

ABSTRACT

The multidisciplinary UAB **Training Program in Brain Tumor Biology** trains highly motivated predoctoral students and Ph.D. and M.D. graduates in the fields of fundamental and translational brain tumor biology. The program builds on the interdisciplinary basic and translational investigative efforts supported by the **Neuro-Oncology Program** and the **UAB Brain Tumor SPORE Grant**. **Seventeen faculty members** serve as mentors on this training program. Key partners are the thematically based Graduate Biomedical Sciences Program, the UAB MSTP Program and the Office of Postdoctoral Education. The Brain Tumor Training Program incorporates faculty committed to training in the fields of oncolytic properties of mutant herpes viruses, novel clinical applications of monoclonal antibody therapy, signal transduction pathways, systems biology, bioinformatics, genomics, kinomics, innate immune response, glioma stem cells, invasive and angiogenic mechanisms, bio-energetics and oxidative stress. An effective interdisciplinary training program requires faculty with collaborative and synergistic scientific interests. A Pub-Med search of the 17 mentors revealed that **95%** published with at least one other mentor. **This committed training environment provides an ideal setting for the implementation of interdisciplinary research and training.**

Over the last five years, 8 postdoctoral and 6 predoctoral trainees have been supported, with 13 of 14 continuing in biomedical research, teaching and/or training. The success of this program is evident by the outstanding publication record of the trainees, **having published 48 peer-reviewed manuscripts** in highly competitive journals, with an additional **11** under review or in preparation. A major effort has been made to recruit under-represented minorities and to enhance gender equality among the trainees. Our trainees have been **57% male (8/14)** and **43% female (6/14)**, and have included **22% under-represented minorities (3/14; African American and Hispanic American)**. They have trained with 10 primary or co-mentors from 7 departments. Because a large number of our mentors are involved in patient care in addition to their research activities, the program provides a strong interface between basic and applied brain tumor biology.

The Training Program provides an exceptional interdisciplinary environment in terms of **didactic training and enrichment opportunities**. The **didactic component** encompasses the Advanced Course in Brain Tumor Biology, a new course entitled Brain Tumor Clinical Course, and a new “hand-on” TCGA/Bioinformatics Tutorial. **Enrichment activities** include a new Monthly Research-In-Progress Brain Tumor Conference, a Monthly Brain Tumor Research Seminar Series, and the Annual UAB Brain Tumor SPORE Scientific Retreat. Collectively, the research training, didactic training and enrichment activities will ensure the development of the next generation of basic/translational researchers addressing the compelling problems related to brain tumors.