

BIOGRAPHICAL SKETCH

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NAME Marina Mata, M.D.		POSITION TITLE Professor of Neurology	
eRA COMMONS USER NAME (credential, e.g., agency login) marinamata			
EDUCATION/TRAINING <i>(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)</i>			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	YEAR(s)	FIELD OF STUDY
Institute Margall, Barcelona, Spain	B.S.	1964	Science
University of Barcelona Medical School, Hospital de San Pablo, Barcelona, Spain	M.D.	1971	Medicine
C.S. Francisco Franco, Barcelona, Spain	Postgraduat	1971-1972	Medicine
C.S. Francisco Franco, Barcelona, Spain	Intern	1972-1973	Medicine
C.S. Francisco Franco, Barcelona, Spain	Resident	1973-1974	Medicine
University of Michigan, Ann Arbor, MI	Resident	1978-1981	Neurology
VAMC, San Francisco, CA	Fellow	1981-1982	Research

A. Positions and Honors.**Positions:**

1978 Fogarty International Fellow, NIH, Bethesda, MD
 1982-1988 Assistant Professor of Neurology, University of Michigan, Ann Arbor, MI
 1988-1995 Associate Professor of Neurology, University of Michigan, Ann Arbor, MI
 1995 Professor of Neurology, University of Michigan, Ann Arbor, MI
 1996-1999 Director, Neurology Residency Training Program, University of Pittsburgh, Pittsburgh, PA
 1995-2004 Professor of Neurology, University of Pittsburgh, Pittsburgh, PA
 2004-present Professor of Neurology, University of Michigan, Ann Arbor, MI
 2004-present Staff Neurologist, Ann Arbor VA, Ann Arbor, MI

Other Experience and Professional Memberships:

1974-1978 Fogarty International Fellowship
 2000-2003 Long Range Planning Committee, American Neurological Association
 2001-2003 Organizing Committee and Mentor, K08 and K23 Annual Symposium, American Neurological Association

Honors:

Fogarty International Fellowship, 1974-1978; Alpha Omega Alpha, graduate member, 1986

B. Selected peer-reviewed publications (in chronological order).

1. Chattopadhyay M, Goss J, Lacomis D, Goins W, Glorioso JC, **Mata M** and Fink DJ. Protective effect of HSV-mediated gene transfer of nerve growth factor in pyridoxine neuropathy demonstrates functional activity of trkA receptors in large sensory neurons of adult animals. *European J Neuroscience* 17:732-740, 2003.
2. Hao S, **Mata M**, Wolfe D, Huang S, Glorioso J and Fink DJ. HSV-mediated gene transfer of the glial cell derived neurotrophic factor (GDNF) provides an anti-allodynic effect in neuropathic pain. *Molecular Therapy* 8:367-375, 2003.
3. Natsume A, Wolfe D, Hu J, Huang S, Puskovic V, Glorioso JC, Fink DJ and **Mata M**. Enhanced functional recovery after proximal nerve root injury by vector-mediated gene transfer. *Experimental Neurology* 184:878-886, 2003.
4. Fink DJ, **Mata M** and Glorioso JC. Cell and gene therapy in the treatment of pain. *Advanced Drug Delivery Reviews* 55:1055-1064, 2003.
5. **Mata M**, Glorioso JC and Fink DJ. Development of HSV-mediated gene transfer for the treatment of

- chronic pain. *Experimental Neurology* 198(S1):25-29, 2003.
6. Fink DJ, Glorioso JC and **Mata M**. Therapeutic gene transfer with herpes-based vectors: studies with Parkinson's disease and motor nerve regeneration. *Experimental Neurology* 184(S1):19-24, 2003.
 7. Glorioso JC, **Mata M** and Fink DJ. Gene therapy for chronic pain. *Current Opinion in Molecular Therapy* 5:483-488, 2003.
 8. Glorioso JC, **Mata M** and Fink DJ. Exploiting the neurotherapeutic potential of peptides: targeted delivery using HSV vectors. *Expert Opinion on Biological Therapy* 3:1233-1239, 2003.
 9. **Mata M**, Glorioso JC and Fink DJ. Targeted gene delivery to the nervous system using herpes simplex virus vectors. *Physiology and Behavior* 77:483-488, 2003.
 10. Chattopadhyay M, Goss J, Wolfe D, Goins W, Huang S, Glorioso JC, **Mata M** and Fink DJ. Protective effect of Herpes simplex virus vector-mediated neurotrophin gene transfer in cisplatin neuropathy. *Brain* 127:929-939, 2004.
 11. **Mata M**, Glorioso JC and Fink DJ. Gene therapy: Novel treatments for polyneuropathy and chronic pain. *Current Neurology and Neuroscience Reports* 4:1-2, 2004.
 12. Goss JR, Natsume A, Wolfe D, **Mata M**, Glorioso JC and Fink DJ. Delivery of herpes simplex virus-based vectors to the nervous system. *Methods Mol Biol* 246:309-322, 2004.
 13. Liu J, Wolfe D, Hao S, Huang S, Glorioso JC, **Mata M** and Fink DJ. Peripherally delivered glutamic acid decarboxylase gene therapy for spinal cord injury pain. *Molecular Therapy* 10:57 2004.
 14. Puskovic V, Wolfe D, Goss J, Huang S, **Mata M**, Glorioso JC and Fink DJ. Prolonged biologically active transgene expression driven by HSV LAP2 in brain in vivo. *Molecular Therapy* 10:67, 2004.
 15. Hu J, **Mata M**, Hao S, Zhang G, and Fink DJ. Central sprouting of uninjured small fiber afferents in the adult spinal cord following spinal nerve ligation. *Eur J Neurosci* 20: 1705-12, 2004.
 16. Hao S, **Mata M**, Wolfe D, Glorioso JC, and Fink DJ. Gene transfer of GAD to DRG produces an antinociceptive effect in neuropathic pain. *Ann Neurol* 57 (6): 914-8, 2005. PMID: PMC1242042
 17. Chattopadhyay M., Wolfe D., **Mata M.**, Huang S., Glorioso J.C., and Fink DJ. Long-term neuroprotection achieved with latency-associated promoter-driven herpes simplex virus gene transfer to the peripheral nervous system. *Molecular Therapy* 2: 307-13, 2005.
 18. Chattopadhyay M, Krisky D, Wolfe D., Glorioso JC, **Mata M.** and Fink DJ. HSV-mediated gene transfer of vascular endothelial growth factor to dorsal root ganglia prevents diabetic neuropathy. *Gene Therapy* 12: 1377-84, 2005. PMID: PMC1242112
 19. Fink, D.J., Liu, J., Tai, C., DeGroat, W.C., **Mata, M.** Release of GABA from sensory neurons transduced with a GAD67-expressing vector occurs by non-vesicular mechanisms. *Brain Research* 1073-1074:297-304, 2006.
 20. Hao, S., **Mata, M.**, Glorioso, J., Fink, D. HSV-mediated expression of interleukin-4 in dorsal root ganglion neurons reduces neuropathic pain. *Molecular Pain* 2:6, 2006. PMID: PMC1395302
 21. **Mata, M.**, Chattopadhyay, M., Fink, D.J. Gene therapy for the treatment of sensory neuropathy. *Expert Opin. Biol. Ther.* 6: 499-507, 2006.
 22. Lee, John, Fink, D.J., **Mata, M.** Vector-mediated gene transfer to express inhibitory neurotransmitters in dorsal root ganglion reduces pain in a rodent model of lumbar radiculopathy. *Spine* 31:1555-1558, 2006.
 23. Peng, X.M., Zhou, Z., Glorioso, J.C., Fink, D.J., **Mata, M.** Tumor necrosis factor-alpha contributes to below-level neuropathic pain after spinal cord injury. *Ann Neurol.* 59(5):843-51, 2006.
 24. Wolfe, D., Hao, S., Hu, J., Srinivasan, R., Goss, J., **Mata, M.**, Fink, D.J., Glorioso, J.C. Engineering an endomorphin 2 gene for use in neuropathic pain therapy. *Pain* 133:29-38, 2007.
 25. Hao, S., **Mata, M.**, Glorioso, J.C., Fink, D.J. Gene transfer to interfere with TNF α signaling in neuropathic pain. *Gene Therapy* 14:1010-6, 2007.
 26. **Mata, M.**, Fink, D.J. Gene therapy for pain. *Anesthesiology* 106:1079-1080, 2007.
 27. Chattopadhyay, M, **Mata, M**, Goss, J, Wolfe, D, Huang, S, Glorioso, J, Fink, DJ. Prolonged preservation of nerve function in diabetic neuropathy in mice by HSV-mediated gene transfer. *Diabetologia* 50:1550-1558, 2007.
 28. Hao, S, **Mata, M**, Fink, D.J. Viral vector-based gene transfer for treatment of chronic pain. *Int Anesthesiol Clin.* 45:59-71, 2007.
 29. Zhou Z, Peng X, Hao S, Fink D, **Mata, M.** HSV-mediated transfer of interleukin-10 reduces inflammatory pain through modulation of membrane tumor necrosis factor alpha in spinal cord microglia. *Gene Therapy* 15:183-90, 2008. PMID: PMC2572752

30. **Mata, M.**, Hao, S., Fink, D. Applications of Gene Therapy to the Treatment of Chronic Pain. *Current Gene Therapy* 8:42-8, 2008.
31. Chattopadhyay, M., **Mata, M.** and Fink, D.J. Continuous delta opioid receptor activation reduces neuronal voltage gated sodium channel (Na_v1.7) levels through activation of protein kinase C in painful diabetic neuropathy. *Journal of Neuroscience* 28:6652-8, 2008
32. **Mata, M.**, Hao, S., Fink, D.J. Gene therapy directed at the neuroimmune component of chronic pain with particular attention to the role of TNF alpha. *Neuroscience Letters* 437:209-13, 2008. PMID: PMC2668118
33. **Mata, M.**, Chattopadhyay, M., Fink, D.J. Gene therapy for the treatment of diabetic neuropathy. *Current Diabetes Reports* 8:431-6, 2008.
34. Fink, D.J., **Mata, M.** HSV gene transfer in the treatment of chronic pain. *Acta Physiological Sinica* 60(5):610-6, 2008. PMID: PMC2586061
35. Cabanero, David, Celerier, Evelyn, Garcia-Nogales, Paula, **Mata, Marina**, Roques, Bernard, Maldonado, Rafeal, Puig, Margarita. The pro-nociceptive effects of remifentanyl or surgical injury in mice are associated with a decrease in delta-opioid receptor mRNA levels: Prevention of the nociceptive response by on-site delivery of enkephalins. *Pain* 141(1-2):88-96, 2008.
36. Hao, S., Wolfe, D., Glorioso, J.C., **Mata, M.** and Fink, D.J. Effects of transgene-mediated endomorphin-2 in inflammatory pain. *European Journal of Pain* 13:380-386, 2009. PMID: PMC2656597.
37. Chattopadhyay, M., Walter, C., **Mata, M.** and Fink, D.J. Neuroprotective effect of HSV-mediated gene transfer of erythropoietin in hyperglycemic DRG neurons. *Brain* 132(pt4):879-88, 2009.
38. Wolfe, D., **Mata, M.** and Fink D.J. A human trial of HSV mediated gene transfer for the treatment of chronic pain. *Gene Therapy* 16(4):455-60, 2009. PMID: PMC2683467
39. Wolfe, D., Wechuck, J., Krisky, D., **Mata, M.**, Fink, D.J. A human trial of gene therapy for chronic pain. *Pain Medicine*, in press.
40. Zhou, Z., Peng, X., Insolera, R., Fink, D.J., **Mata, M.** Interleukin-10 provides direct trophic support to neurons. *Journal of Neurochemistry*, in press.
41. Zhou, Z., Peng, X., Fink, D.J., **Mata, M.** HSV-mediated transfer of artemin overcomes myelin inhibition to improve outcome after spinal cord injury. *Molecular Therapy*, epub ahead of print.

C. Research Support

Ongoing Research Support

2P01 DK044935 (M Mata, Co-PI, DJ Fink, Co-PI) 08/06 – 07/11

University of Michigan Subcontract

NIH (University of Pittsburgh) (Joseph Glorioso, PI)

Model Systems for Development of Pain Gene Therapy

A series of studies to test the hypothesis that HSV-mediated gene transfer to the DRG will provide a novel yet practical therapeutic strategy for the treatment of painful diabetic neuropathy.

Role: Co-PI

VA Merit Review (DJ Fink, PI) 07/01/07 – 06/30/11

Dept of Veterans Affairs

Gene Therapy for Spinal Cord Injury Pain

This study test HSV gene transfer in a model of blunt trauma to the spinal cord.

Role: Co-Investigator

VA Merit Review (DJ Fink, PI) 07/01/07 – 06/30/11

Dept of Veterans Affairs

Gene Therapy for Cervical Spine Injury

This study test HSV gene transfer in a model of cervical spine trauma.

Role: Co-Investigator

NIH 5R01 NS038850 (DJ Fink, PI) 07/1/08 – 06/30/13

Gene Transfer for Prevention of Diabetic Neuropathy

This study investigates gene transfer of neurotrophic factors in diabetic neuropathy, including aims to develop and test regulatable vectors. There is overlap in the studies of regulatable vectors and if this grant is funded by the NIH we will negotiate the return of funds for overlapping experiments.

Role: Co-PI

JDRF (DJ Fink, PI)

03/01/08 – 02/28/11

Construction of a regulatable vector for treatment of diabetic neuropathy.

This study is focused on the development of a regulatable HSV vector for the treatment of diabetic neuropathy.

Role: Co-Investigator

Completed Research Support

Merit Review Grant (M Mata, PI)

03/05 - 02/09

Department of Veterans Affairs

Gene Transfer of Truncated NOGO Receptor for Spinal Cord Regeneration

This study uses transfer of a soluble NOGO receptor gene to study axonal regeneration in the central nervous system.

Role: PI

7 R01 NS044507 (DJ Fink, PI)

09/30/02 – 08/31/07

NIH/NINDS

Gene Therapy for Pain

This study explores the use of HSV-mediated transfer of proenkephalin in the treatment of pain in models of inflammatory pain, neuropathic pain, and pain due to cancer.

Role: Co-Investigator

7 R01 NS38850 (DJ Fink, PI)

09/30/98 – 07/31/07

NIH/NINDS

Gene Transfer for Prevention of Diabetic Neuropathy

This continuation study is designed to explore the use of HSV-mediated gene transfer in the prevention of diabetic neuropathy.

Role: Co-Investigator

JDF Research Grant (DJ Fink PI)

11/01/04 – 10/31/07

Juvenile Diabetes Research

Painful Diabetic Neuropathy

This study tests HSV gene transfer in the treatment of painful diabetic neuropathy.

Role: Co-Investigator

This grant was returned when 2P01 DK044935 with overlapping aims was funded.

7 R01 NS43247 (M Mata, PI)

03/15/03 – 02/28/08

NIH

Gene Transfer for Spinal Root Trauma

This study is designed to examine the effects of gene transfer on regeneration of nerve after crush injury.

Role: PI

Rehabilitation R&D Merit Review Grant (M Mata, PI)

03/05 - 02/08

Department of Veterans Affairs

Gene Transfer for Spinal Cord Trauma

This study will examine the restorative effects of transgene expression after blunt spinal cord injury.

Role: PI