

February 2012



Evgen prepares for next investment round to advance Sulforadex[®] through Phase I trials

RECENT DEVELOPMENTS

- Completion of Series A financing (second closing) in December 2011
- Sulforadex[®] selected to enter into a trial managed by the National Institute of Aging (NIA) and funded by the NIH in the United States
- Pilot research studies initiated with the Christie Hospital (UK) and the Institute of Cancer Research (UK) in prostate and breast cancer fields
- On schedule to secure a CTA (Clinical Trial Approval) for Sulforadex[®] in May 2012
- US clinical meetings and a Clinical Strategy Development Workshop refines trial plan for 2012-13
- The new Sulforadex[®] digital animation can be viewed at http://youtu.be/3_Wd0sllrRE

EVGEN, a Liverpool (UK) based pharmaceutical development company, is preparing for a new investment round in Autumn 2012. The funds will be used to complete Phase I clinical trials on Sulforadex[®] and to extend its collaborative network to demonstrate the potential utility of the product in multiple cancer indications.

Evgen is an atypical investment proposition in drug development. Whilst pharmaceutical investment returns can be exceptionally attractive, they are high risk investments due to the high attrition rate of new drugs through the clinical development process. The Evgen approach is to develop an exciting compound that has already had many years of positive research results published BUT has hitherto not been developed as a drug due to its highly unstable nature.

The unstable molecule in question is sulforaphane; typically associated with many of the health benefits derived from cruciferous vegetables such as broccoli.

The new drug, Sulforadex[®], a stabilised synthetic version of sulforaphane, is a patent pro-

TECTED composition with a shelf life dramatically extended from hours to years.

Evgen is thus uniquely positioned to develop a sulforaphane-based drug - for a range of cancer indications - with a significantly improved probability of advancing successfully through the clinic.

SULFORAPHANE peer-reviewed scientific publications surged in 2011 to a total of 139 for the year (bottom left); over 700 since its discovery as an anti-cancer agent in 1992.

Recent growth is believed to be driven by increased research interest in the mechanism of action. Nrf-2 activation, HDAC inhibition, and caspase induction, have dominated the sulforaphane literature for the last ten years. However, sulforaphane's capacity to eliminate cancer stem cells (CSCs) is a relatively new discovery that is driving a new branch of research with exciting commercial implications.

HOT OFF THE PRESS IN 2012

D,L-sulforaphane-induced apoptosis in human breast cancer cells is regulated by the adapter protein p66(Shc). Sakao K, Singh SV. *J Cell Biochem.* 2012 Feb;113(2):599-610.

LATEST REVIEW

Potential health benefits of sulforaphane: A review of the experimental, clinical and epidemiological evidences and underlying mechanisms. Elbarbry F, Elrody N. *J of Med Plants Res.* 2011 Feb; 5(4): 473-484.

SPOTLIGHT ON

Sulforaphane increases drug-mediated cytotoxicity toward cancer stem-like cells of pancreas and prostate. Kallifatidis G *et al.* *Mol Ther.* 2011 Sep;19(9):1747.

ABSTRACT: "Despite intense efforts to develop treatments against pancreatic cancer, agents that cure this highly resistant and metastasizing disease are not available. Considerable attention has focused on broccoli compound sulforaphane, which is suggested as combination therapy for targeting of pancreatic cancer stem cells (CSCs). Our data suggest that SF increases the effectiveness of various cytotoxic drugs against CSCs without inducing additional toxicity in mice".

