

# PRAMOD BUTTE, MBBS, PhD

321 S Willaman Dr, #305, Los Angeles, CA - 90048 • Tel 323.481.0133 •  
Pramod.Butte@gmail.com

---

## **CAREER HIGHLIGHTS**

Department of Neurosurgery, Cedars-Sinai Medical Center, Los Angeles, CA  
**RESEARCH SCIENTIST I / ASSISTANT PROFESSOR**  
(2012 – PRESENT)

Department of Neurosurgery, Cedars-Sinai Medical Center, Los Angeles, CA  
**PROJECT SCIENTIST**  
(2011 – 2012)

Department of Neurosurgery, Cedars-Sinai Medical Center, Los Angeles, CA  
**POST-DOCTORATE FELLOW**  
(2006 – 2011)

University of Southern California (USC), Los Angeles, CA  
**GUEST LECTURER IN DEPARTMENT OF BIOMEDICAL ENGINEERING**  
(2006 – 2007)

Developed course work with senior faculty for (BME 501) “Advanced Topics in Biomedical Systems” to introduce engineering students to basics of human anatomy and physiological systems.

Department Biomedical Engineering at USC, Los Angeles, CA  
**RESEARCH ASSISTANT**  
(2002 – 2006)

Conducted *ex-vivo* experiments on human brain tumor tissue to determine the potential of Time-Resolved Laser Induced Fluorescence Spectroscopy (TRLIFS). Analyzed and compiled scientific data for submission of STTR (Small Business Technology Transfer) grant. Published and presented all findings in technical/clinical reports, journal articles and international conferences.

Biomedical Simulation Resources Lab, USC, Los Angeles, CA  
**RESEARCH ASSISTANT**  
(2002 – 2003)

Studied non-linear characteristics of the Cerebral Vascular flow using the Laguerre expansion of kernels, also involved in the study of non-stationary analysis of the cerebral vascular flow.

Department Biomedical Engineering at USC, Los Angeles, CA

## **TEACHING ASSISTANT**

**(2005 – 2006)**

Managed course work taught several neuroscience dominated topics and mentored both undergraduate (BME-402) 'Control and Communication in the Nervous System' and graduate students (BME-502) 'Advanced Studies of the Nervous System'.

## **ADDITIONAL PROFESSIONAL EXPERIENCE**

- Co-Authored book chapter in “**Tissue autofluorescence lifetime spectroscopy and imaging: Applications**”
- Co-Authored book chapter in ‘**Tumors of the Central Nervous System, Volume 2**’ (Chapter 14: Time-Resolved Laser Induced Fluorescence Spectroscopy (TRLIFS): a Tool for Intra-operative Diagnosis of Brain Tumors And maximizing extent of surgical Resection)
- Co-Authored book chapter in ‘**Advances in Optical Imaging for Clinical Medicine**’ (Chapter 9: Fluorescence Lifetime Spectroscopy in Cardio and Neuroimaging)
- Refereed five articles for Institute of Physics journals including ‘*Physics in Medicine and Biology*’.
- Awarded 1<sup>st</sup> Prize for best oral Presentation at Annual 9<sup>th</sup> Grodin’s Symposium at University of Southern California.
- Managed a comprehensive case study on HIV infection from the structure to the latest treatment in Rural India.
- Conducted survey for the County Health Office on Maternal and Child health in Rural India, which mainly constituted demographic data collection, analysis and presented findings to the County Health Officer.
- Designed a close-up lens for 37-370mm auto-focusing camera to reduce the minimum object distance from 100cm to 10cm.
- COMPUTER SKILLS: MATLAB, Simulink, C, C++, Linux administration, Microsoft office suite.
- INTERESTS: Photography, Squash, Composing Music, Exotic food preparations.

## **EDUCATION & PROFESSIONAL DEVELOPMENT**

**Ph.D., Biomedical Engineering** (Biophotonics), University of Southern California

May 2006

**Masters in Biomedical Engineering**, University of Southern California

May 2004

**MBBS (MD Equivalent)**, University of Pune, India

May 1999

## **PROFESSIONAL MEMBERSHIPS**

- SNO (Society of Neuro-Oncology)
- SPIE (Society of Optical engineering)
- BMES (Biomedical Engineering Society)
- ASLMS (American Society for Lasers in Medicine & Surgery)
- SBMT Society for Brain Mapping and Therapeutics

- EEEE (Transaction on Biomedical Engineering)

## **REFERENCES & PUBLICATIONS**

- Butte PV, Mamelak A, Parrish-Novak J, Drazin D, Shweikeh F, Gangalum PR, Chesnokova A, Ljubimova JY, Black K, "Near-infrared imaging of brain tumors using the Tumor Paint BLZ-100 to achieve near-complete resection of brain tumors." *Neurosurg Focus*. 2014 Feb;36(2):E1.
- Paul A. Lapchak, Kiyoshi Kikuchi, Pramod Butte, Thilo Hölscher, "Development of Transcranial Sonothrombolysis as an Alternative Stroke Therapy: Incremental Scientific Advances Toward Overcoming Substantial Barriers", *Expert Review Medical Devices* (in press 2013)
- Book Chapter in "Fluorescence Lifetime Spectroscopy And Imaging: Principles and Applications in Biomedical Diagnostics" (Chapter 5 Section 12) *in press*
- Book Chapter in "**Tumors of the Central Nervous System, Volume 2**" By Dr.Hayat (Chapter 14: Time-Resolved Laser Induced Fluorescence Spectroscopy (TRLIFS): a Tool for Intra-operative Diagnosis of Brain Tumors And maximizing extent of surgical Resection) Published by Springer; ISBN: 9400706170, 2011
- P. V. Butte, A. N. Mamelak, S. Bannykh, K. L. Black, L. Marcu, "Fluorescence lifetime method for guided therapy of brain tumors", *Neuroimage*, 2011 Jan;54 Suppl 1:S125-35. Epub 2010 Nov 3.
- Book chapter in '**Advances in Optical Imaging for Clinical Medicine**' (Chapter 9: Fluorescence Lifetime Spectroscopy in Cardio and Neuroimaging) Published by Wiley, ISBN: 0470619090.
- P V. Butte, Q. Fang, J. A. Jo, W. H. Yong, B. K. Pikul, K. L. Black, and L. Marcu, "Intraoperative delineation of primary brain tumors using time-resolved fluorescence spectroscopy", *J. Biomed. Opt.* 15, 027008 (2010), DOI:10.1117/1.3374049
- Joe Fu-Jiou Lo, P. V. Butte, Q. Fang, S. Chen, T. Papaioanou, E. Kim, M. Gundersen, and L Marcu, "Multilayered MOEMS Tunable Spectrometer for Fluorescence Lifetime Detection", *IEEE Photonics Technology Letters*, Vol. 22, No. 7, April 1, 2010
- W. H. Yong, P. V. Butte, B. K. Pikul, J. A. Jo, Q. Fang, T. Papaioannou, K. L. Black, and L. Marcu, "Distinction of brain tissue, low grade and high grade glioma with time-resolved fluorescence spectroscopy," *Frontiers in Bioscience* Vol. 11, 1255-1263, May 1, 2006
- P. V. Butte, L Marcu et al. "Diagnosis of meningioma by time-resolved fluorescence spectroscopy", *Journal of Biomedical Optics*, 2005 Nov-Dec; 10(6):064026.
- L Marcu, J. A. Jo, P. V. Butte, W. H. Yong, B. K. Pikul, K. L. Black, R. C. Thompson. "Fluorescence lifetime spectroscopy of glioblastoma multiforme." *Photochem Photobiol.* 2004 Jul-Aug; 80:98-103

## **CONFERENCE PROCEEDING**

- P.V. Butte, P. Lapchak "Near Infrared Laser Therapy for Stroke: Does it penetrate the skull? Oral Presentation, SPIE Jan 2014

- P.V Butte, P. Lapchak, "What is penumbra?", Poster Accepted Annual meeting of Society of Neuroscience, November 2013
- P.V. Butte, P. Lapchak "Continuous Laser Induced Fluorescence Spectroscopy (CLIFS) Technique for Screening Drugs by Assessing the Metabolic Effects in Real-Time", Poster P04.065. American Association of Neurologists March 2013
- P.V. Butte, K. Black "Ultra High Speed Time-Resolved Laser Induced Fluorescence Spectroscopy for In-vivo Brain Tumors Detection", Poster, 9th annual meeting of Society for Brain Mapping & Therapeutics, June 2012
- P. V. Butte, K. Black "Ultra-high speed time resolved laser induced fluorescence spectroscopy for brain tumor diagnosis", Invited talk at McMaster University, Department of Biomedical Engineering, ON, Canada, 2012
- P. V. Butte, A.N. Mamelak, S. Bannykh, K. L. Black and L. Marcu, "Time-Resolved Fluorescence Spectroscopy For Intra-Operative Delineation Of Human Gliomas", SNO/AANS 2009, New Orleans, LA
- P. V. Butte, A.N. Mamelak, S. Bannykh, J.A. Jo, K. L. Black and L. Marcu, "Intra-operative delineation of primary brain tumors by time-resolved fluorescence spectroscopy", SPIE 2008 BIOS 2008, San Jose, CA
- P. V. Butte, A.N. Mamelak, S. Bannykh, J.A. Jo, K. Black and L. Marcu, "Intra-Operative Time-Resolved Fluorescence Spectroscopy Of Human Gliomas", BMES 2007, Los Angeles, CA
- P. V. Butte, Q. Fang, W. H. Yong, B. K. Pikul, K. L. Black, L. Marcu. "Time-resolved fluorescence spectroscopy of the intrinsic fluorescent constituents of neural tissue and tumors" SPIE 2006 BIOS 2006, San Jose, CA.
- P. V. Butte, L. Marcu et al. "Time-resolved Fluorescence Spectroscopy of Meningiomas", SPIE 2004 Photonics West, San Jose, CA.
- P. V. Butte, L Marcu et al. "Time-Resolved Fluorescence Spectroscopy of Meningiomas, brain tumor", American Society of Lasers in Medicine, International Convention 2003, Anaheim, CA.
- Butte, Pramod V.; Vishwanath, Karthik; Pikul, Brian K.; Mycek, Mary-Ann; Marcu, Laura "Effects of tissue optical properties on time-resolved fluorescence measurements from brain tumors: An experimental and computational study", Optical Tomography and Spectroscopy of Tissue V. Edited by Chance, Britton; Alfano, Robert R.; Tromberg, Bruce J.; Tamura, Mamoru; Sevick-Muraca, Eva M. Proceedings of the SPIE, Volume 4955, pp. 600-608 (2003)