CURRICULUM VITAE

# Adelina Holguin, PhD

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**EDUCATION**

PhD, 2006 University of Colorado, Boulder

Psychology Department & The Center for Neuroscience

Doctoral project: Characterization of the temporo-spatial effects of

chronic bilateral intrahippocampal cannulae on interleukin-1β.

MA, 2002 University of Colorado, Boulder

Psychology Department & The Center for Neuroscience

Master’s project: HIV-1gp120 stimulates proinflammatory cytokine-

mediated pain facilitation via activation of nitric oxide synthase.

BS, 1998 University of Texas, El Paso

Bachelors of Science in Psychology, minor in Biology

**PROFESSIONAL EXPERIENCE/ POSITIONS**

TEACHING POSTDOCTORAL FELLOW

University of Texas at El Paso, HHMI PERSIST: Program to Educate and Retain Students in STEM Tracks, El Paso, Texas

ADJUNCT FACULTY

Excelsior College, Sergeants Major Academy, Fort Bliss, El Paso, Texas

SENIOR RESEARCH ASSOCIATE

University of Nebraska at Lincoln Nebraska Center for Virology, Lincoln, Nebraska

POSTDOCTORAL RESEARCH FELLOW

University of Nebraska Medical Center, Center for Neurovirology and Neurodegenerative Disorders, Omaha and Nebraska Center for Virology, Lincoln, Nebraska

**TEACHING EXPERIENCE**

08/2014 – present Teaching Postdoctoral Fellow for HHMI PERSIST

University of Texas, El Paso

* Developed curriculum for first-year entering students.
* Implemented active learning pedagogical approaches using SCALE-UPfacilities and technology.
* Collaborating with NIH BUILDing Scholars program to develop curriculum that include multidisciplinary concepts.

02/2016 – present Adjunct Faculty

Excelsior College, Sergeants Major Academy, Fort Bliss, El Paso, TX

* Quantitative Statistics Masters course
* Psychology of Learning
* BioPsychology
* Human Motivation

Spring 2004 – Spring 2005 Instructor for the Colorado Diversity Initiative in STEM

[NIH-HHMI Scholars Program].

University of Colorado, Boulder, CO

Fall 2003 – Spring& Fall 2004 Behavioral Neuroscience laboratory

University of Colorado at Boulder, Boulder, CO

Spring 2003 Introduction to Biopsychology

University of Colorado at Boulder, Boulder, CO

Spring & Fall 2002 General Statistics

University of Colorado at Boulder, Boulder, CO

Fall 2001 Learning and Memory Laboratory

University of Colorado at Boulder, Boulder, CO

Spring 2000 Sensation and Perception Laboratory

University of Colorado at Boulder, Boulder, CO

Fall 1999 Introduction to Psychology

University of Colorado at Boulder, Boulder, CO

**RESEARCH EXPERIENCE**

8/2007 – 8/2012 Senior Research Associate

Nebraska Center for Virology, University of Nebraska, Lincoln

* Directed a NeuroAIDS project in Zambia, Africa
* Established the first immunohistochemistry laboratory in the Pathology Department

at the University Teaching Hospital, Zambia Africa.

* Assisted in the preparation of an NIH R01 neuropathogenesis of subtype C HIV grant.

05/2006 – 08/2007 Postdoctoral Research Fellow

University of Nebraska Medical Center, Center for Neurovirology

and Neurodegenerative Disorders, Omaha and Nebraska Center

for Virology, Lincoln, Nebraska

* Investigated the viral efficacy of subtype B and C HIV strains in a murine model.
* Collaborated in projects that examined adjunctive treatments in HIV replication.
* Established memory and learning tasks to assess HIV associated dementia using

a murine model.

**RECENT PROCEEDINGS**

**Holguin, A.,** and Olimpo, J. (2017) Evidence-based Practices for Integration of Group Work into Interdisciplinary Learning Environments. Conference of Higher Education Pedagogy, Virginia Tech, Blacksburg, VA

**PROFESSIONAL DEVELOPMENT**

Sept, 2015 Maximizing Active Learning with a Technology-Enhance Active Learning (TEAL) Classroom workshop. The Teaching Academy

New Mexico State University, Las Cruces, NM

June, 2015 Student-Centered Active Learning Environment for Upside-down

Pedagogies (SCALE-UP) workshop. University of Texas, El Paso

May, 2015 NRMN Facilitating Mentor and Mentee Training Workshop, Kroc

Institute for Peace and Justice. University of San Diego, California

April, 2015 Developing Research Intensive Courses Workshop

University of Texas, El Paso

April, 2015 12th International Sun Conference on Teaching and Learning.

University of Texas, El Paso

Aug, 2014 – present Center for Faculty Leadership and Development

University of Texas, El Paso

**BOOK / BOOK CHAPTERS**

**Holguin, A.,** (2017) The Novel Researcher: What You Need to Know Before Doing Research. Cognella, *Preliminary Edition, in press*

**Holguin, A**., Tully, D., Wood, C. (2012) The impact of HIV subtype, cultural, and sociodemographic factors on HIV-1 infection and associated neuropathogenesis in Africa. The Neurology of AIDS, 3rd Ed., Gendelman, HE., Grant, I., Everall, IP., Lipton SA., Swindells, S., (Eds), Oxford University Press, NY. p.1087-1098.

**Holguin, A**., Reynolds, A., Kadiu, I., Gendelman, H.E. (2007) HIV, the mononuclear phagocyte, and the CNS. In HIV and the Macrophage, Herbein, G. (Ed.), Transworld Research Network. p1-39.

**PUBLICATIONS**

1. **Holguin A,** Banda M.,Willen E., Imasiku M., Malama C., Chiyenu K., Mudenda VC.,

Wood C. (2011) HIV-1 Effects on Neuropsychological Performance in a Resource-

Limited Country, Zambia. **AIDS and Behavior**, 15: 1895-1901

2. Gorantla S., Makarov E., Finke-Dwyer J., Castanedo A., **Holguin A**., Gebhart, C.,

Gendelman H.E., and Poluektova L. (2010) Links between progressive HIV-1 infection of

humanized mice and viral neuropathogenesis. ***American Journal of Pathology,*** 177 (6):

2938-2949

3. Gorantla S., Liu J, Wang T., **Holguin A**., Sneller H., Dou H., Kipnis J., Poluektova L.,

and Gendelman H.E. (2008) Modulation of innate immunity by copolymer-I leads to

neuroprotection in murine HIV-1 encephalitis. ***Glia***, 56 (2): 223-32.

4. Gorantla S., Liu J., Sneller H., Dou H., **Holguin, A**., Smith L., Ikezu, T., Volsky, D.J.,

Poluektova, L., and Gendelman, H.E. (2007) Co-polymer-1 induces adaptive immune

anti-inflammatory glial and neuroprotective responses in a murine model of HIV-1

encephalitis. ***J of Immunology.,*** 179(7): 4345-56.

5. **Holguin A**, Frank MG, BiedenKapp JC, Nelson K , Lippert D, Watkins LR, Rudy, JW,

Maier SF. (2007) Characterization of the temporo-spatial effects of chronic bilateral

intrahippocampal cannulae on interleukin-1β. ***J Neurosci Methods.,*** 161 (2): 265-272.

6. O’Connor KA, **Holguin A**, Hansen MK, Maier SF, Watkins LR (2004). A method for

measuring multiple cytokines from small samples. ***Brain. Behav. Immun***., May, 18:

274-80.

7. **Holguin A**, Biedenkapp J, Campisi J, Wieseler-Frank J, O’Connor K, Milligan E.D.,

Maksimova E, Bravmann, C., Hansen, M.K., Martin D, Flesher M, Maier S.F., and

Watkins L.R., (2004). HIV-1 gp120 stimulates proinflammatory cytokines mediated pain

facilitation via activation of nitric oxide synthase –1(nNOS). ***Pain***, 110: 517-530

8. Milligan ED, O’Connor KA, Nguyen KT, Armstrong CB, Twinning C, Gaykema R,

**Holguin A**, Martin D, Maier SF, Watkins LR (2002). Intrathecal HIV-1 envelope

glycoprotein gp120 enhanced pain states mediated by spinal cord proinflammatory

cytokines. ***Journal of Neuroscience***, 21: 280-2819

**AWARDS**

2017 –present BRAINS Fellow: The Brain Research through Advancing Innovative

Neurotechnologies, National Institute of Health

1999 – 2000 University of Colorado at Boulder Graduate School Fellowship. University

of Colorado at Boulder, Boulder, CO

2000 – 2001 National Institute of Health Minority Fellowship University of Colorado at

Boulder, Boulder, CO

2004 – 2006 Alliances for Graduate Education and the Professoriate Fellowship

University of Colorado at Boulder, CO

2006 – 2008 Ruth L. Kirschstein NRSA from the National Institute of Allergy and

Infectious Diseases, University of Nebraska at Lincoln, Lincoln, NE

2009 – 2011 Fogarty ARRA Supplement for U.S. Global Health Postdoctoral Scientist

Support, National Institute of Health

2008 – 2011 Loan Repayment program, Health Disparities related research program

National Institute of Health

**SERVICE**

**Professional**

* Reviewer for travel awards and presentation abstract submissions to SACNAS: Society for the Advancement of Chicanos and Native Americans in Science
* Invited reviewer to the Journal of Neurobehavioral HIV Medicine
* Invited to prepare grant proposal for the Medical Education Partnership Initiative Linked Award to help establish the first Clinical Neurology and Neuroscience PhD program in Zambia, Africa.

**Community**

* Member of El Paso Council of the Blind – full-sited member. El Paso, Texas

**RESEARCH SKILLS**

* In vitro – murine model

HIV viral growth stocks; Human monocyte-derived macrophages; Reverse transcriptase activity assays

* In vivo - murine model

HIV brain inoculations in severe combined immunodeficient mice; T cell adoptive transfers; Harvested and isolated bone marrow macrophages (CB.17 mouse); Developed behavioral task to test both spatial and cue learning in HIV-infected

SCID mice

* Small Animal Surgery

Intrahippocampal cannulae implants; Intrahippocampal electrolytic lesions; Intrathecal catheterization

* Small Animal Brain Dissections & Tissue Collection

Experience in anesthesia procedure; Performed paraformaldehyde and saline perfusions; Microtome and cryostat slicing

* Administration of Pharmacological and Bacterial Agents

Brain microinfusions; Intraperitoneal injections; Subcutaneous injections *E. coli* culture preparation; Lipopolysaccaride dosing

* Cellular and Molecular Techniques

Immunohistochemistry; Enzyme-linked immunosorbent Assays; Histological Tissue

Preparation; Polymerase Chain Reaction (PCR); Reverse Transcriptase (RT); Quantitative RT-PCR

* Behavioral Tasks

Learning & Memory Tasks; Contextual Fear Conditioning; Morris Water Maze; Eight

Arm Radial Maze; Passive/Avoidance Task

**PROFESSIONAL MEMBERSHIPS**

* Society for the Advancement of Chicanos and Native Americans in Science

**REFERENCES**

Amber O’Neil, Ph.D.

Faculty Program Director

Psychology

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7 Columbia College

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