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## 2001 Inventions of the Year

### Life Science Invention of the Year



Pictured at left is Steven Rokita standing between Chuan S. Liu, interim vice president of research and dean of the Graduate School, and, on the right, James A. Poulos, executive director of the Office of Technology Commercialization. Rokita, a professor of chemistry and biochemistry at Maryland, and with Kenneth Karlin, Kristi Humphreys, Lei Li and Narasimha Murthy of the Johns Hopkins University has developed novel copper complexes that are being tested as anti-cancer agents by the National Cancer Institute (NCI). The NCI's initial results show that the copper complexes are able to

selectively bind and cause damage to unique structures of DNA, such as those present in cancer cells. Metals are useful as anti-cancer medicines because they can either bind to DNA or activate the molecular oxygen that people breathe to cause damage to the DNA. Iron and platinum are already used in a number of anti-cancer drugs. The Maryland-Johns Hopkins research partners are hoping to see copper added to that list. One of their copper complexes is now slated for in vivo studies at NCI.

Other finalists in the life science category were "Self-Assembling Ion Channel and its Potential as an Antibiotic," developed by Jeffery Davis, Vladimir Sidorov and Frank Kotch; and "Peptide Vaccine for Staphylococcal Enterotoxins," developed by Carol Pontzer, Jeffrey Shupp and Marti Jett. Pictured at right in the center is Jeffrey Shupp.



### Physical Science Invention of the Year