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Bull Run Hall 258

(Teleconference to Innovation Hall 131)

The Sphingosine-1-phosphate pathway: Sphingosine kinase as a drug target

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Abstract

Sphingosine 1-phosphate (S1P) is a pleiotropic signaling molecule that interacts with its five G-protein coupled receptors (S1P1–5) to regulate cell growth and survival and has been implicated in a variety of diseases including cancer, fibrosis, inflammation, neurodegenerative diseases, and sickle cell disease. As the key mediators in the synthesis of S1P, sphingosine kinase (SphK) isoforms 1 and 2 have attracted attention as viable targets for pharmaceutical inhibition. In this presentation, I will discuss our efforts in inhibiting SphK through extensive medicinal chemistry campaigns. The activity of inhibitors in mice as well as their therapeutic implications will be discussed.