

Arati Sridharan
1971 W. Derringer Way, Chandler, AZ, 85286
Email: Arati.Sridharan@asu.edu
Tel: 480 855 6196
Cell: 602 770 2235

Education:

Arizona State University
Tempe, AZ
PhD/Bioengineering (2009)

Arizona State University
Tempe, AZ
MS/Bioengineering (2007)

Brandeis University
Waltham, MA
BS/Biology (2001)

Area of Expertise:

- Biosensors, Biophotonics
- Electrochemistry, Impedance spectroscopy
- Biomolecule Immobilization Techniques, Tissue Engineering, Molecular & Cell Biology

Dissertation:

Bioelectronic Characterization of Light Antenna Structures Derived From *Chloroflexus Aurantiacus*

Publications:

Sridharan, A, Muthuswamy, J, Pizziconi, V.B. *Optoelectronic energy transfer at novel biohybrid interfaces*. Langmuir, Submitted

Sridharan, A, La Belle J.T Muthuswamy, J, Pizziconi, V.B. *Immobilization of Functional Light Antenna Structures Derived from the Filamentous Green Bacterium Chloroflexus aurantiacus*. Langmuir 2008, 24: 8078-8089

Pinnix I, Musunuru U, Tun H, **Sridharan A**, Golde T, Eckman C, Ziani-Cherif C, Onstead L, Sambamurti K. *A novel gamma-secretase assay based on detection of the putative c-terminal fragment gamma of amyloid beta protein precursor*. J.Biol.Chem 2001, 276(1):481-7

Conferences:

Sridharan, A, Muthuswamy, J, Pizziconi, V.B. (2008) *Energy Transfer Dynamics of F-Chlorosomes in an Electrochemical Cell*. Biophysical Society Annual Conference, Long Beach, CA, Feb.2-6, 2008

Sridharan, A, Muthuswamy, J, Pizziconi, V.B. (2007) *Novel Photoelectrochemical Cell Using Bacterial Light Antenna Structures* Materials Research Society Fall Conference (MRS), Boston, Massachusetts, Nov.26-30, 2007

Sridharan, A, Muthuswamy, J, Pizziconi, V.B. (2007) *Photoelectrochemical Characterization of Indium Tin Oxide Electrodes For Biophotonic Applications*, Biomedical Engineering Society (BMES). 12th Fall Annual Conference. Los Angeles, CA, Sept.26- Sept.29, 2007

Sridharan, A, La Belle J.T, Muthuswamy, J, Pizziconi, V.B. (2007) *Electron Transfer Properties of Immobilized Chlorosomes* Biophysical Society Conference, Baltimore, Maryland, Mar. 3-7, 2007

Sridharan, A, La Belle J.T. Muthuswamy, J, Pizziconi, V.B. (2007) *Bioelectronic Coupling of F-Chlorosomes*. Nano & Giga Challenges, Tempe, Arizona, Mar. 12-16, 2007

Sridharan, A., Muthuswamy, J, LaBelle, J.T Pizziconi, V.B. (2006) *A Novel Biohybrid Nanophotonic Device*. Chlorosomes derived from the *C.aurantiacus* bacterium. Western Biomedical Engineering Conference (WESTBEC), Nov. 10, 2006

Sridharan A. Muthuswamy J, Pizziconi, V.B. (2006) *Design Feasibility of a Photoelectrochemical Detection System for Biotechnology Applications* Research in Engineering Symposium (REAS) (2006)

Sridharan, A, Pizziconi V.B. (2006). *Feasibility of a Low Light Level Biohybrid Dye Based Photodetector*. Graduates in Earth, Life, & Social Sciences Conference, Tempe AZ, February 2006

Sridharan, A, LaBelle, J.T, Pizziconi, V.B. (2005). *Progress Towards an Ultra-Sensitive Biohybrid Photodetector for Whole Cell Monitoring*. Biomedical Engineering Society (BMES). 10th Fall Annual Conference. Sept.28-Oct.1,2005, Baltimore, MD.

Sridharan, A, LaBelle, J.T, Pizziconi, V.B. (2004). *Design Feasibility of a Nanoscale-Based, Sol-Gel Encapsulated Biohybrid Sensor*. Inter-American Photochemical Society. 15th Winter Conference. Jan.1-4, 2004, Tempe, AZ.

(More on back)→

Research Experience:

Fall 2002-Present

Graduate research student in research lab of Dr. Vincent Pizziconi (ASU)

Duties/Projects: To explore effects of electrical fields on murine osteoblast differentiation (fall 2002). To produce thin film thermopiles on a flexible mylar substrate using chemical vapor deposition (spring 2003). To characterize and develop light-sensitive biohybrid devices using the dye-based solar cell model (Fall 2004- present)

Winter 2002-Spring 2002

Research student and lab manager in research lab of Dr. Michael Heller (UCSD)

Duties/Projects: To analyze and develop methods to characterize single nucleotide polymorphisms (SNPs) in various splice variants using Nanogen DNA nanochips

Fall 2001

Volunteer in research lab of Dr. Shu Chien (UCSD)

Duties/Projects: To analyze DNA microarray data using statistical software for the purpose of creating mathematical models for mechanosensory signal transduction.

Fall 1999-Fall 2000

Intern & Howard Hughes Fellow (Summer 2000) in research lab of Dr. Ruibao Ren (Brandeis University)

Duties/Projects: To create various genetic constructs of the Bcr/Abl gene (involved in Chronic Myelogenous Leukemia) and test them in a mouse model for disease symptoms.

Summer 1999

Mayo Clinic SURF Student in Alzheimer's Disease Research Lab under Dr. Kumar Sambamurti

Duties/Projects: To characterize the products of APP (amyloid precursor protein) metabolism using techniques as western blotting, ELISAs, transfections using CHO cells.

Fall 1998-Spring 1999

Work Study Student in Genetics lab under Dr. Kalpana White (Brandeis University)

Duties/Projects: To maintain and create laboratory stocks of *Drosophila Melanogaster* of specific genetic traits; to extract CNS (central nervous systems) of *Drosophila* larvae

Teaching & Service:

Fall 2007-Spring 2008

Graduate Council Student Representative (ASU)

Duties/Projects: To represent graduate student interests in developing university-wide graduate program curriculum.

Fall 2007-Spring 2008

Research Assistant in Psychology Department under Dr. Bianca Bernstein (ASU)

Duties/Projects: To assist in developing a web-based tutorial to promote women in science (CareerWise Program). Duties included interviewing women scientists and writing case studies

Fall 2005-Spring 2006

Fulton Undergraduate Research Initiative (FURI) Mentor-(ASU)

Duties/Projects: To supervise and guide an undergraduate student to gain experience in research methodology. Current projects include the use of inkjet printing technology in deposition of thin films of biological and biocompatible materials

Fall 2003-Spring 2004, Fall 2006

Teaching Assistant in Bioengineering Department (ASU)

Duties/Projects: To assist students in problem sets and laboratory skills, to teach relevant material, grade assignments, and post notes and other announcements online class website (Blackboard) in undergraduate courses of Biomaterials (BME 318) and Physiology for Engineers (BME 435)

Awards/ Honors:

- Arizona State University Faculty Emeriti Award (2007)
- Preparing Future Faculty Participant (2006-2008)
- Graduate & Professional Student Association (GPSA) Dissertation Award (2005)
- Interdisciplinary Graduate Education & Training Program (IGERT-NSF) (2002-2006)
- *Magna Cum Laude* (2001)
- Howard Hughes Summer Undergraduate Research Fellow (2000)
- Justice Brandeis Merit Scholarship (1997-2001)
- Honors on Dean's List (1997-2000)

Recommendations available upon request.