

Curriculum Vitae WUSM Format – Jose A. Moron-Concepcion, Ph.D.

Date: 05/24/2016

Personal Information:

Sex: Male

Place of Birth: Madrid, Spain

Citizenship: US Citizen

Address and Telephone Numbers:

Department of Anesthesiology
Washington University Pain Center
Washington University School of Medicine

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Present Position:

Associate Professor (with Tenure)
Department of Anesthesiology
Department of Neuroscience
Washington University Pain Center
Washington University School of Medicine

Education:

09/1988-12/1993	B.S. in Biochemistry. Universidad Autonoma de Barcelona, Spain
07/1993-07/1994	M.S. in Biochemistry and Molecular Biology. Universidad Autonoma de Barcelona, Spain
08/1994-12/1998	Ph.D. in Biochemistry and Molecular Biology at the Department of Biochemistry and Molecular Biology, School of Medicine. Universidad Autonoma de Barcelona, Spain

PhD thesis title: “Characterization of new MAO inhibitors as potential therapeutic tools for depression”.

Mentor: Mercedes Unzeta, Ph.D.

Academic Positions/Employment:

01/1999-06/2001	Postdoctoral Scientist, Behavioral Neuroscience Branch, National Institute on Drug Abuse, National Institutes of Health, Baltimore
07/2001-06/2002	Postdoctoral Scientist, Department of Pharmacology, University of Texas Health Science Center at San Antonio, San Antonio

07/2002-09/2003	Neurology R&D Programme Manager. Neurological diseases Biomarker Team Leader, Proteomika S.L., Barcelona (Spain)
10/2003-11/2006	Research Instructor, Department of Pharmacology and Biological Chemistry. Mount Sinai School of Medicine, New York
12/2006-12/2009	Assistant Professor, Department of Pharmacology and Toxicology. University of Texas Medical Branch, Galveston
12/2009-06/2013	Assistant Professor of Clinical Anesthesiology, Department of Anesthesiology. Columbia University Medical Center, New York
07/2013-09/2015	Associate Professor, Department of Anesthesiology. Columbia University Medical Center, New York
10/2015-present	Associate Professor, with Tenure, Department of Anesthesiology, Department of Neuroscience, Washington University Pain Center, Washington University School of Medicine, St Louis

University and Hospital Appointments and Committees:

None

Medical Licensure and Board Certification:

None

Honors and Awards:

09/1993-07/1994	Erasmus Program Student from the European Community
08/1994-12/1998	Predoctoral Fellowship from the Comissionat per a Universitats i Recerca, Generalitat de Catalunya, Spain
01/1999-06/2001	Postdoctoral Visiting Fellowship from the National Institutes of Health, Bethesda, USA
12/2012	Elected to the American College of Neuropsychopharmacology

Editorial Responsibilities:

Journal of Neuroscience; PloS ONE; Journal of Neurochemistry; Hippocampus; Molecular Pharmacology; Brain Research; Drug and Alcohol Dependence; Neuropsychopharmacology; Psychopharmacology; European Journal of Neuroscience; British Journal of Pharmacology; Journal of Pharmacology and Experimental Therapeutics.

Professional Societies and Organizations:

American College of Neuropsychopharmacology (Associate Member; election is by nomination only)
Society for Neuroscience
International Narcotics Research Conference (Member of the Executive Committee from 2013-2016).
American Pain Society
National Hispanic Society of Neuroscience

Federal Review Committees:

Adhoc Member of NIDA/NIH Study Section for B/START awards ZDA 1-MXS-M from 2008-2010

Adhoc Member of NIDA/NIH Study Section Special Emphasis Panel (Medications Development for Substance related disorders) ZDA1 JXR-D (10) 07/2010

Member of NIDA/NIH Study Section for Cutting-Edge Basic Research Awards (CEBRA) ZDA1 SXC-E(11) 03/2012

Adhoc member of NIH Study Section NTRC (Neurotransporters, Receptors and Ca²⁺ Signaling) 06/ 2012, 02/2013

Adhoc member of NIH Study Section NMB (Neurobiology of Motivated Behavior) 10/2012

Regular member of NIH Study Section MNPS (Molecular Neuropharmacology and Signaling) September 2013-June 2017

Committee Responsibilities:National

2006-present Reviewer, National Student Research Forum

University of Texas Medical Branch-School

2008-Member, GSBS Admissions committee

University of Texas Medical Branch - Departmental

2007-2009 Co-chair, PHTO Admissions committee

2008-2009 Director of the Seminar Program

Columbia University Medical Center – Departmental

2010-2015 Chair, Mentoring Committee Basic Science Junior Faculty

Washington University in St Louis

2016 Program committee and judge for Postdoctoral Symposium.

Major Invited Professorships and Lectureships:

Bordeaux Institute of Neuroscience, France. March 2006

University of Texas Medical Branch, Galveston, TX. April 2006

University of Texas at San Antonio, TX. August 2007

Rosalind Franklin University, Chicago, IL. February 2008

Rush University, Chicago, IL. September 2008

Boston University Medical School, MA, March 2009

Mount Sinai School of Medicine, New York, NY, April 2009

Columbia University, New York, NY, April 2009

NIDA Intramural Research Program, Baltimore, March 2010

University of Pennsylvania, Philadelphia, June 2010

Universitat Autònoma de Barcelona, Spain, January 2011

Washington University, St. Louis, MO, March 2011

University of Texas Medical Branch, Galveston, TX, May 2011

University of Sherbrooke, Quebec, Canada, August 2011

Gallo Clinic and Research Center, UCSF, Emeryville, CA, October 2011
Johns Hopkins University, Baltimore, MD, January 2012
University of Texas Health Science Center, San Antonio, TX, April 2012
University of Arizona, Tucson, AZ, September 2012
Temple University, Philadelphia, PA, January 2013
Mount Sinai School of Medicine, New York, NY, February 2013
University of Massachusetts Medical School, Worcester, MA, September 2013
University of Miami, Miller School of Medicine, FL, February 2014
University of Michigan, Ann Arbor, March 2014
University of Maryland, Baltimore, June 2014
University of Kentucky, Lexington, September 2014
National Institute on Drug Abuse, Baltimore, March 2015
National Institute on Alcohol Abuse, Bethesda, May 2015
Vanderbilt University, Nashville, April 2016
University of Barcelona, Barcelona, June 2016
University of Valencia, Valencia, June 2016

Talks at Pharmaceutical Companies

Janssen Pharmaceutica, Beerse, Belgium. May 2005
Wyeth Pharmaceuticals, Princetown, NJ. April 2005

Consulting Relationships and Board Memberships:

None

Research Support:

Area of Research

Neuropsychopharmacology; mechanisms of action of opiates; neuroplasticity induced by opiates, interactions between opiate dependence and pain sensitivity; effects of chronic pain on motivated behavior; role of the periphery in pain mechanisms.

Current:

R01DA027460 (Moron-Concepcion) 07/01/2010-06/30/2016 3.6 calendar months
NIH/NINDS \$423,123 NCE

“AMPA Receptors: Common role in opiate withdrawal and pain sensitivity”.

Overall, these studies will provide insight into the neuroplasticity that may lead to novel approaches for pharmacotherapeutic intervention for pain treatment in opiate addicts.

Role: Principal Investigator

R21DA036826 (Moron-Concepcion) 06/01/2014-05/31/2017 1.35 calendar months
NIH/NINDS \$149,613

“Role for delta opioid receptor in morphine tolerance during chronic pain”.

In this application we propose that pretreatment with DOP antagonists or disruption of the MOP-DOP heteromer will result in an attenuation of the analgesic tolerance that develops after repeated morphine injections during chronic pain. We also propose that morphine-induced analgesic tolerance is mediated by increased DOP function and MOP-DOP heteromer abundance, which in turn reduces MOP-mediated inhibition of excitatory transmission.

Role: Principal Investigator

R21/R33DA041883 (Nelson, Dougherty, Moron-Concepcion) 1.8 calendar months
NIH/NIDA 04/01/2016-03/31/2021 \$125,000 years 1-2; \$250,000 years 3-5

“Using transgenic mice to examine the role of CNH3 variants in opioid dependence”

This application, submitted in response to RFA-DA-16-004, proposes to functionally validate genetic variants identified in a NIDA-funded R01 (DA17305; PI E. Nelson) in which GWAS analyses in a sample limited to opioid misusers tested the hypothesis that genetic polymorphisms influence progression from exposure to severe opioid dependence.

Role: co-Principal Investigator.

Mallinckrodt Institute of Radiology Pilot Grant Awards (Moron-Concepcion)

04/01/2016-03/31/2017

“Imaging dopamine in pain-addiction”

This application proposes using PET/CT imaging to visualize alterations in pain transmission in vivo during pain conditions.

Role: Principal Investigator

R21DA042581-01(Moron-Concepcion) 07/01/2016-06/30/2018 1.8 calendar months
NIH/NIDA *Cutting Edge Research Awards* \$125,000

“In vivo imaging of dynamic structural plasticity driving morphine conditioned place preference”.

In this proposal we will conduct *in vivo* imaging analyses in awake mice to elucidate the temporal dynamics of hippocampal dendritic spine remodeling and its relationship to the formation of drug-context associations that may play a role in the mechanisms underlying reinstatement of drug seeking. In addition we will implement novel virtual navigation approaches to examine hippocampal circuit dynamics during the formation of morphine-context associations.

Role: Principal Investigator.

Pending:

R01DA 041781-01 (Moron-Concepcion) 04/01/2016-03/31/2021 3.6 calendar months
NIH/NIDA \$470,770

“Dissecting circuits mediating pain-induced alterations in motivated behavior”.

This project will examine the neural and cellular mechanisms underlying the effects of pain on the motivation for natural reinforcers and opioids.

Role: Principal Investigator. 20 percentile, JIT submitted

R01DA042499-01 (Moron-Concepcion) 07/01/2016-06/30/2021 3.6 calendar months
NIH/NIDA \$250,000

“Role of SK2 Channels in Morphine Conditioning”.

The overall objectives are to uncover the cellular mechanisms underlying morphine-induced activation of SK2 channels, and to investigate how the activation of

hippocampal SK2 channels is integral for formation of morphine conditioned behavior (CPP) and its reinstatement.

Role: Principal Investigator

Completed:

NIH/NIDA 1R03DA023454-01; “PSD-protein expression in extinction of morphine-dependent conditioned behavior”; Principal Investigator, 07/01/2007-06/30/2008, \$50,000.

This project examine alterations in the expression profile of PSD proteins during the extinction of morphine-induced conditioned place preference.

Irving Institute for Clinical and Translational Research , Clinical Trials Office Pilot Award; “Glial inhibitors: Novel therapeutic tools for opioid abuse and pain”;

Principal Investigator, 07/01/2012-06/30/2013, \$50,000.

This project is conducted in collaboration with Dr Sandra Comer from the Dept Psychiatry at Columbia. The main goal of the project is to characterize the role of glial inhibitors on the abuse liability of opiates in the presence of chronic pain.

NIH/NIDA 1R01DA025036; “Mechanisms underlying opiate-induced neuroplasticity at the synapse”; Principal Investigator, 01/01/2009-11/30/2013, \$1,320,000.

This project examines the role of AMPA and NMDA receptors in the neuroadaptations in response to morphine administration.

Skin Disease Research Center/Department of Dermatology Pilot Grant Award, Pilot and Feasibility Study Program, Columbia University; “Characterization and identification of AMPA receptors in the skin”. Principal Investigator. 07/01/2013-06/30/2014, \$25,000

This project will identify and characterize the expression of AMPA glutamate receptors in keratinocytes and their implication in the adverse effects of opioid treatments such as itch and hyperalgesia. This project will be conducted in collaboration with Drs Ellen Lumpkin and David Owens from the Dept Dermatology at Columbia.

Patents:

None

Teaching Experience and Responsibilities:

University of Texas Medical Branch

a. Teaching:

Graduate School

2007-2009 PHTO 6212 – Autonomic Cardiovascular and CNS Pharmacology

2007- PHTO 6223 – Neuropharmacology

b. Students/Mentees/Advisees/Trainees:

Post-doctoral fellows:

Sophie Grimond-Billa, Ph.D., 03/2007 – 01/2010

Sri Rayja Rudrabhatla, Ph.D., 06/2008 – 11/2009

Nicole Bjorklund, Ph.D. 01/2008 – 01/2010

Undergraduate students:

Mary Eldhart, 05-08/2007 (SURP Program)

Columbia University Medical Center

a. Teaching:

CA2 Anesthesiology residents

2010-present ABA-Basic Pharmacology of Opioids

Pain Medicine Fellows

2010-2015 Basic Research in Pain Medicine

2011-2015 New Advances in Pain Research

b. Former and Current Research Fellows

Post-doctoral fellows:

Yan Xia, PhD	12/2009-01/2011
George Portugal, Ph.D	07/2010-05/2013
David Cabanero Ferri, DVM, PhD	05/2010-07/2014
Lucia Hipolito, Ph.D	08/2011-08/2014
Zara Melyan, Ph.D	12/2010-2015
Amanda Fakira, Ph.D	02/2011-2015
Adrianne Wilson-Poe, Ph.D	10/2014-present
Nicolas Massaly, Ph.D	11/2014-present

Clinical Faculty

Anis Dizdarevic, M.D. 01/2012-2015

Dr Dizdarevic is a clinical faculty at the Pain Center at Columbia. We are conducting a collaborative project about the use of delta-opioid receptor ligands to prevent morphine-induced analgesic tolerance in animal chronic pain models.

Residents and Fellows

Takeshi Irie, MD, PhD	06/2012-January 2013 (Anesthesia Resident)
Kristoff Padjen, MD, PhD	09/2012-2015 (Pain Fellow)

Medical Students

Elaine Zhong	03/2013-2014 (second year Columbia medical student)
Blake Butler	06/2014-2015 (third year Columbia medical student)

Undergraduate Students:

Claudia Chauvet	04-06/2011
Brianna Carussillo	05/2011-01/ 2012
Arthur Avakian	06/2012-06-2013
Jose Gonzalez	06/2012-08/2014
Alexandra Berman	06/2013-09/2015
Rebecca Blandon	05/2013-08/2013
Katherine Lopez	05/2014-09/2015

Washington University School of Medicine

b. Former and Current Research Fellows

Post-doctoral fellows

Adrienne Wilson-Poe, Ph.D	10/2015-present
Nicolas Massaly, Ph.D	10/2015-present
Marta Celorrio, Ph.D	02/2016-present
Sidney Williams, PhD.	06/2016-present

Graduate Students:

Tamara Markovic (Neuroscience)	04/2016-present
Hannah Frye (Neuroscience)	04/2016-present

Residents and Fellows

Nicholas Gregory, MD, PhD	10/2015-present
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Undergraduate Students:

Kristine Yoon	01/2016-present
Mathew Bredder	01/2016-present
Will Post	01/2016-present

Technicians:

Chris Trousdale, Bsc	01/2016-present
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Thesis Committees:

Samantha White, PhD candidate, University of Pennsylvania. Advisor: Dr Christopher Pierce. Thesis defense: June 21, 2013 (external committee member).

Daniel Christofell, PhD candidate, Mount Sinai School of Medicine. Advisor: Dr Scott Russo. Thesis defense: August 14, 2013 (external committee member)

Sam Golden, PhD candidate, Mount Sinai School of Medicine. Advisor: Dr Scott Russo. Thesis defense: September 26, 2014 (external committee member)

Bibliography:

A. ARTICLES IN PEER-REVIEWED JOURNALS:

(*) Indicates senior authorship

1) M.Valoti, J.A. Morón, G.P. Sgaragli and M. Unzeta. "Evidence of a coupled mechanism between monoamine oxidase and peroxidase in the metabolism of tyramine in rat intestinal mitochondria". Biochemical Pharmacology (1998) 55: 37-43.

2) J.A. Morón, V. Perez, E. Fernandez-Alvarez, J.L. Marco and M. Unzeta. "In vitro effects of some 5-hydroxy-indolealkylamine derivatives on monoamine uptake systems". Journal of Neural Transmission (1998) [suppl] 52: 343-349.

- 3) J.A. Morón, V. Pérez, E. Fernández-Alvarez, J.L. Marco and M. Unzeta. "New 2-[(5-methoxy-1-methylindolyl)]alkylamine derivatives: the effect of branching and elongation of the side chain on MAO inhibition". *Journal . Enzyme Inhibition* (1998) 13: 237-251
- 4) J.A Morón, V. Pérez, M. Pastó, J.M. Lizcano and M. Unzeta. "Effects of a new MAO-A inhibitor, FA70, on monoamine metabolism in mice brain cortex". *Journal of Pharmacology and Experimental Therapeutics* (2000) 292:788-794.
- 5) J.A. Morón, M. Campillo, V. Pérez, M. Unzeta and L. Pardo. "Molecular determinants of MAO selectivity in a series of indolealkylamine derivatives: biological activities, 3D-QSAR/CoMFA analysis and computational simulation of ligand recognition". *Journal of Medicinal Chemistry* (2000) 43: 1684-1691.
- 6) V. Perez, J.A. Moron, M. Pasto and M. Unzeta. "Neuroprotective aspects of a novel MAO-B inhibitor PF9601N". *Neurobiology* 2000;8(3-4):231-6.
- 7) V. Chefer, J.A. Morón, B. Hope, W. Rea and T. S. Shippenberg. "Kappa opioid receptor activation prevents alterations in mesocortical dopamine neurotransmission that occur during abstinence from cocaine". *Neuroscience* (2000) 101(3):619-627.
- 8) L. Daws, P. Callaghan, J.A. Morón, K. Kahlig, T. Shippenberg, J. Javitch and A. Galli. "Cocaine increases dopamine uptake and cell surface expression of dopamine transporters". *Biochemical and Biophysical Research Communications* (2002) 290: 1545-1550.
- 9) J.A. Morón, L. Carvelli, K. Kahlig, J. Ferrer, N. Sen, J. Lechleiter, L. Leeb-Lundberg, G. Merrill, E. Lafer, L. Ballou, T. Shippenberg, J. Javitch, R. Lin and A. Galli. "PI 3-kinase regulation of dopamine uptake". *Journal of Neurochemistry* (2002) 81: 859-869.
- 10) J. A. Morón, A. Brockington, R. Wise, B. Rocha and B. Hope. " Dopamine uptake through the NET in brain regions with low levels of the DAT: Evidence from knockout mouse lines". *Journal of Neuroscience* (2002) 22(2):389-395
- 11) J. A. Morón, I. Zakharova, J. Ferrer, G. Mirrel, B. Hope, E. Lafer, Z. Lin, J. Wang, J. Javitch, A. Galli and T. Shippenberg. "Mitogen-Activated Protein Kinase regulates dopamine transporter surface expression and dopamine transport capacity". *Journal of Neuroscience* (2003) 23: 8480-8488.
- 12) B. Garcia, Y. Wei, J.A. Morón, R. Lin, J.A. Javitch, A. Galli. "AKT is essential for insulin modulation of amphetamine-induced human dopamine transporter cell surface redistribution". *Molecular Pharmacology* (2005) 68: 102-109.
- 13) V. Chefer, T. Czyzyk, E. Bolan, J. Morón, J. Pintar, T. Shippenberg. "Endogenous kappa opioid receptor systems regulate mesoaccumbal dopamine dynamics and vulnerability to cocaine". *Journal of Neuroscience* (2005) 25: 5029-5037.

- 14) J.A. Morón, Abul-Husn NS, Rozenfeld R, Dolios G, Wang R, Devi LA. "Morphine administration alters the profile of hippocampal postsynaptic density-associated proteins: A proteomic study focusing on endocytic proteins". *Mol Cell Proteomics*. (2007) 6: 29-42.
- 15) J.A. Morón and L.A. Devi. "Use of proteomics for the identification of novel drug targets in brain diseases". *J Neurochem* (2007) 102(2):306-15.
- 16) N.S. Abul-Husn, I. Bushlin, J.A. Morón, S. Jenkins, G. Dolios, R. Wang, R. Iyengar, A. Ma'ayan, and L.A. Devi. "Systems approach to explore components and interactions in the presynapse". *Proteomics* (2009) 9:3303-3315.
- 17) S. Billa, N. Sinha, S. Rudrabhatla, and J.A. Morón. "Extinction of morphine-dependent conditioned behavior is associated with increased phosphorylation of the GluR1 subunit of AMPA receptors at hippocampal synapses". *European Journal of Neuroscience* (2009) 29:55-64. (*)
- 18) J.A. Morón, S. Gullapalli, C. Taylor, A. Gupta, I. Gomes and L.A. Devi. "Modulation of opiate-related signaling molecules in morphine-dependent conditioned behavior: conditioned place preference to morphine induces CREB phosphorylation". *Neuropsychopharmacology* (2010) 35(4):955-966.
- 19) J.A. Morón and T. A. Green. "Exploring the molecular basis of addiction: Drug-induced neuroadaptations". *Neuropsychopharmacology* (2010) 35(1): 337-338. (*)
- 20) S. Billa, J. Liu, N. Bjorklund, N. Sinha, Y. Fu, P. Shinnick-Gallagher, and J.A. Morón. "Increased insertion of GluR2-lacking receptors at hippocampal synapses upon repeated morphine administration". *Molecular Pharmacology* (2010) 77:874-883 [Epub ahead of print Feb 16]. (*)
- 21) S. Billa, Y. Xia J.A. Morón. "Disruption of morphine CPP by delta-2-opioid receptor antagonist: study of mu- and delta-opioid receptor expression at hippocampal synapses" *European Journal of Neuroscience* (2010) 32:625-631[Epub ahead of print July 19]. (*)
- 22) Y. Xia, G. Portugal, A. Fakira, Z. Melyan, R. Neve, HT Lee, S. Russo, J. Liu, J.A. Morón. "Hippocampal GluA1-containing AMPA receptors mediate context-dependent sensitization to morphine". *Journal of Neuroscience* (2011) 3(45):16279-16291. (*)
- 23) T. Leung , Y. Lu , M. Yan, J.A. Morón-Concepcion, S.C. Ward, X. Ge , L. Conde de la Rosa. Nieto N. "Argininosuccinate synthase conditions the response to acute and chronic ethanol-induced liver injury in mice". *Hepatology*. (2012) 55(5):1596-609.
- 24) D. Cabanero, S. Zhou, A. Baker, Z. Melyan, S. Carlton and J.A. Morón. "Pain after discontinuation of morphine treatment is associated with synaptic increase of GluA4-

containing AMPAR in the dorsal horn of the spinal cord". *Neuropsychopharmacology* (2013) 38(8):1472-84. (*)

25) D. Hogan, A. Baker, J. A. Morón, Susan M. Carlton. "Systemic morphine treatment induces changes in firing patterns and responses of nociceptive afferent fibers in mouse glabrous skin". *Pain* (2013) Nov: 154(11):2297-309.

26) A. Fakira, G. Portugal, B. Carusillo, Z. Melyan, and J.A. Morón. "Increased SK channel-NMDAR mediated negative feedback on NMDA receptors impairs synaptic plasticity following context-dependent sensitization to morphine". *Biological Psychiatry* (2014) 75(2): 105-114. (*)

27) Portugal GS, Al-Hasani R, Fakira AK, Gonzalez-Romero JL, Melyan Z, McCall JG, Bruchas MR, Morón JA.. "Hippocampal Long-Term Potentiation Is Disrupted during Expression and Extinction But Is Restored after Reinstatement of Morphine Place Preference" *J Neurosci*. 2014 Jan 8;34(2):527-38. (*)

28) C. Cahill, A. Taylor, C. Cook, E. Ong, J.A. Morón, C. Evans. "Does kappa opioid receptor system contribute to pain aversion?" *Frontiers in Pharmacology* (2014) 5:253.

29) E. Gallo, M. Salling, J. Javitch, J.A. Morón, N. Harrison, C. Kellendonk. "Upregulation of dopamine D2 receptors in the nucleus accumbens indirect pathway increases locomotion but does not reduce alcohol consumption." *Neuropsychopharmacology*, 2015 June 40(7):1609-18.

30) H. Beaudry, L. Gendron, and J.A. Morón. "Implication of DOP2 but not DOP1 in development of morphine analgesic tolerance in a rat model of chronic inflammatory pain " *Eur J Neurosci*. 2015 Apr;41(7):901-7. (*)

31) L. Hipolito, A. Fakira, D. Cabanero, R. Blandon, S. Carlton, J.A. Morón. Z. Melyan. "In vivo activation of the SK channel in the spinal cord reduces the NMDAR antagonist dose needed to produce antinociception in an inflammatory pain model". *Pain* 2015 May 156(5):849-58.

32) Stockton SD Jr, Gomes I, Liu T, Moraje C, Hipólito L, Jones MR, Ma'ayan A, Morón JA, Li H, Devi LA."". *Mol Cell Proteomics*. 2015 Oct;14(10):2564-76.

33) Elliot C. Nelson, Arpana Agrawal, Andrew C. Heath, Richard Sherva, Bo Zhang, Ream Al-Hasani, Michael R. Bruchas, Yi-Ling Chou, Amanda K. Fakira, Lindsay A. Farrer, Alison Goate, Scott Gordon, Anjali K. Henders, Victor Hesselbrock, Manav Kapoor, Michael T. Lynskey, Pamela A.F. Madden, J.A. Morón, John P. Rice, Nancy L. Saccone, Sibylle G. Schwab, Fiona L. Shand, Alexandre A. Todorov, Leanne Wallace, Ting Wang, Naomi Wray, Xin Zhou, Louisa Degenhardt, Nicholas G. Martin, Henry R. Kranzler, Joel Gelernter, Laura J. Bierut, David J. Clark, and Grant W. Montgomery. "A genome-wide association study provides evidence of *CNIH3* involvement in opioid dependence". *Molecular Psychiatry* 2015, Aug 4. doi: 10.1038/mp.2015.102. [Epub

ahead of print]

34) L. Hipolito, A. Wilson-Poe, Y. Campus-Jurado, E. Zhong, J. Gonzalez-Romero, L. Virag, R. Whittington, S. Comer, S. Carlton, B. Walker, M. Bruchas and J.A. Morón. "Inflammatory pain promotes increased opioid self-administration: role of dysregulated ventral tegmental area mu opioid receptors". *Journal of Neuroscience* 2015 Sept 2:35(35): 12217-12231 (*)

35) J. Moreno, P. Miranda-Azpiazu, A. Garcia-Bea, Y. Younkin, M. Cui, A. Kozlenkov, A. Ben-Ezra, G. Voloudakis, A. Fakira, L. Baki, Y. Ge, A. Georgakopoulos, J.A. Morón, G. Milligan, J. Lopez-Gimenez, N. Robakis, D. Logothetis, J. Meana, J. Gonzalez-Maeso. "Mechanistic insights into the allosteric crosstalk between mGlu2 and 5-HT2A receptors acting as an altered heteromer in schizophrenia". *Science Signaling* 2016 Jan 12;9(410).

36) A. Fakira, N. Massaly, O. Cohensedgh, A. Berman, J.A. Morón. "Morphine-associated contextual cues induce structural plasticity in hippocampal CA1 pyramidal neurons" *Neuropsychopharmacology*. 2016 (In Press) (*)

37) D. Cabanero, T. Irie, Z. Melyan, L. Hipolito, D. Owens, S. Carlton, F. Rice, and J.A. Morón. "Expression and characterization of AMPA receptors in epidermal keratinocytes: Implications for itch and pain responses in primary afferents". *In preparation*.

B. OTHER:

Proceedings and Symposia

1. Annual Meeting of the Spanish Society of Toxicology. "Proteomic analysis of morphine addiction". March 2005. Logrono, Spain (invited speaker)
2. Annual Experimental Biology Meeting. "Neuroproteomics of Drug Addiction". April 2006, San Francisco, USA (invited speaker).
3. International Narcotics Research Conference. "Changes in the presynaptic active zone and PSD proteins during chronic morphine". July 2006, Minnesota, USA (invited speaker).
4. College on Problems on Drug Dependence. "Mechanisms of morphine-induced neuroplasticity at the synapse". June 2008. San Juan, Puerto Rico (invited speaker).
5. International Narcotics Research Conference. "Context-dependent behavioral sensitization to morphine alters hippocampal neuroplasticity". June 2011. Hollywood, Florida (invited speaker).

6. American Pain Society. "Targeting of spinal GluA2-lacking AMPA receptors abolishes morphine-induced hyperalgesia". May 2012, Honolulu, Hawaii (invited speaker).
7. Eastern Pain Association Annual Meeting. "Molecular mechanisms underlying opiate dependence and opiate-induced hyperalgesia". December 2012, New York (invited speaker).
8. Winter Brain Research Conference. "AMPA receptors and addiction: the chicken or the egg". January 2013, Colorado (panel Chair).
9. International Narcotics Research Conference. "AMPA receptors in the spinal cord mediate morphine-induced hyperalgesia". July 2013, Cairns, Australia (invited speaker).
10. American Pain Society. "Novel mechanisms of opioid-induced hyperalgesia: A focus in the periphery". May 2014, Tampa, Florida (invited speaker).
11. International Narcotics Research Conference. "New technologies in Drug Addiction". July 2014, Montreal, Canada. Discussion Leader.
12. American Society of Pharmacology and Experimental Therapeutics meeting. "Chronic inflammatory pain increases opioid intake through a accumbal mechanism". March 2015, Boston (invited speaker).
13. Spring Pain meeting. "Effect of pain on the reward pathway and drug intake". May 2015. Palm Springs, California (invited speaker).
14. American Pain Society. "GluA4 containing AMPAR are expressed in epidermal keratinocytes: A possible role in chronic itch and painful conditions". May 2015, Palm Springs, California (invited speaker).
15. Winter Brain Research Conference. "Opioid-induced neuroplasticity in the brain". January 2016, Colorado (invited speaker).
16. Winter Brain Research Conference. "Kappa opioid receptors mediate the effect of pain on motivated behavior". January 2016, Colorado (invited speaker).
17. Pain Mechanisms and Therapeutics Conference. "Effects of pain on the reward pathway". June 2016, Sicily (panel Chair).
18. International Narcotics Research Conference. "Inflammatory pain affects opioid intake and associated motivated behavior" July 2016, Bath, UK.

Book Chapters

- 1) J.A. Morón & L.A. Devi. "Kappa opioid peptide receptor" In: xPharm (Bylund, D. and Enna, S. eds.) Elsevier Science, Inc. New York, (2005) Varia (online modules, CDs)

Abstracts

(*) Indicates senior authorship

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