



Press Release

Pittsburgh, November 20, 2003

Fluorous Technologies Receives GlaxoSmithKline
Drug Discovery and Development Research Grant for 2003

Pittsburgh-based chemical technology firm Fluorous Technologies, Inc. (FTI) today announced receiving a GlaxoSmithKline Drug Discovery and Development Research Grant.

A New Approach to Inhibiting HIV Reverse Transcriptase

Many of today's approved anti-retroviral drugs work by inhibiting reverse transcriptase (RT), the enzyme needed to convert viral RNA into DNA, enabling the virus to integrate its genetic material into the DNA of the human host cell.

Nucleoside and nonnucleoside RT inhibitors now on the market work by inhibiting RT's polymerase activity, which is to copy the genetic materials needed to infiltrate the human cell. The DNA copy, however, remains associated with the original viral RNA, forming what's called an RNA/DNA complex. "To proceed with replication, the virus must degrade the RNA component, a process carried out by another portion of the RT enzyme called Ribonuclease H (RNase H). "Currently, there are no approved anti-retrovirals that inhibit this vital step of HIV replication," said Wei Zhang, Ph.D. Dr. Zhang was awarded a \$62,500 Drug Discovery and Development Research Grant to test compounds called mappicine analogs that may comprise a promising new class of HIV RNase H inhibitors. This work will be carried out with Co-Investigator Michael Parniak, Ph.D., of the University of Pittsburgh.

Mappicine is a natural derivative of the plant *Mappia Feotida*. It is hoped that a mappicine analog will prevent HIV RNase H from degrading the RNA component of the RNA/DNA duplex intermediate, thereby preventing HIV replication. Similar chemical derivatives that inhibit topoisomerase, enzymes responsible for the arrangement of DNA in cancer cells and for cell growth and replication, are being investigated as anticancer drugs.

"By targeting a different stage of RT activity, Ribonuclease H inhibitors also may be effective in treating HIV that has developed resistance to conventional RT inhibitors," Dr. Zhang said."

Philip E. Yeske, Ph.D., President & CEO of Fluorous Technologies commented, "We are very excited and proud to receive such an award from GlaxoSmithKline. Their financial support of our promising work is tremendously helpful and greatly appreciated."

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