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ACADEMIC POSITIONS, FORMAL EDUCATION

- Assistant Professor, Department of Chemistry, Univ of Virginia (Sep-2008 → present)
- Research Assistant Professor, Department of Chemistry, Univ of Virginia (Jan-2008 → Aug-2008)
- Postdoctoral Fellow in Computational Biology, Univ of California, San Diego (Oct-2002 → Dec-2007)
Advisor: Prof. J. Andrew McCammon, Department of Chemistry & Biochemistry; Investigator, HHMI;
Joseph E. Mayer Professor of Theoretical Chemistry; Distinguished Professor of Pharmacology
Funding: Sloan/DOE Postdoctoral Fellowship in Computational Molecular Biology
- Postdoctoral Research Associate in Structural Biology, UCLA (May-2002 → Oct-2002)
Advisor: Prof. David Eisenberg, UCLA-DOE Institute for Genomics & Proteomics; Investigator, HHMI
Paul D. Boyer Professor of Molecular Biology; Distinguished Professor of Biological Chemistry
- Ph.D. in Biochemistry & Molecular Biology, UCLA (Sep-1996 → May-2002)
Thesis: “The Structures, Functions, & Evolution of Sm-like Archaeal Proteins (SmAPs)”
Advisor: Prof. David Eisenberg, Department of Chemistry & Biochemistry; Investigator, HHMI
Funding: NSF Graduate Research Fellowship; UCLA Dissertation Year Fellowship
- B.S. in Chemistry, with Highest Honors, Georgia Institute of Technology (Sep-1992 → Mar-1996)
Advisor: Prof. Loren D. Williams, School of Chemistry & Biochemistry

SCIENTIFIC AWARDS, HONORS (chronological)

Dean's List & Faculty Honors (Georgia Tech, 1993–96)
L.M. Fitten and Junior Engineering Technical Society Scholarships (Georgia Tech, 1993)
Gamma Beta Phi, Phi Kappa Phi, Golden Key, & other honor societies (Georgia Tech, 1993–96)
National Science Foundation REU Fellowship for research at Columbia University (1994)
National Science Foundation REU Fellowship for research at UCLA (1995)
Texaco Corporation Chemistry Scholarship (Georgia Tech, 1995)
Hypercube Corporation Chemistry Award (Georgia Tech, 1996)
National Science Foundation Graduate Research Fellowship (UCLA, 1996–99)
UCLA University Fellowship (1996–98)
UCLA Departmental Prize for Excellence During the First Year of Graduate Study (1997)
UCLA Dissertation Year Fellowship (2001–02)
Pauling Prize at the American Crystallographic Association Annual Meeting (2001; honorable mention)
NIH Ruth L. Kirschstein/National Research Service Award Postdoctoral Fellowship (2003; declined)
Alfred P. Sloan / U.S. DOE Postdoctoral Fellowship in Computational Molecular Biology (2003–05)
University of Virginia Mead Endowment Honored Faculty (2010)

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

American Chemical Society (1994–96; 2005–present), Computational Chemistry division (2008–present); American Crystallographic Association (2000–present); Protein Society (2003–present); Biophysical Society (2004–present); International Society for Computational Biology (2010–present)

MANUSCRIPTS REVIEWED (~15 articles in the following journals)

Biochimica et Biophysica Acta – Gene Regulatory Mechanisms (BBA-GRM); *Biophysical Journal*; *J. of the American Chemical Society*; *Journal of Molecular Biology*; *Proceedings of the National Academy of Sciences USA*; *Structure*

TEACHING EXPERIENCE

1° Instructor: [1] *Advanced Biochemistry I* (Chem7430/5430) – Designed and taught this one-semester, graduate-level course in UVa's Dept of Chemistry (Fa2008, 2009, 2010; ~20-25 students); [2] *Biochemistry Laboratory I, II* (Chem4411, 4421) – Contributed to design & teaching of these one-semester undergraduate lab courses (Sp2010, Fa2010; Sp2012 ~80 students).

2° Instructor: [1] *Biophysics* (Biop506) – Two hours of guest lecture on molecular dynamics simulation for this graduate-level course in UVa's Dept. of Molecular Physiology & Biophysics (Spring 2009, 2010); [2] *Physical Chemistry II* (Chem3820) – Three hours of guest lecture on classical thermodynamics in this undergraduate course (Spring 2009).

PUBLICATIONS (†equal authorship; *corresponding author)

- 1) Presnell SR, Patil GS, Mura C, Jude KM, Conley JM, Bertrand JA, Kam C-M, Powers JC, & Williams LD* “Oxyanion-mediated inhibition of serine proteases” (1998) *Biochemistry*, 37, 17068–17081.
- 2) Mura C, Cascio D, Sawaya MR, & Eisenberg D* “The crystal structure of a heptameric archaeal Sm protein: Implications for the Sm core of eukaryotic snRNPs” (2001) *Proc. Natl. Acad. Sci. USA*, 98(10), 5532–5537.
- 3) Wang S, Mura C, Sawaya MR, & Eisenberg D* “Structure of a Nudix protein from *Pyrobaculum aerophilum* reveals a dimer with two inter-subunit β -sheets” (2002) *Acta Crystallographica Section D*, 58, 571–578.
- 4) Mura C, Kozhoukhovskiy A, Gingery M, Phillips M, & Eisenberg D* “The oligomerization and ligand-binding properties of Sm-like archaeal proteins (SmAPs)” (2003) *Protein Science*, 12, 832–847.
- 5) Mura C, Katz JE, Clarke SG, & Eisenberg D* “Structure and function of an archaeal homolog of survival protein E (SurEa): An acid phosphatase with purine nucleotide specificity” (2003) *Journal of Molecular Biology*, 326(5), 1559–1575.
- 6) Mura C, Phillips M, Kozhoukhovskiy A, & Eisenberg D* “Structure and assembly of an augmented Sm-like archaeal protein 14-mer” (2003) *Proc. Natl. Acad. Sci. USA*, 100(8), 4539–4544.
- 7) Arluison V, †* Mura C, † Romero-Guzmán M, Liquier J, Pellegrini O, Gingery M, Régner P, & Marco S “Three-dimensional structures of fibrillar Sm proteins: Hfq and other Sm-like proteins” (2006) *Journal of Molecular Biology*, 356(1), 86–96.
- 8) Arluison V, Mutyam SK, Mura C, Marco S, & Sukhodolets MV* “Sm-like protein Hfq: Location of the ATP-binding site and the effect of ATP on Hfq•RNA complexes” (2007) *Protein Science*, 16, 1830–41.
- 9) Mura C* & McCammon JA “Molecular dynamics of a κ B DNA element: Base flipping via cross-strand intercalative stacking in a microsecond-scale simulation” (2008) *Nucleic Acids Research*, 36(15), 4941–4955.
- 10) Yawn B, Zhang L, Mura C, & Sukhodolets MV* “RapA, Swi/Snf subunit of *Escherichia coli* RNA polymerase promotes the release of nascent RNA from transcriptional complexes” (2009) *Biochemistry*, 48, 7794–7806.
- 11) Cieřlik M & Mura C* “PaPy: Parallel and distributed data-processing pipelines in Python” (2009) *Proceedings of SciPy2009: The 8th Annual Conference on Python for Scientific Computing*, 41–47. [invited; peer-reviewed]
- 12) Mura C*, McCrimmon CM, Vertrees J, & Sawaya MR “An introduction to biomolecular graphics” (2010) *PLoS Computational Biology* 6(8): e1000918. doi:10.1371/journal.pcbi.1000918 [invited; peer-reviewed]
- 13) Panecka J, Mura C, & Trylska J* “Molecular dynamics of potential rRNA binders: Single-stranded nucleic acids and some analogues” (2011) *Journal of Physical Chemistry B*, 115(3), 7794–7806.
- 14) Cieřlik M & Mura C* “A lightweight, flow-based toolkit for parallel and distributed bioinformatics pipelines” (2011) *BMC Bioinformatics*, 12(61), 1–11.
- 15) Cieřlik M, Derewenda Z, & Mura C* “Abstractions, algorithms and data structures for structural bioinformatics in *PyCogent*” (2011) *Journal of Applied Crystallography*, 44(2), 424–428.
- 16) Mura C* “Computational chemistry of molecular interactions” (2012) [forthcoming as a chapter in *Molecular Interactions in Biology*, Cambridge University Press]
- 17) Patterson J & Mura C* “Rapid colorimetric assays to qualitatively distinguish RNA and DNA in biomolecular samples” (2012; submitted)
- 18) Gray C†, Price CW†, Mura C, & Columbus L* “Known structure, unknown function, I: An inquiry-based undergraduate biochemistry laboratory course” (2012; submitted)

SELECTED PRESENTATIONS

- 1) “Microsecond-scale Molecular Dynamics Simulations of a κ B DNA Element” (*invited seminar*); University of Southern California; Department of Chemistry (20-Nov-2007; Los Angeles, CA)
- 2) “On the Non-uniform Distribution of Macromolecular Crystal Space Groups” (*poster presentation*); CM McCrimmon† & C Mura; American Crystallographic Association Annual Meeting (Jul-2009; Toronto, CANADA)
†Received the IUCr’s Pauling Prize and the American Institute of Physics Undergraduate Poster Award
- 3) “Structural & Computational Studies of Nucleic Acids and the ‘Sm’ Proteins That Bind Them” (*invited seminar*); Dept of Integrative Biology & Pharmacology; University of Texas Health Science Center, Houston (01-Nov-2010; Houston, TX)
- 4) “The RNA-associated Sm Protein Superfamily: Structural & Computational Studies” (*invited seminar*); Interdisciplinary Centre for Mathematical & Computational Modelling; University of Warsaw (17-Mar-2011; Warsaw, POLAND)
- 5) “The RNA-associated Sm Protein Family” (*invited talk*); CECAM workshop on “Dynamics of Protein–Nucleic Acid Interactions: Integrating Simulations with Experiment”; ETH–Zürich (Sep-2011; Zürich, SWITZERLAND)
- 6) “Microsecond-scale DNA Conformational Dynamics” (*invited seminar*); Wake Forest University; Department of Physics; (Nov-2011; Winston-Salem, NC)
- 7) “The RNA-associated Sm Protein Family” (*invited seminar*); University of Maryland; Department of Pharmaceutical Sciences; (Feb-2012; Baltimore, MD)