What is a biomarker?

A biomarker is a substance used as an indicator of a biologic state. For example, in medicine, a biomarker can be a substance whose detection indicates a particular disease state (for example, the presence of an antibody may indicate an infection). In cell biology, a biomarker is a molecule that allows for the detection and isolation of a particular cell type (for example, the protein Oct-4 is used as a biomarker to identify embryonic stem cells).

The term biomarker may have different meanings in different domains, but the purpose is the same—to serve as an indicator for screening and diagnosing an abnormal state.

Texas A&M University’s REU site on Imaging and Biomarkers is a summer research program that provides opportunities for undergraduate students to learn about the use of imaging techniques to characterize biomarkers and biomaterials for potential use in medical applications.

Our objectives are to help participants to understand the research process, to acquire laboratory skills, and to be well-positioned for graduate school and career success. Activities will include joining a research group led by a faculty mentor, completion of a 10-week research project, and participation in weekly faculty seminars, field trips, and career development workshops. For more information, visit: [http://etidweb.tamu.edu/hsieh/REU/](http://etidweb.tamu.edu/hsieh/REU/)

**Stipend**

Each participant will receive a stipend of $4500 for participation in the program. Other benefits include housing, meal and travel allowances; 1.0 credit hour of undergraduate course credit; and full access to university recreational facilities.

**Eligibility**

Criteria for selection include: 1) desire to participate in research as evidenced by application responses and faculty recommendation; 2) completion of at least the sophomore year of the curriculum for an academic major in engineering, computer science, or the life sciences; 3) GPA of 3.00 or above (exceptions may be made based on review of an applicant’s last 60 hours of coursework); 4) citizen or permanent resident of the U.S. or its possessions; and 5) plan to graduate no earlier than December 2011. Students who have limited opportunities to participate in research on their home campuses or who are from groups traditionally underrepresented in engineering and science are highly encouraged to apply.

**Interested?**

To apply, complete and print out the form at: [http://etidweb.tamu.edu/hsieh/REU/apply.html](http://etidweb.tamu.edu/hsieh/REU/apply.html). Send the form, a sealed letter of recommendation from a faculty member and a sealed official copy of your academic transcript to: Dr. Sheng-Jen (“Tony”) Hsieh, REU: Interdisciplinary Research on Imaging and Biomarkers, ETID Department, 3367 TAMU, Texas A&M University, College Station, TX 77843-3367

All materials must be postmarked by March 11, 2011. Notifications about acceptances will be sent out by April 1.