

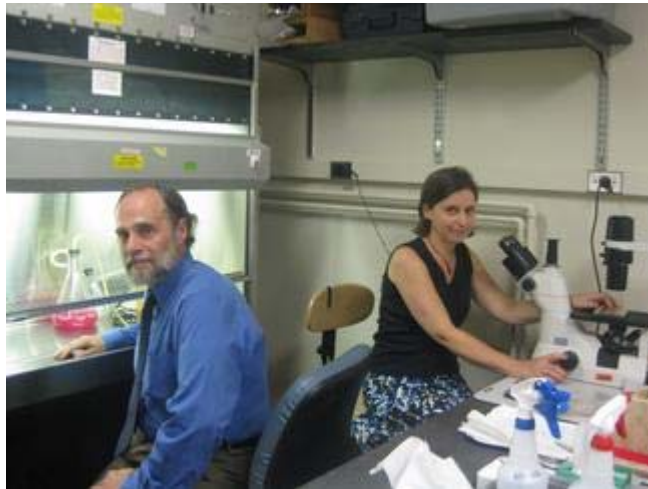
SBU Couple Develop Cancer Treatment Together

[By Jennifer Choi](#)

September 09, 2009 | 02:20 PM

Two Stony Brook University researchers have helped develop a potential cure for various types of cancer.

Paul Bingham and Zuzana Zachar, a married couple from South Setauket, began their research in the mid-1990s and found they could develop a successful cancer drug by targeting the energy metabolism of cancer cells, which are nearly identical to normal cells. While other types of cancer treatment such as chemotherapy cause severe side effects because the chemicals attack both good and bad cells, Bingham said the new drug, named CPI-613, targets metabolic changes that can only be found in cancer cells.



Paul Bingham and Zuzana Zachar, from South Setauket, collaborate personally and professionally, having been married for 29 years and working at Stony Brook University. *Photo by Jennifer Choi*

The story of CPI-613 officially began in 2001 when Cornerstone Pharmaceuticals, a privately held company focused on the discovery and development of innovative cancer therapies, opened its doors at Stony Brook University. Bingham, who joined the Department of Biochemistry and Cell Biology in the School of Medicine at SBU in 1982, said he and Zachar were introduced to the pharmaceutical company by the university's Center for Advanced Technology. Zachar, director of the Masters in Education in Biology Program in SBU's Center for Science and Mathematics Education, said CPI-613 "hopes to do for malignancy what antibiotics did for infectious diseases."

Recently, Cornerstone officials announced that they have begun human clinical trials of the new drug, which will be used in combination with gemcitabine, a standard chemotherapeutic for the treatment of pancreatic and other cancers. During the trial process, researchers will gradually increase the dose of CPI-613 until they reach a therapeutic level that effectively targets cancer cells without killing normal cells, according to Bingham, a member of Cornerstone's Board of Scientific Advisors. The trial

is currently underway at the Eastchester Center for Cancer Care in the Bronx, and additional clinical sites are scheduled to be added.

Bingham, who received his doctorate in biochemistry and molecular biology from Harvard in 1979, said he is optimistic that a therapeutic dose will be reached in the near future and added, "It's extraordinarily exciting to know that there could be immediate impact. I can't think of anything else that I'd rather be doing than this." He also noted that such discoveries are made possible when "talented individuals come together and synergize," allowing them to do "things that none of them alone can do."

The couple, who have been married for 29 years and have two children, agreed that this experience has been doubly rewarding because they share the same passions. "It doesn't get any better than this," Bingham said. "What more could you ask for? It's such a thrill to discover something that's never happened in the world before, but the pleasure is a 100 times greater when you have someone to share it with."

Describing the couple as "lifelong collaborators," Zachar said having a partnership with someone on both the personal and professional levels is "priceless." In addition to spending countless hours conducting research, Zachar, who received her doctorate in genetics from Stony Brook University, said she enjoys hiking and has "explored every green place on the Long Island map."

Bingham added that he enjoys "sitting under my apple tree reading" and taking in Broadway shows with his wife.