

Mauricio Esguerra

Mobile (+46) 73 6785334

Lab (+46) 18 4715056

mauricio.esguerra@gmail.com

mesguerra.org

Home Address

Sollentunavägen 155, Lgh. 1302

191 48 Sollentuna

Sverige

PERSONAL INFORMATION

Nationality: Colombian

Marital Status: Single

Languages: Spanish (advanced), English (advanced), Swedish (SFI D), French (beginner)

RESEARCH

Post-doctoral Researcher - Uppsala Universitet (current)

Carl-Tryggers Fellow - Uppsala Universitet (2015)

Post-Doctoral Fellow - Karolinska Institutet (2013)

EDUCATION

Ph.D. in Chemistry - Rutgers, The State University of New Jersey (2010)

Chemist - Universidad Nacional de Colombia (2000)

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, Fall 2008)

- Teaching assistant for General Chemistry at Rutgers, The State University of New Jersey. (Spring 2004, Spring 2005, Fall 2005)

- Teaching assistant for Physical Chemistry of Biochemical Systems, Rutgers, The State University of New Jersey. (Spring 2009)
- Teaching assistant for Principles of Quantitative Biology, Rutgers, The State University of New Jersey. (Fall 2009)
- Co-lecturer, Principles of Nucleic Acid Structure, Karolinska Institute Doctoral Course 2430 (Spring 2011, Spring 2012, Spring 2014)

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 (RNA Ontology Consortium) 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).
- The 17th Conversation in Biomolecular Dynamics and Structure, Albany, NY. (June 14-18, 2011).
- Biennial ISQBP President's Meeting. Challenges in Biomolecular Modeling – From QM to Coarse-Graining, Stockholm, Sweden (17-20 June, 2012).
- 244th American Chemical Society National Meeting and Exposition, Philadelphia, PA. (2012).
- 6th International Theoretical Biophysics Symposium, Gothenburg, Sweden (June 24-27, 2013).
- Selected talk. Glisten Budapest 2014 Conference, New features for GPCR modeling implemented on GPCR-MODSYM and PYMEMDYN, Budapest, Hungary (October 3, 2014).
- Glisten Meeting on GPCR's at Actelion Pharmaceuticals, Allschwill, Switzerland (April 1-2, 2015).
- Ribosome Structure and Function 2016, Strasbourg, France (July 6-10, 2016)

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.
- RNA STEPS, and online database of sequence-dependent deformability of RNA helical regions, The 17th Conversation in Biomolecular Structure and Dynamics, Albany, NY. 2011.
- The DNA Triplex and the bis-LNA construct, 244th American Chemical Society National Meeting and Exposition, Philadelphia, PA. 2012.
- gpcr-modsim.org: A one-stop shop for sequence homology and molecular dynamics modeling, Glisten GPCR Meeting, Basel, Switzerland, 2015.

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.
- Triple helical DNA in a duplex context and base pair opening, *Nucleic Acids Research*, **42**, 11329, (2014), Mauricio Esguerra N., Lennart Nilsson, and Alessandra Villa.
- GPCR-ModSim: A comprehensive web based solution for modeling G-protein coupled receptors, *Nucleic Acids Research*, **44** W455-W462 ,(2016), Mauricio Esguerra N., Alexey Siretskiy, Xabier Bello, Jessica Sallander, Hugo Gutiérrez de Terán.
- The bisLNA construct: A promising path in antigene technology, *In preparation*, Mauricio Esguerra N., Lennart Nilsson.
- A close-up view of codon selection in eukaryotic initiation, *RNA Biology*, **14**, 815, (2017), Christoffer Lind, Mauricio Esguerra, Johan Åqvist.