



SARCOMA FOUNDATION OF AMERICA
FINAL REPORT

Project Title: Development of a Mouse Model of
Synovial Sarcoma

Project Number: SFA05-B

1. Date project was initiated: 08/01/2003
2. Period covered by this report: From: 06/01/2005 To: 05/31/2006
3. Publications, Abstracts, and Presentations:
 - a. List all manuscripts submitted for publication during the period covered by this report resulting from this project. Include those in the categories of lay press, peer-reviewed scientific journals, invited articles, and abstracts. Each entry must include the author(s), article title, journal [book, editors(s), publisher, volume number, page number(s), and date.]
 - (1) Lay Press: N/A
 - (2) Peer-Reviewed Scientific Journals: N/A
 - (3) Invited Articles: N/A
 - (4) Abstracts:

Title: Developing a mouse model of Synovial sarcoma
Authors: Malay Haldar and Mario R. Capecchi
Meeting: 11th annual meeting of Connective Tissue Oncology Society (CTOS) – November 19-21, 2005.
 - b. List presentations made during the last year (international, national, local societies, etc.). Use an asterisk (*) if presentation produced a manuscript.
N/A
4. Provide a brief list of keywords: (limit to 20 words)

5. Summarize the progress during the period of this report and its impact on your plans for the remainder of the project. Include a summary of the progress toward the achievement of the originally stated aims and list the significant results:

This project was aimed at developing a reliable pre-clinical mouse model of synovial sarcoma. We have generated genetically altered mouse lines that are capable of expressing the human synovial sarcoma associated SYT-SSX2 fusion protein. Our strategy is based on the cre-Loxp system where expression of the fusion protein takes place in the presence of the cre recombinase enzyme. Cre recombinase is delivered to the target tissue by breeding the conditional SYT-SSX2 mice to mice expressing cre recombinase in a tissue specific manner.

We are currently breeding our conditional SYT-SSX2 mice to several tissue specific cre expressing mice and analyzing the presence or absence of tumors over time in the progenies. We have been successful in obtaining tumors with some our breeding experiments and are currently analyzing how closely these tumors resemble the human case. The conditional strategy gives us the unique opportunity to not only attempt at recapitulating the pathogenesis of Synovial sarcoma *in-vivo* but also allows us to identify the source of this tumor.

6. In layperson's terms, summarize the progress during the period of this report. Explain any medical significance or implications of your results to date:

This grant has supported our efforts at developing an animal model for a rare and aggressive human sarcoma. The presence of such an animal model would be invaluable for not only better understanding this disease but also significantly aid our efforts at designing and testing novel therapeutic strategies.

Malay Haldar

06/15/06

Principal Investigator (signature)

Date

Mario R. Capecchi

06/15/06

Department Chair (signature)

Date