royal Society of Chemistry (RSC) Advances*. Lastly, our key study of AST-004 in a non-human primate model was published this week in the premier journal in the field of stroke – aptly named *Stroke*. As highlighted in our press release, AST-004 administration changed the trajectory of the stroke, with lesion growth rates slowing by more than two-fold, and reducing the ultimate brain lesions by up to 45% beyond the benefits of reperfusion surgery alone. Treatment with AST-004 also preserved more of the penumbra brain tissue during the ischemia, which could potentially enable more stroke patients to reach hospitals and receive additional interventions like surgery. Publishing this research in a top tier journal is a key company milestone and bolsters the scientific credibility of the company and the team.



AST-004 significantly reduces lesion growth rate and volume in transient MCAO in non-human primates

Operationally in Q3, Astrocyte successfully completed the manufacture of >2,000 vials of AST-004 drug product vials. ~600 vials are required for quality testing and release, and for long-term stability studies. The remaining >1,400 vials will be used in Phase I and Phase II clinical studies. On Nov. 5th, 2021 Astrocyte submitted the key regulatory filing of a Clinical Trial Application (CTA) including the Investigational

Medicine Product Dossier (IMPD) to Hungary's National Institute of Pharmacy and Nutrition (OGYÉI). This application, the equivalent of an Investigational New Drug (IND) application in the U.S., contains all the required information to justify advancing a compound to human testing including animal efficacy, preclinical safety, manufacturing details, clinical plans, etc. If the application is approved in a timely manner, we plan to start the first dosing of human subjects in March of 2022.

Financially, Astrocyte also made significant progress in Q3. The company received two large grant awards from Medical Technology Enterprise Consortium (MTEC). MTEC works in cooperation with the U.S. Army Medical Research and Development Command (USAMRDC) and other government agencies in the biomedical sciences, to facilitate prototype advancement of technologies (such as drugs, biologics, vaccines, medical software and medical devices) that protect, treat, and optimize the health and performance of U.S. military personnel. The first grant of $500,000 provides funding for manufacturing more AST-004, which will be needed for the oral formulation program of AST-004. The second grant of $3.0M award supports the upcoming Phase 1 human safety studies of AST-004 and the further development of a convenient oral field formulation of the drug.

Lastly, stay tuned for another update announcing the appointment of a new Independent Director for Astrocyte's Board – separate email coming soon!

If you have any questions, feel free to contact me.

Sincerely,

William S. Korinek
CEO, Astrocyte Pharmaceuticals Inc.

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