

JUDITH HELENA PRIETO

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CURRENT POSITION

Aug 2017-present Associate Professor, Chemistry Department, Western Connecticut State university
Aug 2012-present Assistant Professor, Chemistry Department, Western Connecticut State University

PREVIOUS POSITIONS

Jan 2011-Aug 2012 Alexander von Humboldt fellow at Giessen University, 35392, Giessen, Germany
Sept 2009-Dec 2010 Scientist. Alexion Pharmaceuticals Inc. 352 Knotter Dr, Cheshire, CT 06518, USA
May 2005- Sept 2009 Postdoctoral Associate, Yates Laboratory, The Scripps Research Institute, La Jolla, CA, USA

EDUCATION

2005 PhD., Chemistry
Department of Chemistry and Biochemistry, University of California, San Diego
Advisor: Dr. Elizabeth A. Komives
Project: Correlations Between Dynamic Motions and Function in Thrombomodulin as it interacts with Thrombin
2001 Masters of Science, Chemistry
Department of Chemistry and Biochemistry, University of California, San Diego
1999 Bachelors of Science, Chemistry
Departamento de Química, Universidad del Valle, Cali, Colombia.

HONORS, AWARDS & FUNDING:

2017 AAUP Research Grant
2017 Faculty development award
2015 Faculty development award
2015 Committee for Professional Opportunities for Women travel award to present at the Biophysical Society meeting
2014 Minority Retention award
2014 Mini-grant for flipping the classroom
2014 AAUP Research Grant
2014 Faculty development award
2013 AAUP Research Grant
2013 Faculty development award
2012 Minority Recruitment and Retention award
2011 Alexander von Humboldt Fellowship
2007 DAAD short term visit fellowship

INVITED TALKS:

- Prieto, JH.** Seminar series at Universidad del Valle. "APOPTOSIS EN EL PARÁSITO CAUSANTE DE LA MALARIA Y EL PAPEL DEL CITOCROMO C", July 2016
- Prieto, JH.** Seminar series at Chemistry Department at Ursinus College, PA. "Programmed cell death pathway of the malaria parasite and the role of cytochrome C", September 2014
- Prieto, JH.** ACS Northeast Regional Meeting Talk. "Programmed cell death pathway of the malaria parasite and the role of cytochrome C", October 2013
- Prieto, JH.** Induction ceremony National Society for Collegiate Scholars. "Experience abroad: how to get out of your comfort zone" November 2013
- Prieto JH.** COST Meeting. "Quantitative proteomics of the malaria parasite" Corsica 2007.

UN-REFERRED PUBLICATIONS

- JH Prieto.** The Binding of Methylene Blue to *Plasmodium falciparum* Glutathione Reductase. 2017, BIOPHYSICAL JOURNAL 112 (3), 351a
- S Lim, **JH Prieto.** Glutathione Reductase of Plasmodium Falciparum as an Antimalarial Drug Target of Methylene Blue. BIOPHYSICAL JOURNAL 2015, 108 (2), 55a-56a
- JH Prieto.** Putative programmed cell death pathway of the malaria parasite and the role of cytochrome c PROTEIN SCIENCE 2014, 23 (Supplem 1):40
- JH Prieto.** Putative programmed cell death pathway of the malaria parasite and the role of cytochrome c Finneran P., Darinzo N., BIOPHYSICS JOURNAL 2014, 106 (2):595a-596a
- JH Prieto, K Becker, J Yates, SK Park.** Autophagy or apoptosis in the malaria parasite. ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY 243, 2012
- JH Prieto, E Chen, E Anderson, E Swenson, N Bergman, P Hanna.** Proteomic analysis of anthrax-infected macrophages. MOLECULAR & CELLULAR PROTEOMICS 2006 5 (10), S49-S49
- JH Prieto, A Becvar, B., Sampoli-Benitez, W Matthew, EA Komives.** Dynamic studies of the EGF-like domains of thrombomodulin. PROTEIN SCIENCE 2004 13, 162-162
- JH Prieto, BA Sampoli, M Wood, EA Komives.** Dynamic studies of the EGF-like domains of thrombomoduli. BIOPHYSICAL JOURNAL 2002, 82 (1), 138A-138A

PUBLICATIONS

- Wang L, Delahunty C, Fritz-Wolf K, Rahlfs S, **Prieto JH**, Yates JR, and Becker K. Characterization of the 26S proteasome network in *Plasmodium falciparum*. Scientific Reports. 2015 Dec 7;5:17818
- Prieto JH**, Fischer E, Koncarevic S, Yates J, Becker K. Large-scale differential proteome analysis in Plasmodium falciparum under drug treatment. Methods Mol Biol. 2015;1201: 269-79.
- Talman AM, **Prieto JH**, Marques S, Ubaida-Mohien C, Lawniczak M, Wass MN, Xu T, Frank R, Ecker A, Stanway RS, Krishna S, Sternberg MJE, Christophides GK, Graham DR, Dinglasan RR, Yates JR, Sinden RE. Proteomic analysis of the Plasmodium male gamete reveals the key role for glycolysis in flagellar motility. Malaria Journal 2014, 13 (1):315
- Wang L, Delahunty C, **Prieto JH**, Rahlfs S, Jortzik E, Yates III JR, Becker K. Protein S-nitrosylation in Plasmodium falciparum. Antioxid Redox Signal. 2014, 20(8):2923-2395
- Wass MN, Stanway R, Blagborough AM, Lal K, **Prieto JH**, Raine D, Sternberg MJ, Talman AM, Tomley F, Yates J, Sinden RE. Proteomic analysis of Plasmodium in

- the mosquito: progress and pitfalls. *Parasitology*. 2012 Aug;139(9):1131-45.
- Röseler A, **Prieto JH**, Iozef R, Hecker B, Schirmer H, Külzer S, Przyborski J, Rahlfs S, Becker K. Insight into the selenoproteome of the malaria parasite *Plasmodium falciparum*. *Antioxid Redox Signal*, 2012, Jan 9 doi:10.1089/ars.2011.4276.
- Nebel T, **Prieto JH**, Kapp E, Smith B, Yates JR, Cowman A, Tonkin C. Quantitative in vivo analyses reveal calcium-dependent phosphorylation sites and identifies a novel component of the Toxoplasma invasion motor complex. *Plos Pathogens* 2011 Sep;7(9):e1002222.
- Guttman M, **Prieto JH**, Handel TM, Domaille PJ, Komives EA. Structure of the minimal interface between ApoE and LRP. *J Mol Biol*. 2010 Apr 30;398(2):306-19
- Guttman M, **Prieto JH**, Croy JE, Komives EA. Decoding of lipoprotein - receptor interactions; Properties of ligand binding modules governing interactions with ApoE. *Biochemistry*. 2010 Feb 16;49(6):1207-16.
- Lal K, Bromley E, Oakes R, **Prieto JH**, Sanderson SJ, Kurian D, Hunt L, Yates JR 3rd, Wastling JM, Sinden RE, Tomley FM. Proteomic comparison of four Eimeria tenella life-cycle stages: unsporulated oocyst, sporulated oocyst, sporozoite and second-generation merozoite. *Proteomics*. 2009 Oct;9(19):4566-76.
- Koncarevic S, Rohrbach P, Deponete M, Krohne G, **Prieto JH**, Yates J 3rd, Rahlfs S, Becker K. The malarial parasite Plasmodium falciparum imports the human protein peroxiredoxin 2 for peroxide detoxification. *Proc Natl Acad Sci U S A*. 2009 Aug 11;106(32):13323-8.
- Lal K, Bromley E, **Prieto JH**, Sanderson SJ, Yates JR, Wastling JM, Tomley FM, Sinden RE. Characterisation of *plasmodium* invasive organelles; an ookinete microneme proteome. *Proteomics*. 2009 Mar;9(5):1142-51.
- Prieto JH**, Koncarevic S, Park SK, Yates JR and Becker K. Differential proteome analysis in *Plasmodium falciparum* under drug treatment using stable isotope labelling, fractionation and multidimensional protein identification technology. *PLoS One*. 2008;3(12):e4098.
- Sanderson SJ, Xia D, **Prieto JH**, Yates JR, Heiges M, Kissinger J, Tomley F, Bromley E, Sinden R, Kalpana L, Wastling JM. Determining the protein repertoire of *Cryptosporidium parvum* sporozoites: a multidirectional approach. *Proteomics*. 2008, 8: 1398-1414.
- Xia D, Sanderson SJ, Jones AR, **Prieto JH**, Yates JR, Bromley E, Tomley FM, Lal K, Sinden RE, Brunk B, Roos D, Wastling JM. The Proteome of *Toxoplasma gondii*: Insights into Gene Expression and Annotation. *Genome Biology* 2008, 9, R:116
- Prieto JH**, Sampoli Benitez BA, Melacini G, Johnson DA, Wood MJ, Komives EA. Dynamics of the fragment of thrombomodulin containing the fourth and fifth epidermal growth factor-like domains correlate with function. *Biochemistry*. 2005 Feb1;44(4):1225-33.
- Wood MJ, Becvar LA, **Prieto JH**, Melacini G, Komives EA. NMR structures reveal how oxidation inactivates thrombomodulin. *Biochemistry*. 2003 Oct 21;42(41):11932 -42.
- Prieto JH**, Benitez R, Quintero G, Socrates H. Clearance time determination of sulphadoxine and pyrimethamine in plasma from *Aotus lemurinus* monkeys by high performance liquid chromatography. *Revista Colombiana de Quimica*. 2001, **30**, No1.

UNDERGRADUATE PRESENTATIONS AND POSTERS

- **Western Research Day 2017**

Co-author of *five posters* presented at the American Chemical Society Meeting with research students

Sumra Akhlaq

“Cloning of *Plasmodium falciparum*'s Dihydrofolate Reductase Mutants”

Provost poster award

Doneisha Coleman

“EXPRESSION AND PURIFICATION OF DIPEPTIDYLAMINOPEPTIDASE”

Robert Mownn

” Study of Glutathione Reductase/Methylene Blue interaction using HDX”

M. Hazal Yilmaz

“Cytochrome c's role in apoptosis of *P. falciparum*”

Carolyn Vazquez and Zena Wright

“Quantitative proteomic analysis of malaria parasite treated with chloroquine”

- **American Chemical Society April 2017**

Co-author of *three posters* presented at the American Chemical Society Meeting with research students

Sumra Akhlaq

“Characterization of Malaria DHFR Mutants”

Doneisha Coleman

“Expression and Purification of DPAP-1”

Robert Mownn

“Expression and Purification of Glutathione Reductase of *Plasmodium falciparum*. An Antimalarial Drug Target of Methylene Blue (MB)”

- **Western Research Day 2015**

Co-author of *four posters* presented at the American Chemical Society Meeting with research students

Socheata Lim

“The Binding of Methylene Blue to *Plasmodium falciparum* Glutathione Reductase”

Provost poster award and winner of Sigma Xi Research Award

Erick Orozco

“The role of cytochrome c and its effects on the programmed cell death pathway of *P. falciparum* using yeast as a model organism”

Amrita Bains

“Expression and purification of DPAP-1, a malaria protease, and its role in the putative programmed cell death pathway of the parasite”

Sarah Castro

“Cloning, expression, and purification of *PfSHMT*”

- **Northeast Regional SigmaXi Meeting 2015**

Co-author of *five posters* presented at the American Chemical Society Meeting with research students

Karen Anderson

“Kinetics of *Plasmodium falciparum*'s dihydrofolate reductase mutations from pyrimethamine treatment”

Amrita Bains

“Expression and purification of DPAP-1, a malaria protease, and its role in the putative apoptosis pathway of the parasite”

Sarah Castro

“Cloning of *Plasmodium falciparum*'s folate pathway enzyme, SHMT”

Socheata Lim

“Hydrogen deuterium exchange used to study the interface of *Plasmodium falciparum* glutathione reductase and the antimalarial drug methylene blue”

Erick Orozco

“The role of cytochrome c and its effects on the programmed cell death pathway of *P. falciparum*, using yeast as a model organism”

- **American Chemical Society March 2015**

Co-author of *three posters* presented at the American Chemical Society Meeting with research students

Amrita Bains

“Expression and purification of DPAP-1, a malaria protease, and its role in the putative apoptosis pathway of the parasite”

Socheata Lim

“Hydrogen deuterium exchange used to study the interface of *Plasmodium falciparum* glutathione reductase and the antimalarial drug methylene blue”

Erick Orozco

“Role of cytochrome c and its effects on the programmed cell death pathway of *P. falciparum* using yeast as a model organism”

- **Biophysical Society February 2015**

Co-author of **one poster** presented at the Biophysical Society Meeting with Research Student Socheata Lim

“Gluthathione Reducatse of Plasmodium falciparum as an antimalarial drug target of methylene blue”

CPOW travel award and educational travel award

- **Western Research Day 2014**

Co-author of *five posters* presented at WRD with research students

Patrick Finneran

“The role of Cytochrome C in the Programmed Cell Death Pathway of the Malaria Parasite. A Comparison with Yeast Apoptosis Pathway”

First place Provost poster award and winner of Sigma Xi Research Award

Nicholas Darinzo

“Expression and Purification of *Plasmodium falciparum* Cytochrome c”

Carlos Menjivar

“Cloning, expression, and purification of Plasmodium falciparum serine-hydroxymethyltransferase”

Socheata Lim

“Expression and purification of glutathione reductase of *Plasmodium falciparum* as an antimalarial drug target”

Juliann Simma and Lydia Walter

“Proteases as triggers of apoptosis in the malaria parasite”

- **American Chemical Society March 2014**

Co-author of *two posters* presented at the American Chemical Society Meeting with research students

Carlos Menjivar

“Cloning, expression, and purification of *Plasmodium falciparum* serine hydroxymethyltransferase (SHMT)”

Nicholas Darinzo

“Cytochrome *c*'s role in the programmed cell death pathway of the malaria parasite”

Co-author of *undergraduate student talk* at the American Chemical Society presented by

Patrick Finneran

“Role of cytochrome *c* in the programmed cell death pathway of the malaria parasite: A comparison with yeast apoptosis pathway”

- **Western Research Day 2013**

Co-author of *two posters* presented at WRD with research students

Patrick Finneran

“Screening of Inhibitors For a Protease in the Malaria Parasite Using Fluorescence Spectroscopy”

Thaiani Paca

“Protein expression to study programmed cell death, apoptosis, in the malaria parasite”

TEACHING EXPERIENCE

Instructor

Survey of Chemistry I and II

General Chemistry I

Concepts in Chemistry

Biochemistry I

Biochemistry II

Biochemistry Lab

Co-Instructor

Topics on Molecular Biology and genetical variation.

Topics on Cell Biology.

Special Topics in Biochemistry.

Practical Course of Biochemistry II.

Affiliations

American Chemical Society, Biophysical Society, Sigma Xi.