



## SARCOMA FOUNDATION OF AMERICA

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## SARCOMA FOUNDATION OF AMERICA AWARDS 2004 RESEARCH GRANTS

*Four cancer researchers in Massachusetts, Pennsylvania, California and Texas  
receive funds to further the search for a cure to orphan disease*

NEW YORK CITY (June 8, 2004) The Sarcoma Foundation of America (SFA) has awarded grants totaling \$100,000 to four cancer researchers whose work holds promise toward the identification of a cure for Sarcoma, a rare bone and soft tissue cancer that affects 50,000 Americans a year, with about 11,000 people newly diagnosed each year. The award announcement marks the beginning of Sarcoma Awareness Month in June. The Sarcoma Foundation of America research awards this year will go a long way to provide significant advances in sarcoma research in the years to come. Importantly, two grants will lay a solid foundation from which investigators across the globe can benefit and use to identify key genes causing sarcomas of all types. Further, these two grants are linked and the researchers will collaborate across the United States, providing synergy that was never present before. The other two grants attack specific sarcoma types, one from the soft tissues (rhabdomyosarcoma) and one from bone (osteosarcoma). The \$25,000 Reid Brecher Memorial Research Award went to Dr. Jonathan Fletcher from Harvard, who has been a major contributor to the analysis of the chromosome make-up of sarcomas over the past 15 years. His past efforts often involved looking at how the sarcoma chromosomes differed from the normal 46 chromosomes in our normal cells; and his insights have led to the discovery of specific sarcoma genes. In this grant, he is going to go a step further and, using sarcoma tissues, create sarcoma cell lines from all types of sarcomas. Unlike tissues which can be used only once or several times for analysis, cell lines can be grown in culture, and frozen away, and taken out and re-analyzed for new genes many times. Cell lines last for many years, and he will screen them to be sure they faithfully represent the original tumor. Also, they can be shipped to interested researchers around the world so they can test for DNA changes, gene expression, and protein expression in these rare tumors. "Never before has such a resource existed and the Sarcoma Foundation of America and Reid Brecher Award is thus providing an important and true infrastructure approach which will continue to have an impact in the years to come," explained Mark Thornton, M.D., President of the SFA. Dr. Matt van de Rijn of Stanford University is the recipient of a \$25,000 Elizabeth Shriver Memorial Research Award. He is one of the few researchers in the country to use gene chips on sarcomas. He will use the sarcoma cell lines generated by Dr. Fletcher to analyze thousands of genes in these tumors. The technique is called DNA microarray and allows one to put the tumor DNA on a chip containing DNA from essentially all known genes; if the tumor DNA binds, it means that gene is present in the tumor. One can then tell if key genes in the tumor are absent (allowing the tumor to grow unchecked) or abnormal. Once these abnormal genes are found, researchers can attempt to block their effect

unchecked) or abnormal. Once these abnormal genes are found, researchers can attempt to block their effect using various molecules -- thus searching for so-called "molecular targets" for new therapies. "Again, the Sarcoma Foundation of America and the Elizabeth Shriver Award will have a significant impact on our knowledge of how sarcomas grow, and on future sarcoma research, Thornton said. "This is the type of study that can lay the groundwork to find the magic bullet, though it will likely take years." Dr. Frederic Barr of the University of Pennsylvania is also the recipient of a \$25,000 Elizabeth Shriver Memorial Research Award. He is well known for his work on gene fusions in rhabdomyosarcoma (RMS), so he is well familiar with the complex genes in this tumor. Most of the alveolar type of RMS, a childhood tumor, form when two genes are abnormally stuck together (PAX and FKHR genes). For unknown reasons, some alveolar RMS lack this finding and yet still form and grow. "In this grant, Dr. Barr will try to determine how and why some rhabdomyosarcomas do not have the usual gene fusion, which causes abnormal growth," explained Thornton. "Perhaps by learning this, some mysteries of RMS can be unraveled. Often by testing the exceptions to the rule one can learn a great deal and perhaps find another molecular target." Dr. Lisa Wang of Baylor College of Medicine in Houston is also the recipient of a \$25,000 Elizabeth Shriver Memorial Research Award. She had been involved in studying a group of people with a genetic syndrome that results in a certain germ-line mutation in all their normal cells. The gene, called RECQL4, is a DNA helicase (enzyme) that functions to maintain genomic stability. When it is mutated there is genetic instability and an increased risk of osteosarcoma. She will now test whether or not the same mutations are a common feature of all osteosarcomas. If this gene is very common in osteosarcomas, it may then become a target for therapy in the future. "It is possible that this rare genetic syndrome may lead to finding a key gene in this bone tumor, and the Sarcoma Foundation of America and Elizabeth Shriver Award is critical to getting this investigation done and an answer known. Only by following such leads is progress made, said Thornton.

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### ***Quick Facts About Sarcoma***

Sarcoma is a rare cancer in adults (1 percent of all adult cancers) but rather prevalent in children (about 20 percent of all childhood cancers). At any one time, 50,000 patients and their families are struggling with sarcoma. Every year, about 10,000 new cases are diagnosed, and about 5,000 people die from sarcoma.

### ***About the Sarcoma Foundation of America***

The Sarcoma Foundation of America (SFA), a 501 (c) (3) nonprofit charitable organization, is an advocate for increased research to find new and better therapies with which to treat patients with sarcoma. SFA raises its own funds to provide research grants to sarcoma researchers. SFA also interacts with public, private for-profit, and private non-profit organizations to raise awareness of the treatment needs of sarcoma patients. For more information, please visit [www.curesarcoma.org](http://www.curesarcoma.org).