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PERSONAL INFORMATION

Nationality: Colombian
Marital Status: Single
Languages: Spanish (native), English (advanced), French (beginner), Swedish (beginner)
<http://mesguerra.net>

EDUCATION

Post-Doctoral Researcher - Karolinska Institutet (current)
Ph.D. in Chemistry - Rutgers, The State University of New Jersey (2010)
Chemist - Universidad Nacional de Colombia (2000)

High School:
9th Grade – 11th Grade Gimnasio Moderno - Bogotá, Colombia
9th Grade Sevier County High School - Sevierville, TN, USA
Elementary School:
8th Grade Pi Beta Phi Elementary School - Gatlinburg, TN, USA
Montessori (Kindergarden) – 7th Grade Gimnasio Moderno - Bogotá, Colombia

AWARDS

Chemistry 171 Teaching Excellence Award. Department of Chemistry and Chemical Biology, Rutgers, The State University of New Jersey. 2003-2004.

MEMBERSHIPS

American Chemical Society member. 2006-Present.

PROFESSIONAL EXPERIENCE

- Academic Monitor for the course, Synthesis of Heterocyclic Compounds, for Pharmaceutical Chemistry Students at Universidad Nacional de Colombia.(1998).
- Academic Monitor for the course, Organic Synthesis, for Chemistry Students at Universidad Nacional de Colombia.(1998)
- Patent Engineer for the law firm Baker & Mackenzie (i.e. patent preparation for filling and submitting to the Colombian Superintendence of Industry and Commerce). (May – August 2000)
- Lab and recitation Teaching Assistant at Universidad de los Andes. (August 2000 – February 2001)
- Guide elaboration for the course "Prelude to the Sciences", Physics module, prepared for the Faculty of Sciences at Universidad de los Andes. (June – July 2001)
- Course instructor for "Prelude to the Sciences", Physics module, Faculty of Sciences at Universidad de los Andes. (June26 – July19 2001)
- Patent advisor for the law firm Alvaro Castellanos y Cia. (September 2001 – July 2002)
- Course instructor for "Prelude to the Sciences", Physics module, Faculty of Sciences at Universidad de los Andes. (Summer 2002, Summer2003)
- Teaching assistant for Introduction to Chemical Experimentation lab at Rutgers, The State University of New Jersey. (Fall 2003, Fall 2004, Fall 2006)
- Teaching assistant for General Chemistry at Rutgers, The State University of New Jersey. (Spring 2004, Spring 2005, Fall 2005)
- Teaching assistant for Principles of Quantitative Biology, Rutgers, The State University of New Jersey. (Fall 2009)

CONFERENCES / SCHOOLS

- Second Latin-American Course on Parallelism and High Performance Computing, Merida, Venezuela (December 3-7 2001).
- A.C.S. Mid-Atlantic Regional Meeting, Piscataway, NJ (May 22-25, 2005).

- Rutgers-UMDNJ Molecular Biophysics Minisymposium, Piscataway, NJ. (May 6, 2005).
- Rutgers-UMDNJ Molecular Biophysics Minisymposium, Piscataway, NJ. (May 5, 2006).
- NSBP and NSHP Annual Conference, Boston, MA. (2007)
- Rutgers-UMDNJ Molecular Biophysics Minisymposium, Piscataway, NJ. (May 4, 2007).
- IMA Workshop: RNA in Biology, Bioengineering and Nanotechnology, Minneapolis, MN. (October 29 - November 2, 2007).
- Rutgers-UMDNJ Molecular Biophysics Minisymposium, Piscataway, NJ. (May 6, 2008).
- 5th Annual ROC Meeting, Madison, WI. (May 25-26, 2009).
- The 16th Conversation in Biomolecular Dynamics and Structure, Albany, NY. (June 16-20, 2009).
- Molecular Simulation and Structure Prediction using CHARMM and the MMTSB Tool Set, San Diego, CA. (August 4-7, 2009).

POSTERS

- Clustering RNA non-A-type dinucleotide conformations using the base-step parameter space, NSBP & NSHP, Boston, MA. 2007.
- Rutgers-UMDNJ Molecular Biophysics Minisymposium, Piscataway, NJ. 2007.
- RNA Dinucleotide Step Parameters, IMA Workshop, Minneapolis, MN. 2007.
- Rutgers-UMDNJ Molecular Biophysics Minisymposium, Piscataway, NJ. 2008.
- Sequence-dependent Deformability of RNA Helical Regions. What We Have Learned So Far, The 16th Conversation in Biomolecular Structure and Dynamics, Albany, NY. 2009.
- Automated Detection of GNRA Tetraloop Prevalance Using 3DNA and Python, MARMACS, Wilmington, Delaware. 2010.

PUBLICATIONS

- New information content in RNA base pairing deduced from quantitative analysis of high-resolution structures, *Methods*, **47**, 177-186, (2009), Wilma K. Olson, Mauricio Esguerra, Yurong Xin, Xiang-Jun Lu.
- Sequence-dependent deformability of RNA helical regions. What we have learned so far, *Journal of Biomolecular Structure and Dynamics*, **26**, 832, (2009), Mauricio Esguerra N., Wilma K. Olson.