

WORK ADDRESS

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SUMMARY

Over 10 years of research experience in signal transduction and molecular biology. Demonstrated skills in utilization of techniques involving siRNA, QPCR, cell culture and Immunohistochemistry. Expertise in *in vivo* mechanisms involving preclinical models of pain, nerve regeneration, cancer and diabetic neuropathy. Supervisory and teaching experience of grad students and postdocs. Excellent oral and written communication skills. Several publications in peer reviewed journals.

PUBLICATIONS

1. Huaqing Liu, Ph.D.; Youngsoon Kim, M.D.; **Sharmila Chattopadhyay**, Ph.D.; Igor Shubayev, M.D.; Jennifer Dolkas; Veronica Shubayev, M.D. Matrix metalloproteinase inhibition enhances the rate of nerve regeneration *in vivo* by promoting de-differentiation and mitosis of supporting Schwann cells. *Journal of Neuropathology and Experimental Neurology* (Accepted Nov 2009)
 2. Subir K. Roy Chowdhury, Darrell Smith, **Sharmila Chattopadhyay**, Corinne Jolivalt, Nigel Calcutt, Paul Fernyhough Mitochondrial Respiratory Chain dysfunction of Dorsal Root Ganglia in Streptozotocin-induced Diabetic Rats and its Correction by Insulin Treatment. *Diabetes*. (Accepted Dec 2009)
 3. **Chattopadhyay S** and Shubayev VI. MMP-9 regulates Schwann cell survival and phenotypic remodeling via IGF-1 and ErbB receptor-mediated ERK activation. (*Glia*. 2009 Feb 19. [Epub ahead of print]).
 4. Kobayashi H, **Chattopadhyay S**, Kato K, Dolkas J, Kikuchi S, Myers RR, Shubayev VI: MMPs initiate Schwann cell-mediated MBP degradation and mechanical nociception after nerve damage. *Molecular and Cellular Neuroscience* 39: 619-627, 2008.
 5. **Chattopadhyay S**, Myers R, Janes J, Shubayev V: Cytokine regulation of MMP-9 in peripheral glia: Implications for pathological processes and pain in injured nerve. *Brain, Behavior & Immunity*, 21 (5): 561-8, 2007 (Special Issue on Glial and Immune Regulation of Pain).
 6. María Cortes-Sempere¹, **Sharmila Chattopadhyay**¹, Ana Rovira, Vanesa Rodriguez- Fanjul, Cristobal Belda-Iniesta, Mariana Tapia, Paloma Cejas, Cristina Manguan-García, Isabel Sánchez-Pérez, Manuel Nistal, Carmen Moratilla, Javier de Castro-Carpeño, Manuel Gonzalez-Barón, Joan Albanell and Rosario Perona: MKP1 repression is required for the chemosensitizing effects of NFκB and PI3K inhibitors to cisplatin in non-small lung cancer. *Cancer Letters* 28 December 2009 (Vol. 286, Issue 2, Pages 206-216)
 7. **Chattopadhyay S**¹, Machado-Pinilla R¹, Manguan-Garcia C, Belda-Iniesta C, Moratilla C, Cejas P, Fresno-Vara JA, de Castro-Carpeno J, Casado E, Nistal M, Gonzalez-Baron M, Perona R: MKP1/CL100 controls tumor growth and sensitivity to cisplatin in non-small-cell lung cancer. *Oncogene*, 25 (23): 3335-45, 2006.
 8. Palacios S, Lalioti V, Martinez-Arca S, **Chattopadhyay S**, Sandoval IV: Recycling of the insulin-sensitive glucose transporter GLUT4: Access of surface internalized GLUT4 molecules to the perinuclear storage compartment is mediated by the Phe5GlnGlnIle8 motif, *J Biol Chem* 276 (5): 3371- 3383, 2001.
 9. Belda-Iniesta C, Perona R, De Castro Carpeno J, **Chattopadhyay S**, Casado E, Cejas P, Vara JA, Moreno Guerra C, Baron MG: Do beta tubulin pseudo-genes really matter. *Lancet Oncol.*, 1: 271-272, 2004.
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RESEARCH EXPERIENCE

University of Tennessee Health Sciences Center, Memphis, TN; Jan 2010- present
Instructor

PROJECT 1: Role of PPP2R3A in signal transduction after Ischemia/Reperfusion in cardiovascular system.

University of California, San Diego, California. Jul 2005-Jan 2010
Postdoctoral employee, Dept. of Pathology.

PROJECT 1: Diabetic neuropathy and COX 2 regulation in Type 1 and Type 2 diabetes.

PROJECT 2: Role of glia in diabetic neuropathy in the CNS.

PROJECT 3: Characterized the expression and role of Matrix metalloprotease-9 in peripheral neuropathy post nerve injury.

PROJECT 4: Initiated the osteosarcoma pain model in mice establishing biomarkers of cancer pain.

Sidney Kimmel Cancer Center, San Diego Nov 2004-Jun 2005
Postdoctoral associate

Project : Screened cDNA library and characterized retinoid receptors involved in cancer.

University of Autonoma, Madrid, Spain. 2000 – 2004
Predoctoral scholar, Center of Molecular Biology Severo Ochoa.

PROJECT 1: Characterized the role of Endosomal trafficking of glucose GLUT4 and copper ATPase transporters and lysosomal proteins.

PROJECT 2: Elaborated signal transduction pathways responsible for drug resistance in Nonsmall cell lung cancer to platinum drugs.

EDUCATION

Ph.D. Autonomous University of Madrid, Madrid, Spain, Biochemistry.

M.S. Jawaharlal Nehru University, New Delhi, Biotechnology.

B.S. Lady Brabourne College, Calcutta, Honors in Physics.

HONORS AND AWARDS

First author, Invited Original Publication in <i>Brain, Behavior & Immunity</i> , Special Issue: Immune and Glial Regulation of Pain.	2007
Finalist chosen to speak on the Neurosurgery Grand Round, Neurosurgery Neuroscience Consortium Fellowship, San Diego, CA.	2007
First Prize , Best Communication Award, Atlantic Conference on Cancer, Tenerife, Spain.	2004
Doctorate with “ Summa Cum Laude ”, Autonomous University of Madrid	2004
Diploma of Advanced Studies with Distinction , Autonomous University of Madrid	2002

REVIEWS:

Invited reviewer for Elsevier Publishing: “**Neuroscience Letters**”.

GRANTS/FELLOWSHIPS

Finalist of Neurosurgery Neuroscience Consortium fellowship UCSD 2007

Recipient of Research Associated Group Fellowship UCSD (Anesthesiology) 2008

PRESENTATIONS/ABSTRACTS

1. Kobayashi H, **Chattopadhyay S**, Dolkas J, Kikuchi S, Myers RR, Shubayev V: Therapy using MMP inhibitor protects from neuroinflammation and neuropathic pain, *International Society for the Study of Lumbar Spine (ISSLS)*, Geneva, Switzerland, 2008.
 2. **Chattopadhyay S** and Shubayev V: MMP-9 controls de-differentiation and proliferation of peripheral glia through ErbB receptor mediated activation of ERK/MEK pathway, *International Symposium on Neural Regeneration (ISNR)*, Asilomar, CA, 2007.
 3. **Chattopadhyay S** and Shubayev V: Schwann cell proliferation depends on MMP-9 regulation of ErbB receptor-mediated activation of MEK/ERK pathway, *Society for Neurosciences (SFN)*, Neuron Satellite Symposium, San Diego, CA, 2007.
 4. **Chattopadhyay S**, Kobayashi H, Myers RR, Dolkas J and Shubayev V: Cytokine induced matrix metalloproteinase regulate MBP processing and neuropathic pain in peripheral nerve, *Peripheral Nerve Society (PNS)*, Salt Lake City, 2007.
 5. Rosario Perona, **Sharmila Chattopadhyay**, Carmen Moratilla, Cristobal Belda-Iniesta, Paloma Cejas, Juan-Angel Fresno, Rosario Machado-Pinilla, Cristina Manguan-Garcia, Manuel Nistal and Manuel Gonzalez-Baron. Role of MKP-1 and NFkB on survival of non-small cell lung carcinoma cells to cisplatin. *Experimental and Molecular Therapeutics 28: Cell Death Pathways Abstract #3324 AACR meeting [Proc Amer Assoc Cancer Res, Volume 46, 2005]*
 6. **Chattopadhyay S**, Moratilla C, and Perona R. Role of the dual phosphatase MKP1 in conferring chemoresistance to Cisplatin in Non-small cell lung cancer, *Atlantic Conference on Cancer*, Tenerife, Spain, 2006.
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TEACHING

Postgraduate Research Training	
<i>Teresa Mixcoatl-Zecuatl Ph.D., Dept of Pathology, UCSD (postdoctoral researcher)</i>	2009
<i>Maria Kim MD, Dept of Anesthesiology, UCSD. (postdoctoral researcher)</i>	2008
<i>Huaqing Li MD, Dept. of Anesthesiology, UCSD (postdoctoral researcher)</i>	2008
<i>Kinshi Kato MD, Fukushima University, Japan (postdoctoral fellow)</i>	2007-2008
<i>Hide Kobayashi MD, Fukushima University, JAPAN (postdoctoral fellow)</i>	2006-2007
Undergraduate Research Advisor	
<i>Renata Ferreira, Engineering, San Francisco State University summer student</i>	2007
<i>Elena Zininberg, Molecular Biology, UCSD</i>	2006 – 2007
<i>Lori Guner, Biology, UCSD</i>	2006
High School Senior Research Internship Research Advisor	
<i>Marianna Yusupov, High School of the Arts (SOTA), San Francisco, CA</i>	2007
<i>Meera Soni, Torrey Pines High School, Encinitas, CA</i>	2006
Teaching assistant for Microbiology Lab courses for undergrads	2001-2002
Teaching assistant for Biochemistry Lab courses for undergrads	2001-2001

MEMBERSHIP

Member of Society For Neurosciences (SFN)

Member of Association of Women in Science (AWIS)

VOLUNTARY SERVICE

Events committee co-chair for AWIS (Assocn. Of Women in Science)	2009
Membership Committee Team member: National Postdoctoral Association	2007-present
Volunteering member of Neural Networking a NGO working for development of facilities for epilepsy treatment in rural India	2006-2007
Organizing team member: "Transition to Industry" Career Symposium for Graduate students and Postdoctoral Trainees, Biogen Idec	2006
Organizing team member: UC Council of Postdoctoral Scholars meeting	2006
Committee member: UCSD Postdoctoral Scholars Association	2006-2008

Languages:

English, Spanish, Bengali and Hindi
