

## **Elixir Pharmaceuticals Announces Discovery of Potent Sirtuin Inhibitors; Sirtuin Class of Enzymes Implicated in Control of Lifespan and Metabolism**

**CAMBRIDGE, Mass. Dec. 15, 2005** -- Elixir Pharmaceuticals, Inc. announced today the discovery of new, potent, orally bioavailable and highly selective inhibitors of SirT1, a member of the sirtuin class of protein deacetylase enzymes. SirT1 is the human equivalent of Sir2, a gene identified in yeast that plays a key role in the control of lifespan, metabolism, resistance to stress and other cellular regulatory pathways. The research findings are being reported by the company in the current issue of the *Journal of Medicinal Chemistry* published by the American Chemical Society ("Discovery of Indoles as Potent and Selective Inhibitors of the Deacetylase SIRT1," Vol. 48, No. 25, December 15, 2005, pp. 8045-8054).

Peter DiStefano, Ph.D., Chief Scientific Officer at Elixir and an author on the paper, commented, "SirT1 represents an important new drug target, given its role in critical cellular processes such as lifespan modulation and the regulation of metabolism. Previously reported SirT1 inhibitors have low potency and low solubility making them poor candidates for drug development. Through Elixir's high-throughput screening campaign, we have discovered several highly selective low molecular weight SirT1 inhibitors that are 500-fold more potent than previously reported SirT1 blockers. These inhibitors are also cell-permeable and orally bioavailable, two characteristics that are invaluable for studying the biology of SirT1 and exploring possible therapeutic uses for SirT1 inhibitors."

Based on this landmark research, the Elixir R&D team and its academic collaborators have begun a broad program to more fully characterize this new class of SirT1 inhibitors and the function of SirT1 in important biochemical pathways. One study appearing in the January 2006 issue of *Molecular and Cellular Biology* authored by Elixir scientists details the ability of the SirT1 inhibitors to block SirT1 enzymatic activity in a variety of cellular assays.

Elixir is a leader in the field of sirtuin research and has built a comprehensive patent estate, covering novel chemical compositions and their potential application to disease treatment and longevity. As part of this estate, Elixir has exclusively licensed research focused on several of the sirtuins from the laboratory of Eric M. Verdin, M.D. at the University of California, San Francisco (UCSF). The Company also holds an exclusive license from the Massachusetts Institute of Technology to work surrounding Sir2 and SirT1 conducted in the laboratory of Company co-founder, Leonard Guarente, Ph.D.

### About Elixir Pharmaceuticals

Elixir is a biopharmaceutical company focused on exploiting its Optimal Aging scientific platform to discover, develop, and market new drugs for the treatment and prevention of metabolic disorders, as well as the prevention of age-related diseases. The Company's research and discovery programs are based on a unique understanding of the genetics and biochemical pathways of aging. More information about Elixir is available at <http://www.elixirpharm.com/>

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