

## **Asiri S. Ediriwickrema, MD MHS**

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### **Education and Training**

<b>Stanford University Medical Center</b>	2017-Present
Fellowship in Hematology and Oncology. Advisors: Jason Gotlib, MD	
<b>Stanford University, Department of Cancer Biology</b>	2017-Present
PhD Candidate. Advisors: Ravindra Majeti, MD PhD	
<b>Stanford University Medical Center</b>	2014-2017
Residency in Internal Medicine. Advisors: Jason Gotlib, MD	
<b>Yale University School of Medicine (YSM), Cum Laude</b>	2014
Doctor of Medicine (MD), Master of Health Science (MHS). <u>Thesis</u> : Design of multi-layered nanoparticles for combination gene and drug cancer therapy. Advisors: W. Mark Saltzman PhD, Jiangbing Zhang PhD	
<b>Massachusetts Institute of Technology (MIT)</b>	2008
B.S. in Mechanical Engineering, Minor in Biomedical Engineering. <u>Thesis</u> : Novel polymer constructs for controlled release and presentation of topographic cues in support of neuronal cells. Advisors: Rajiv Saigal MD PhD, Robert Langer PhD.	

### **Grants and Fellowships**

1. **Advanced Residency Training at Stanford Award:** Awarded fellowship in support of pursuing a career as a physician-scientist. Provides support for research and obtaining a Ph.D. degree. 2017-Present
2. **HHMI Medical Research Fellowship:** Awarded one-year fellowship and grant to conduct biomedical research. 2012– 2013
3. **New England Baptist Hospital Research Fellowship:** Awarded one-year fellowship to conduct research on treating spinal cord injury. 2008-2009
4. **Program on Human Rights and Justice Fellowship at MIT:** Awarded grant for independent project in expanding healthcare access in a developing country. 2008
5. **Glaxo Summer Research Fellowship:** Awarded a summer fellowship to conduct research on modelling heavy element nucleosynthesis during the r-Process 2003

### **Patents**

1. Hyperbranched polyglycerol-coated particles and methods of making and using thereof. Deng Y, **Ediriwickrema A**, Saltzman, M. A multi-functional microparticle and/or nanoparticle delivery system with tunable surface properties. International Application No. PCT/US2015/030169 filed May 11, 2015.
2. Topical Formulation of hyperbranched polyglycerol-coated particles thereof. Deng Y, **Ediriwickrema A**, Saltzman, M. U.S. Provisional Patent Application. International Application No. PCT/US2015/030187 filed May 11, 2015.

### **Invited speaker**

1. Moving from Merkel Cell to the Myocardium. **Ediriwickrema A**, Banerjee D, Reddy S. Stanford Internal Medicine Grand Rounds. August 19, 2015.
2. Perspectives from Year-Out Trainees. Eckenrode G, **Ediriwickrema A**, Lee J, Udelsman B. 2013 APSA North East Regional Meeting. November 2013.

**Peer reviewed Publications**

1. Raber I\*, **Ediriwickrema A\***, Aduba U, Higgins J, Kambham N, Pao A. Crescentic Glomerulonephritis with IgG-4 Related Disease: case report and review of the literature. The American Journal of the Medical Sciences. 0 (0). 2016. doi: <http://dx.doi.org/10.1016/j.amjms.2016.09.004>. **\*Contributed equally to this work.**
2. Deng Y\*, **Ediriwickrema A\***, Yang F, Lewis J, Girardi M, Saltzman WM. A Sunscreen Based On Bioadhesive Nanoparticles. Nature Materials. 2015, 14(12), pp 1278-65. PMID: 26413985. doi:10.1038/nmat4422. **\*Contributed equally to this work.**
3. **Ediriwickrema A**, Saltzman WM. Nanotherapy for cancer: targeting and multifunctionality in the future of cancer therapies. ACS Biomaterials Science and Engineering, 2015, 1 (2), pp 64–78. PMID: 25984571. doi: 10.1021/ab500084g. **Selected as an Editor's Choice article, and was featured on the issue cover.**
4. Benison, K, **Ediriwickrema A**, Bulsara KR. Acute bitemporal hemianopsia from a compressive anterior communicating artery aneurysm. Neurology and Clinical Neuroscience. 2014. doi: 10.1111/ncn3.146.
5. **Ediriwickrema A**, Zhou J, Deng Y, Saltzman WM. Multi-layered nanoparticles for combination gene and drug delivery to tumors. Biomaterials. 35(34): 9343-9354. 2014. PMID: 25112935. doi: 10.1016/j.biomaterials.2014.07.043.
6. Kuzmik G, Williamson T, **Ediriwickrema A**, Andeejani A, Bulsara KR. Flow Diverters and a tale of two aneurysms. Journal of NeuroInterventional Surgery. 5(4):e23. 2013. PMID: 22510458. doi: 10.1136/neurintsurg-2012-010316.
7. **Ediriwickrema A**, Williamson T, Hebert R, Matouk C, Johnson MH, Bulsara KR. Intracranial stenting as monotherapy in subarachnoid hemorrhage and sickle cell disease. Journal of NeuroInterventional Surgery. 5(2):e4. 2013. PMID: 22248629. doi: 10.1136/neurintsurg-2011-010224.
8. Bulsara K, **Ediriwickrema A**, Pepper J, Robertson F, Aruny J, Schindler J. Tissue plasminogen activator via cross-collateralization for tandem internal carotid and middle cerebral artery occlusion. World Journal of Clinical Cases. 1(9):285-289. 2013. PMID: 24364024. doi: 10.12998/wjcc.v1.i9.290.
9. **Ediriwickrema A**, Banerjee D, Kim K, Nghiem P, Sharon E, Reddy S. Ventricular arrhythmia due to autoimmune myocarditis after single dose pembrolizumab for metastatic merkel cell carcinoma. [In preparation]

**Poetry**

1. **Ediriwickrema A**. Sunset. JAMA. 2016;315(7):708. doi:10.1001/jama.2015.12891.

**Oral Presentations**

1. Multi-layered nanoparticles for combination gene and drug delivery to tumors. **Ediriwickrema A**. 2014 Yale University Student Research Day. May 2014.
2. Design of polymer nanoparticles for combination delivery of anti-cancer agents and evaluation of their effect on cancer cell growth. **Ediriwickrema A**, Zhou J, Saltzman M. 2013 Biomedical Engineering Society Annual Meeting. September 2013.
3. Convection-Enhanced Delivery of Brain-Penetrating Nanoparticles in Glioma. **Ediriwickrema A** and Saucier-Sawyer J, Zhou J, Sawyer A, Saltzman M. 2013 Biomedical Engineering Society Annual Meeting. September 2013.

**Additional Publications**

1. **Ediriwickrema A** and Xue J. The Effects of Neutron Capture on the A=195 r-Process Peak. National Consortium for Specialized Secondary Schools of Mathematics, Science, and Technology. 2005.

**Abstracts/Posters**

1. Electronically controlled release of minocycline nanoparticles from conductive polymers rescues primary neurons from excitotoxicity.  
Saigal R, Prego C, **Ediriwickrema A**, Langer R. San Francisco Neurological Society Annual Meeting. April 2013.
2. Electronically controlled release of nanoparticles rescues neurons from an excitotoxic environment.  
Saigal R, **Ediriwickrema A**, Millan C, Woodard E, Prego C, Langer R. Neuroscience 2013. November 2013.
3. Delivery of camptothecin and TRAIL plasmid using multilayered nanoparticles for synergistic inhibition of glioma cell growth.  
**Ediriwickrema A**, Zhou J, Saltzman M. 2013 Congress of Neurological Surgeons Annual Meeting: The Evolution of Neurosurgery Section on Tumors. October 2013.
4. Evaluation of polymer nanoparticles for delivery of multiple therapeutic agents and their effect on cancer cell growth.  
**Ediriwickrema A**, Zhou J, Saltzman M. 2013 HHMI Medical Fellows Scientific Meeting. May 2013.
5. Polymer Nanoparticles for Delivery of Multiple Therapeutic Agents and their Effects on Glioma Growth.  
**Ediriwickrema A**, Zhou J, Saltzman M. Society for Biomaterials 2013 Annual Meeting and Exposition: Biomaterials Revolution. April 2013.
6. Minocycline microspheres for neuroprotection in excitotoxic environments.  
Saigal R, **Ediriwickrema A**, Nguyen D, Langer R. US-Japan Symposium on Drug Delivery Systems. December 2007.
7. The Effects of Neutron Capture Rates on the r-Process A=195 Peak.  
**Ediriwickrema, A**, Xue, J. American Physical Society, Division of Nuclear Physics Fall Meeting. October 2003.

**Awards**

1. **ACS Editor's Choice**: Manuscript: "Nanotherapy for cancer: targeting and multifunctionality in the future of cancer therapies" was selected as an Editor's Choice article, and was featured on the issue cover. 2015
2. **Cum Laude, YSM**: Conferred on students whose academic performance shows unusual merit. 2014
3. **William U. Gardner Thesis Prize, YSM**: Awarded by the YSM Thesis subcommittee for the most outstanding thesis in the graduating class. Thesis abstract published in: Yale School of Medicine Thesis Award Recipients — 2014. Yale J Biol Med. Sep 2014; 87(3): 389–393. 2014
4. **Farr Research Scholar, YSM**: Awarded by the Faculty and Dean of YSM for excellence in research as a medical student. 2013-2014
5. **Mack I. Davis II Award, Cambridge School Volunteers**: Recognition for outstanding volunteer work in the Cambridge school system. 2009
6. **Longevity Award, Cambridge School Volunteers**: Recognition for continuous volunteer service in the Cambridge school system for greater than four years. 2009

**Research Experience**

- Gotlib Lab, Stanford University** 2015-Present  
Research Student. Advisors: Dr. Jason Gotlib. Evaluating treatment responses to midostaurin in patients with advanced systemic mastocytosis through analysis of clinical improvement, inflammation and circulating tumor DNA while on treatment.
- Saltzman Research Group, Yale University** 2010-2014  
HHMI Medical Research Fellow. Advisors: Dr. Mark Saltzman, Dr. Jiangbing Zhou. Analyzed multi-functional bioadhesive particles for topical anti-cancer therapies. Optimized polymer nanoparticles for efficient delivery of plasmid DNA and small

molecules by utilizing multiple polymer layers and surface conjugation techniques. Investigated glioblastoma, colorectal adenocarcinoma, and breast adenocarcinoma biology and evaluated interesting targets for synergistically reducing tumor growth.

**Langer Laboratories, New England Baptist Hospital Research Fellow, MIT** 2007-2009

Research Fellow. Advisors: Dr. Rajiv Saigal, Dr. Eric Woodard, and Dr. Robert Langer: Examined the potential for conductive polymers in treating spinal cord injury. Developed an in vitro model of spinal cord injury pathology and investigated the use of controlled drug delivery via conductive polymers to decrease excitotoxic cell damage.

**Biological Microtechnology and BioMEMS Group, MIT** 2005-2007

Research Student. Advisor: Dr. Joel Voldman: Developed efficient, stream-lined protein detection assays using microfluidic chips for potential clinical and research applications. Specifically, I designed microfluidic immunoassays capable of detecting minute amounts of TNF-alpha, and engineered microfluidic perfusion chambers for upstream cell culture.

### **Editorship**

David Katz's Nutrition in Clinical Practice: A Comprehensive, Evidence-Based Manual for the Practitioner, 3<sup>rd</sup> Edition. Assistant Author/Editor 2012-2014

### **Mentorship/Student Supervision**

Medical Student Mentor: Inbar Raber, BS. Currently a medical student at the Stanford University School of Medicine. Completed a manuscript on IgG-4 related disease which was accepted for publication in The American Journal of the Medical Sciences. 2015-2017

### **Work Experience**

Stanford University Medical Center, Medical Resident	2014-2017
WikiDoc Foundation	2016
Novartis Vaccines and Diagnostics, Technology Operations Intern	2009
Sarvodaya Shramadana Movement Mobile Health Unit, Fellow	2008
Organic Chemistry Tutor at MIT, Tutor	2008

### **Memberships**

Stanford Society of Physician Scholars, American College of Physicians, American Physician Scientist Association, American Society of Hematology, American Society of Clinical Oncology.