

Jeniffer Concepción-Acevedo, Ph.D.

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EDUCATION

- Ph.D. in Microbiology** Amherst, MA
Department of Microbiology at the University of Massachusetts, Amherst 08/07 – 01/13
- Dissertation: Spatiotemporal localization of mitochondrial DNA polymerases in *Trypanosoma brucei*
 - Research Advisor: Dr. Michele M. Klingbeil
- B.S. in Biology** Mayagüez, PR
Department of Biology at the University of Puerto Rico, Mayagüez 08/01 – 12/05

EXPERIENCE

EMORY UNIVERSITY, ATLANTA, GA

Researcher, Rollins School of Public Health, 07/13 – present

Support clinical and basic research on *Streptococcus pneumoniae*. Investigate the mechanism by which different pneumococcus serotypes form biofilm on human nasopharynx cells.

UNIVERSITY OF MASSACHUSETTS, AMHERST, MA

Graduate Student Researcher, Department of Microbiology, 08/07 – 01/13

Developed innovative molecular biology assays to study the mechanisms of mitochondrial DNA replication in trypanosomes. Performed microbiology science work such as monitoring, culturing, and detecting bacterial and parasitic pathogens. Trained over 30 students and visiting scientist to perform molecular assays such as molecular cloning, gel electrophoresis, Western Blot, PCR and RT-PCR, and to operate in a biological safety level 2 environment. Analyzed complex laboratory data using the Prism statistical software program and developed functional Excel spreadsheets for processing large amounts of data. Wrote three scientific papers in peer reviewed journals including one selected as the cover illustration for the journal, *Eukaryotic Cell*. Communicated scientific findings in over 12 national research conferences and delivered oral presentations to audiences of up to 100 people. Taught pathogenic bacteriology and medical microbiology laboratory courses to a group of ~30 students. Managed general laboratory activities such as: (1) preparing the laboratory for environmental health and safety inspections, (2) monitoring and disposing hazardous substances, and (3) organizing laboratory meetings.

Post-Baccalaureate Researcher, Department of Microbiology, 08/06 – 07/07

Supported scientific research on the parasitic pathogen *Trypanosoma brucei*. Implemented molecular biology assays such as real-time PCR and immunofluorescence microscopy to characterize potential drug targets against trypanosomes. Worked independently and collaboratively in the process of data interpretation and analysis. Managed multiple projects concurrently and developed standard-operating laboratory procedures. Wrote reports on scientific investigations and presented reports at weekly laboratory meetings. Maintained electronic records of research data and experimental results in organized databases using Excel.

AMGEN MANUFACTURING LIMITED, JUNCOS, PR

Manufacturing Associate I, 01/06 – 07/06

Conducted daily manufacturing operations in collaboration with a cross-functional team and documented production activities following good manufacturing practice (cGMP). Performed aseptic processing operations in a clean-room environment. Operated production equipment such as autoclave, centrifuge, incubator and pH conductivity meter and trained other associates as required. Completed paperwork for each task: cleaning procedures, aseptic processing techniques, Good Manufacturing Practices (GMP) and laboratory safety practices. Complied with ethical, legal, and proprietary regulations affecting biotechnology research.

SKILLS AND QUALIFICATIONS

Techniques: Polymerase Chain Reaction (PCR), RT-PCR, DNA isolation, SDS-PAGE, Western Blot, Purification of Protein Complexes, Molecular Cloning, Fluorescent Microscopy, Cell Culture, RNA interference and Gel Electrophoresis (Protein, DNA and RNA)

Software: Sequencher, GraphPad Prism, Microsoft Office (Excel, PowerPoint and Word), Adobe Photoshop, Image J, OpenLab, Spot Imaging Solution, MxPro Quantitative PCR software and EndNote

PUBLICATIONS

2013

Concepción-Acevedo, J, Boucher, M and Klingbeil MM. Localization of mitochondrial DNA polymerase IC during *Trypanosoma brucei* cell cycle. (May 2013, Accepted in the journal of Molecular Biology of the Cell).

Benmerzouga, I, Concepción-Acevedo, J, Kim, H, Vandoros, AV, Cross, GAM, Klingbeil, MK, Li, B. *Trypanosoma brucei* Orc1 is essential for nuclear DNA replication and affects both *VSG* silencing and *VSG* switching. *Molecular Microbiology*, 87: 196–210.

2012

Concepción-Acevedo, J, Luo, J, and Klingbeil MM. Dynamic localization of *Trypanosoma brucei* mitochondrial DNA polymerase ID. *Eukaryotic Cell*, 11, 844-855.

- **Featured as the cover image of the *Eukaryotic Cell* journal: July 2012**
- **Broadcasted on National Public Radio**

HONORS AND AWARDS

2012. Recipient of the 2012 Curt Thorne "Carry On" Award: Amherst, MA – Selected among 40 microbiology graduate students for exemplary research achievements, leadership and service to the University of Massachusetts, Amherst (\$500).

2011-2008. Northeast Alliance for Graduate Education and the Professoriate Fellowship: Amherst, MA– Awarded to talented underrepresented minority students in doctoral programs in science, technology, engineering, and mathematic (STEM) disciplines (\$22,000 per year).

2010. Optical Microscopy and Imaging in the Biomedical Sciences Course: Marine Biological Laboratory at Woods Hole, MA – One of the 20 students selected from more than 200 applicants.

2009. Society for Chicanos/Latinos and Native Americans in Science National Conference Travel Grant: Dallas, TX – Selected to deliver an oral presentation (\$600).

2008. American Society for Microbiology 108th General Meeting Travel Grant: Boston, MA – Selected among 160 students based on the impact of the study to the field of parasitology (\$500).

2005. Puerto Rico Louis- Stokes Alliance for Minority Participation (PR-LSAMP) fellowship: Mayagüez, PR – A one-year fellowship for outstanding undergraduate researchers (\$2,000).

2004. Research Experience and Training Opportunities (RETO) fellowship: Mayagüez, PR – Fellowship from the Howard Hughes Medical Institute awarded to undergraduate researchers (\$800).

TEACHING

Graduate Teaching Assistant, Department of Microbiology at the University of Massachusetts, Amherst

- Spring 2010: Introduction to Medical Microbiology Laboratory. Taught aseptic technique, light microscopy, and the isolation and identification of pathogenic microorganisms to a group of ~20 undergraduate nursing major students.
- Fall 2009: Pathogenic Bacteriology Laboratory. Taught a group of ~30 students how to culture, diagnose and isolate different pathogenic bacteria.

Guest Lecturer, Department of Microbiology at the University of Massachusetts, Amherst

- Spring 2008: Parasitology. Prepared educational material and taught a group of ~20 students about the cellular biology of trypanosomes.

Professional Development Workshop, University of Massachusetts, Amherst

- Summer 2008-2011: “How to put together an oral and poster presentation.” Developed and directed an annual workshop focused on scientific communication for a diverse and multidisciplinary group of students that participated of summer research programs.

ACTIVITIES AND SERVICE

Volunteer

AID Atlanta- Summer 2013 - present

Support the needs of the HIV/AIDS community including improving health literacy, outreach, counseling and HIV testing.

Boston Living Center- Fall 2013

Worked at a non-profit resource center to support the needs of homeless veterans and HIV positive individuals including meal preparation and health communication.

Outreach

Member of the Northeast Alliance (NEA) Graduate Students Peer Mentoring Group- 2008-2012

University of Massachusetts, Amherst

Advised NEA students in the selection of graduate courses and research laboratories based on student's academic and professional goals.

Member of the Undergraduate Mentoring Program “Each One Reach One” - 2011-2012

University of Massachusetts, Amherst

Mentored over 10 undergraduate students on graduate education opportunities, the application process and how to benefit from university resources.

Community Outreach Event Organizer - 2009.

University of Massachusetts, Amherst and the Springfield Renaissance School

Coordinated the visit of 110 high school students from the Springfield Renaissance School to research laboratories at the University of Massachusetts, Amherst exposing students to science research and a variety of scientific careers.

Leadership

Member of the Organizing Committee of the 18th New England Association of Parasitology Meeting- 2010

University of Massachusetts, Amherst

Coordinated multiple aspects of the conference logistics. Evaluated abstracts selected for poster and oral presentations and coordinated keynote speaker visit. Attendance rate increased 50%.

Graduate Student Representative for the Molecular Geneticist Search Committee - 2009

University of Massachusetts, Department of Microbiology

Evaluated the work experience and credentials of over 100 applicants and assisted in the interview and selection process that resulted in the recruitment of Dr. Kevin Griffith.

PRESENTATIONS

Oral Presentations

2012. Concepción, J. Analysis of the spatiotemporal localization of mitochondrial DNA polymerases in *Trypanosoma brucei*. UMass Department of Microbiology. Amherst, MA. (Doctoral defense)

2010. Concepción, J., Luo, J and Klingbeil, M. *Trypanosoma brucei* mitochondrial DNA polymerase ID has a cell cycle dependent localization. New England Association of Parasitology Annual Meeting

2009. Concepción, J., Laitinen, K and Klingbeil, M. *Trypanosoma brucei* mitochondrial DNA polymerase IC behaves as a stable component of the tripartite attachment complex. SACNAS National Meeting. Dallas, TX.

2008. Concepcion, J., and Klingbeil, M. *Trypanosoma brucei* Mitochondrial DNA Polymerases, a Complex Story. UMass Department of Microbiology Seminar. Amherst, MA.

Invited Speaker

- 2011.** Concepción, J. New tricks for replicating *Trypanosoma brucei* mitochondrial DNA. UMass Department of Microbiology Retreat. Amherst, MA. (Keynote speaker)
- 2008.** Concepción, J., Laitinen, K, and Klingbeil, M. Mitochondrial DNA polymerase replication complexes from *Trypanosoma brucei*. ASM 108th General Meeting. Boston, MA.

Poster Presentations

- 2012.** Concepción, J., Luo, J, Chepa-Lotrea, X, Boucher, M, Tran, A, and Klingbeil, M. Lord of the rings: Three Pols to Rule the all. UMass Department of Microbiology Retreat, Amherst, MA.
- 2011.** Concepción, J., Luo, J and Klingbeil, M. Dynamic localization of mitochondrial DNA polymerases in *Trypanosoma brucei*. Kinetoplastid Molecular and Cell Biology Meeting IV, Woods Hole, MA.
- 2010.** Concepción, J., Luo, J and Klingbeil, M. *Trypanosoma brucei* mitochondrial DNA polymerase ID has a cell cycle dependent localization. Molecular Parasitology Meeting XX. Woods Hole, MA.
- 2010.** Bruhn, DB, Concepción, J., Luo, J and Klingbeil, M. RNA interference reveals mitochondrial DNA replication as a new target for combating African Sleeping Sickness. Department of Microbiology Retreat, Amherst, MA.
- 2009.** Concepción, J., Laitinen, K and Klingbeil, M. Purification of *Trypanosoma brucei* mitochondrial DNA polymerase complexes using Tandem Affinity Purification. Kinetoplastid Molecular and Cell Biology Meeting III, Woods Hole, MA.
- 2009.** Bruhn, DB, Concepción, J., Luo, J, De, Ajanta, and Klingbeil, M. Dividing the kDNA workload amounts six mitochondrial DNA polymerases. Department of Microbiology Retreat, Amherst MA.
- 2008.** Concepción, J., Laitinen, K, Sarmiento, R and Klingbeil, M. Analyses of *Trypanosoma brucei* mitochondrial DNA polymerases complexes. Molecular Parasitology Meeting XIX. Woods Hole, MA.
- 2007.** Concepción, J., Laitinen, K, Sarmiento, R and Klingbeil, M. Characterization of Mitochondrial DNA Polymerase Complexes in *Trypanosoma brucei*. Molecular Parasitology Meeting XVIII. Woods Hole, MA.

Panelist

- 2011.** "How to develop your future". Louis Stroke Alliance for Minority Participation outreach event. UMass, Amherst.
- 2010.** Raising awareness and encouraging the pursuit of post-secondary education. Center for Multicultural Advancement and Student Success. UMass Amherst, MA.
- 2010.** "No stupid questions". North East Alliance for the Graduate and the Professoriate Summer Program for Undergraduate Research and Post-baccalaureate Research Education Program event. UMass, Amherst, MA.
- 2006.** "Research anyone" Northeast Alliance for the Graduate and the Professoriate event. UMass Amherst, MA.

PROFESSIONAL AFFILIATIONS

American Society for Microbiology, 2006 – present.

University of Massachusetts Microbiology Graduate Student Group, 2006-2012 (**2009-2010- Secretary**)

Society for the Advancement of Chicanos/Latinos and Native American in Science, 2006 – present (**2008-2009-**

Vice-President of the University of Massachusetts, Amherst SACNAS Chapter)

American Association for the Advancement of Science, 2007– present.

LANGUAGES

Fluent in English and Spanish