Pfizer Logo

Circle Pharma enters into an agreement with Pfizer to build screening library of macrocyclic peptides

Monday, September 12, 2016 - 08:00am

Circle Pharma, Inc., today announced that it will apply its computational design and synthetic chemistry platform to design and create a physical screening library of novel macrocyclic peptides. Once completed, the library is initially expected to comprise several hundred macrocycles that will be designed to potentially disrupt bioactive conformations commonly found in protein-protein interactions known to drive disease processes, and will deploy backbone scaffolds screened in silico for intrinsic cell permeability characteristics. In addition, the design of the library will permit the simple creation of derivative libraries tailored to specific features of a therapeutic target class.

Pfizer Inc. (NYSE: PFE) has entered into an agreement with Circle under which Pfizer will provide support for the library build, and Circle has granted Pfizer non-exclusive rights to screen the library against certain targets. The rights granted to Pfizer exclude specified targets for which Circle has reserved exclusive rights to screen the library.

“This physical library will complement Circle’s target-specific computational design toolkit,” said David J. Earp, J.D., Ph.D., Circle’s President and CEO. “We expect to use the library for our internal pipeline discovery work, and we will make it available to all of our collaboration partners in drug discovery.”

About Macrocyclic Peptides
Macrocyclic peptides have the potential to provide access to the large proportion of therapeutic targets (estimated at up to 80%) that are considered undruggable with conventional small molecule or biologic modalities. In particular, there is great interest in developing macrocycles to modulate protein-protein interactions, which play a role in almost all disease conditions, including cancer, fibrosis, inflammation and infection. However, the development of macrocyclic therapeutics has been limited to this point by the need for a greater understanding of how to design macrocycles with appropriate pharmacokinetics, cell permeability and oral bioavailability. As a result, most clinical-stage macrocyclic peptide drugs address extracellular protein targets because of the challenge of identifying cell permeable macrocycles. The ability to design potent macrocycles with intrinsic permeability is expected to give access to a large number of important therapeutic targets that have been out of reach to this point.

About Circle Pharma
Founded by computational chemist Prof. Matthew Jacobson (UC San Francisco) and peptide chemist Prof. Scott Lokey (UC Santa Cruz), Circle Pharma is developing a new paradigm for macrocycle drug discovery. Circle’s technology facilitates the design and synthesis of intrinsically cell-permeable macrocycles that can address both intra- and extra-cellular therapeutic targets, and can be delivered by oral administration. Circle’s macrocycle development platform is applicable across a wide range of serious diseases; the company is initially focusing its internal development efforts on intracellular protein-protein interactions that are key drivers in cancer.

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