Camino Pharma receives $920K Small Business Innovation Research (SBIR) grant from the National Institute of Mental Health

New class of drugs focuses on treating major depression

San Diego, Calif., June 30, 2020 – Camino Pharma, LLC, a biotech company focused on finding cures for cancer and brain disorders, announced today that its co-founder and CSO, Reto Gadient, Ph.D., has been awarded a two-year, $920K SBIR grant by the National Institute of Mental Health (NIMH) at the National Institutes of Health. The grant will fund a collaborative effort between Camino Pharma, LLC, University of California San Diego (UCSD) and Sanford Burnham Prebys Medical Discovery Institute to validate negative allosteric modulators (NAMs) of metabotropic glutamate receptor 2 and 3 ($mGlu_{2/3}$) for the treatment of major depressive disorder and treatment-resistant depression.

"This exciting collaboration between Camino Pharma, UCSD and Sanford Burnham Prebys is aimed at bringing forth novel therapeutic options for patients suffering from major depression," says Gonul Velicelebi, Ph.D., co-founder and CEO of the company.

"We are optimistic that our lead compound, SBP-9881, and its analogs—all discovered at Sanford Burnham Prebys—have the properties to become safe and effective drugs to help the millions of people affected by depression. Importantly, SBP-9881 can be dosed orally and has fast-acting and long-lasting effects *in vivo*," adds Gadient.

The grant will enable the multidisciplinary team of scientists to validate SBP-9881 in two novel rodent models of anhedonia and avolition designed to translate to clinical efficacy. "These behavioral models reflect the imbalance(s) in brain circuitries affected in patients suffering from depression. Activity in these models will provide us with higher confidence that efficacy can be obtained in the clinic, which has been notoriously difficult in depression using traditional models," says Andre Der-Avakian, Ph.D., assistant professor in the Department of Psychiatry, UCSD.

"A large body of experimental evidence suggests that glutamate neurotransmission is involved in the pathophysiology of depression," says Nicholas Cosford, Ph.D., co-founder of Camino Pharma, LLC, and a professor at Sanford Burnham Prebys' National Cancer Institute–designated Cancer Center and Director of Translational Research. "Our compounds increase glutamate neurotransmission by negatively modulating $mGlu_{2/3}$, and therefore represent a mechanism distinct from other drugs used in the treatment of depression."

About metabotropic glutamate receptors (mGlus)

The mGlu receptors are a family of eight G protein-coupled glutamate receptors that are widely expressed in the central nervous system (CNS) and are classified into three groups based on sequence homology and signaling mechanisms. The group II mGlus ($mGlu_2$ and $mGlu_3$) are located presynaptically at glutamatergic synapses, where they play a key role in maintaining glutamate homeostasis. $mGlu_2$ and $mGlu_3$ are abundantly expressed in forebrain regions affected in depression, where they modulate glutamate transmission and the release of other neurotransmitters involved in reward processing. $mGlu_2$ and $mGlu_3$ are also abundantly expressed in brain regions implicated in drug abuse and addiction, including the cortex, hippocampus, striatum and amygdala. Thus, negative modulators of presynaptic $mGlu_2$ and $mGlu_3$ represent a new class of drugs to treat depression, and positive modulators for substance abuse disorders. Camino Pharma is collaborating with Sanford Burnham Prebys to pursue both strategies.

About Camino Pharma, LLC (www.caminopharma.com)

Camino Pharma is a San Diego–based start-up focused on discovering and developing safe and effective, first-in-class drugs to treat patients suffering from (1) psychiatric disorders that are poorly addressed by current medications, including substance abuse and major depression, and (2) the most aggressive forms of cancer with currently limited treatment options. We target signaling proteins based on emerging biological concepts and discover novel mechanisms for modulating these targets with small molecule drugs. Our leadership team has proven expertise in the relevant target biology as well as extensive experience in drug discovery and development. Our innovative technology platform allows for exploiting inadequately served targets that require a highly adaptive and specialized approach to drug discovery. We intend to find novel cures using our deep understanding in target biology combined with well-tailored, cutting-edge discovery technologies.

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