Curriculum Vitae

Enrique M. De La Cruz, Ph.D.

William R. Kenan, Jr. Professor of Molecular Biophysics and Biochemistry
Head of Branford College

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Born: September 15, 1969 Date of CV: October 15, 2024

Education:

Years	Institution	Field	Degree
1992-1997	Johns Hopkins University School of Medicine Baltimore, MD	Cell Biology	Ph.D.
1987-1991	Rutgers University, Newark, NJ	Biology/Chemistry	B.A.

Research and Professional Experience:

2020-2023	Chair, Department of Molecular Biophysics and Biochemistry, Yale University, New Haven, CT
2019	Visiting Professor, ESPCI Paris Tech (école supérieure de physique et de chimie industrielles de la ville de Paris) and Sorbonne Université, Campus Pierre et Marie Curie, Paris, France
2017-current	Head, Branford College, Yale University, New Haven, CT
2016	Visiting Professor, ESPCI Paris Tech (école supérieure de physique et de chimie industrielles de la ville de Paris), Paris, France
2015	Mayent-Rothschild Senior Researcher Fellow, Institut Curie, Paris, France
2012-current	Professor, Department of Molecular Biophysics and Biochemistry, Yale University, New Haven, CT
2009	Visiting Scientist, Centre National de la Recherche Scientifique (CNRS), Commissariat à l'Énergie Atomique & Université Joseph Fourier, Grenoble, France
2008-2012	Associate Professor with tenure, Department of Molecular Biophysics and Biochemistry, Yale University, New Haven, CT
2006-2008	Associate Professor on term, Department of Molecular Biophysics and Biochemistry Yale University, New Haven, CT
2001-2006	Assistant Professor, Department of Molecular Biophysics and Biochemistry Yale University, New Haven, CT
1997-2001	Post-doctoral fellow, Mentors: Dr. E. Michael Ostap & H. Lee Sweeney, University of Pennsylvania School of Medicine, Philadelphia, PA
1997	Graduate Student, Mentor: Dr. Thomas D. Pollard, The Salk Institute for Biological Studies, La Jolla, CA
1992-1997	Graduate Student, Mentor: Dr. Thomas D. Pollard, Johns Hopkins University Medical School, Baltimore, MD
1991-1992	Research Assistant. Drs. Richard Mendelsohn and Harvey H. Feder, Rutgers University, Newark, NJ
1987-1991	Research Assistant. Dr. Harvey H. Feder, Rutgers University, Newark, NJ
1986-1987	Research Assistant. Dr. Ann Goldstein, Hoffman La-Roche, Nutley, NJ

Honors and Awards:

2025	Fellow, Biophysical Society (BPS)
2024	Featured Scientist, The Atlas of Inspiring Hispanic/Latinx Scientists
2023-current	William R. Kenan, Jr. Professor of Molecular Biophysics and Biochemistry
2022	Fellow, American Association for the Advancement of Science (AAAS)
2022	Champion for Change, Vanderbilt University School of Medicine, Inaugural Hispanic Heritage Month Conference
2022-23	Ivy+ Provost Leadership Fellow, Institute for Inquiry, Equity and Leadership in the Academic Department, Hosted by the Faculty Advancement Network (FAN)
2022-23	Poorvu Center Inaugural Faculty Fellow
2021	Fellow, American Society for Biochemistry and Molecular Biology (ASBMB)
2021	Member, Connecticut Academy of Science and Engineering (CASE)
2020	Cell Press' 100 inspiring Hispanic/Latinx scientists in America
2017	Emily Gray Award in Education, Biophysical Society
2017	Rutgers University 250 Fellow
2016	Invited Professor Fellowship (ESPCI Paris Tech)
2015	Rothschild-Yvette-Mayent Fellowship (Institut Curie)
2009	Established Investigator, American Heart Association
2009	Visiting Scientist, Centre National de la Recherche Scientifique (CNRS), Commissariat à l'Énergie Atomique & Université Joseph Fourier, Grenoble, France
2006	NSF CAREER Award
2002	Hellman Family Fellow
2001	Keith R. Porter Symposium Award, Society for General Physiologists
1998	Life Sciences Research Foundation Postdoctoral Fellowship Award
1997	Commencement Speaker, Johns Hopkins University School of Medicine
1997	Young Investigator Award, Molecular Interactions of Actin, Maui, HI
1995	Biophysical Society Travel Award, San Francisco, CA
1993	National Science Foundation Pre-doctoral Fellowship Award
1992	*Phi Beta Kappa* National Honor Society (#313730)
1991	*Beta Beta Beta* Biological Honor Society
1987-1991	National Dean's List
1987-1991	Rutgers University Scholars Award (4-year fellowship)

Keynote and Plenary Lectures:

2024	Keynote Speaker, *Gordon Research Conference on Cytoskeletal Motors,* West Dover, VT.
2023	Keynote Speaker, WesMass Program, Wesleyan University, Middletown, CT.
2022	Keynote Lecturer, Graduate Student Research Day Symposium, MD Anderson Cancer Center UT-Health Graduate School of Biomedical Sciences, Houston, TX.
2020	Keynote Speaker, Inaugural BioAcCES (Conference for Emerging Scholars), Rockefeller University, New York, NY.
2019	Keynote Speaker, 2nd PhDay at i3S – Instituto de Investigação e Inovação em Saúde, Universidade do Porto, Porto, Portugal.
2019	Keynote Speaker, Inaugural Dr. Samuel M. Nabrit Conference for Early Career Scholars, Brown University, Providence, RI
2019	Keynote Speaker, Harvard University Molecules, Cells, and Organisms graduate program annual retreat, Cambridge, MA
2018	Andrew Szent-Györgyi Lectureship in Physiology, MBL, Woods Hole, MA

2018 Keynote Speaker, BioMed Surf 2018 Symposium, Yale Univ., New Haven, CT
2017 Keynote Speaker, Gibbs Conference on Biothermodynamics, Carbondale, IL
2017 Keynote Speaker, Initiative to Maximize Student Development (IMSD) Symposium, Washington University in St. Louis, St. Louis, MO
2017 Keynote Speaker, 15th Annual NHLBI Research Festival, Bethesda, MD
2017 Plenary Speaker, Boston Regional SACNAS Meeting, Boston, MA
2016 Keynote Speaker, 4th Annual North Carolina Biosciences Collaborative for Research Engagement (BioCoRE) Symposium, Duke University, Durham, NC
2016 Keynote Speaker, BioMed Surf 2016 Symposium, Yale Univ., New Haven, CT
2016 Keynote Speaker, U. Penn Physiology Department Retreat, Merion Station, PA
2014 Keynote Speaker, Dept. of Molecular Physiology & Biophysics Annual Retreat, University of Vermont College of Medicine, Trapp Family Lodge, Stowe, VT
2014 John V. O'Connor Lectureship, 19th Annual Biochemistry Research and Education Conference, University of Notre Dame, Notre Dame, IN
2014 4th Annual Robert Davis Lecture in Cell and Molecular Biology, Federated Department of Biological Science at Rutgers University and NJIT, Newark, NJ
2014 Keynote Speaker, 10th Annual Biophysics and Computational Biology Symposium, Illinois Biophysics Society, University of Illinois Urbana Champaign, Urbana, IL
2013 Distinguished Lecturer (invited by graduate students and post-doctoral fellows), Cell Biology and Physiology Center (CBPC), NHLBI, NIH, Bethesda, MD
2013 Invited Lecturer (invited by graduate students), UNC Molecular and Cellular Biophysics Program, University of North Carolina, Chapel Hill, NC
2012 Distinguished Alumnus Speaker, *Biochemistry, Cell & Molecular Biology* graduate program, Johns Hopkins University School of Medicine, Baltimore, MD
2012 Keynote Speaker, *Biochemistry and Computational and Molecular Biophysics* graduate program retreat, Washington University in St. Louis, St. Louis, MO
2009 Visiting Scientist, Centre National de la Recherche Scientifique (CNRS), Commissariat à l'Énergie Atomique & Université Joseph Fourier, Grenoble, France
2006 Plenary Lecturer, 44th Annual Meeting of the Biophysical Society of Japan
2003 Plenary Lecturer, Ibero-American Congress of Biophysics Meeting, Brazil
2002 Abbott Distinguished Lecturer (awarded by Purdue University)
1997 Commencement Speaker, Johns Hopkins University School of Medicine

Professional Activities:

2019-2029 Associate Editor (Term 2), *Journal of Biological Chemistry*
2024-2026 Council Member, American Society for Cell Biology (ASCB)
2024-2026 Steering Committee, Section on Biological Sciences, American Association for the Advancement of Science (AAAS)
2024-2026 Board-Council Prize Committee, American Association for the Advancement of Science (AAAS)
2024-2026 Council Member, Section on Biological Sciences, American Association for the Advancement of Science (AAAS)
2023-current External Advisory Board, Vagelos Institute for Biomedical Research Education at Columbia University Irving Medical Center
2023-current Dean's Cabinet, Rutgers School of Arts and Sciences
2023 Evaluation Committee, Michèle Auger Award for Young Scientists' Independent Research (2024)
2023 External Reviewer, Department of Biochemistry and Molecular Biology,

	University of Nevada, Reno
2022	External Reviewer, Department of Biophysics, Johns Hopkins University Krieger School of Arts and Sciences
2022	External Reviewer, Program Review Oversight Committee (PROC), Department of Molecular and Cell Biology, University of California at Berkeley
2022	External Reviewer, Biochemistry, Biophysics, and Structural Biology (BBSB) PhD training program, Washington University in St. Louis
2022	Biological Sciences Panel, National Academies of Sciences, Engineering, and Medicine (NASEM) Decadal Survey on Life and Physical Sciences Research in Space 2023-2032
2022-current	Fox Chase Cancer Center, External Advisory Board
2022-current	Compass Faculty Mentor, Washington University in St. Louis School of Medicine
2022	External Review Panel of Tenured Faculty, Department of Biochemistry and Molecular Biology at the University of Iowa Carver College of Medicine
2022	Search Committee, NIH Division of Biomedical Research Workforce (DBRW) Director
2021-cuurent	Compliance Editor, Data Integrity Team, *Journal of Biological Chemistry*
2020-current	Board Member (at-large), Coalition for the Life Sciences.
2020-current	Career Coach, ASBMB program for MOSAIC scholars (UE5)
2020-current	Advisory Board Member, ASBMB program for MOSAIC scholars (UE5)
2019	Search Committee, NIGMS Biophysics, Biomedical Technology and Computational Biosciences (BBCB) Division Director
2019-2022	Advisor, Program Development Committee, Washington Univ. School of Medicine
2019-2024	Associate Editor (Term 1), *Journal of Biological Chemistry*
2019	External Reviewer, Harvard University Molecules, Cells, and Organisms graduate program, Cambridge, MA
2018-current	Faculty Advisor, SACNAS chapter at Yale
2017-19	Chair, Publications Committee, American Society for Biochemistry & Molecular Biology (ASBMB)
2017	Acting Chair, Publications Committee, American Society for Biochemistry & Molecular Biology (ASBMB)
2017-current	Faculty Advisor, Científico Latino (https://www.cientificolatino.com)
2016-2021	Standing Member, National Advisory General Medical Sciences Council (NIH/NIGMS)
2016-current	Scientific Advisor, SENA Institute of Technology - Ghana
2016-2020	External Scientific Advisory Board, Center for Cell Analysis and Modeling, U. Conn. Health Sciences Center
2016	External Decennial Review Committee, Biochemistry Program, Smith College, Northampton, MA
2016-19	Editorial Board, *Journal of Biological Chemistry*
2017-22	Meetings Committee, American Society for Biochemistry & Molecular Biology (ASBMB) (2nd term)
2015-2021	Scientific Advisory Board, Inozyme Pharma, Boston, MA
2015	Co-founder, Inozyme Pharma, Boston, MA
2015-18	Editorial Board, *Biophysical Journal* (2nd term)
2015-current	Mentor, National Research Mentoring Network (NRMN)
2014	NIH, ZGM1 TWD-3 (SC) NIGMS Special Emphasis Panel (SCORE proposals)
2013-2020	Executive Committee, Center for Multiscale Theory and Simulation, Univ. Chicago
2014-15	Program Committee, 2016 Annual Biophysical Society Meeting

2013-14	Chair, Program Committee, 2015 Annual Biophysical Society Meeting
2013	Secondary Chair, NIH, Macromolecular Structure & Function C Study Section
2013-16	Meetings Committee, American Society for Biochemistry & Molecular Biology (ASBMB)
2013-current	Virtual Mentor; Building Research Infrastructure and Capacity (BRIC) Program, University of Puerto Rico in Cayey.
2012-16	Publications Committee, American Society for Biochemistry & Molecular Biology (ASBMB)
2012-15	Editorial Board, *Biophysical Journal*
2012-2020	Scientific Advisory Board, Myokardia, Inc., San Francisco, CA
2010-14	NIH, Macromolecular Structure & Function C Study Section
2012-13	Biophysical Society Nominating Committee
2011-12	Chair, Biophysical Society Nominating Committee
2010-current	Editorial Board, *Biophysical Reviews*
2009	National Science Foundation, *Cellular Organization* Panel
2009	Bernfield and Gilula Awards Joint Selection Committee, ASCB
2009	Grant Reviewer for Agence Nationale de la Recherche (ANR), France
2009	NIH, Macromolecular Structure & Function C Study Section
2009-12	Elected Council Member, Biophysical Society
2008	External Review Committee, Molecular & Cellular Biology Graduate Program, University of Massachusetts, Amherst, MA.
2007	Grant Reviewer for Philip Morris External Research Program
2006-07	Co-Chair, Biophysical Society Motility Subgroup
2006-07	American Heart Association, National Center, Basic Cell & Molecular Biology 3 Study Group
2006	Grant Reviewer, Israel Science Foundation
2005	Grant Reviewer, Biotechnology and Biological Sciences Research Council (U.K.)
2005	Grant Reviewer, American Chemical Society, Petroleum Research Fund
2003-08	Grant Reviewer for the National Science Foundation

Patents:

Compounds, Compositions, and Methods for Treating and/or Preventing Periodontal Disease. Patent No. 16/765420 filed October 15, 2020

ENPP3 Enzyme replacement therapy for disorders of ectopic calcification. Patent No. 15/777446, filed December 27, 2018

Affiliations with the Private Sector:

2015	Co-founder, Inozyme Pharma, Boston, MA
2015-2020	Scientific Advisory Board, Inozyme Pharma, Boston, MA
2012-2020	Scientific Advisory Board, Myokardia, Inc., San Francisco, CA

Meeting and Symposia Organization:

Co-Organizer (with Karen Fleming, Johns Hopkins University), 2015 Biophysical Society Annual Meeting, Baltimore, MD, Feb. 7-11, 2015.

Co-Organizer (with Geeta Narlikar, UCSF), 2014 American Society for Biochemistry & Molecular Biology (ASBMB) Annual Meeting, San Diego, CA, April 26-30, 2014.

Co-Organizer (with Cathy Drennan, MIT), *Catalytic Mechanisms* Thematic Meeting, American Society for Biochemistry & Molecular Biology (ASBMB) Annual Meeting, Boston, Apr. 20-24, 2013.

Co-Chair (with Ann Miller, U. Michigan), *Actin Organization and Dynamics* Mini-Symposium, American Society for Cell Biology Annual Meeting, San Francisco, CA, Dec. 15-19, 2012.

Chair and Organizer, *Physical Properties of Proteins* Symposium, Protein Society Annual Meeting, San Diego, CA, Aug. 15-19, 2012.

Co-Organizer (with Angel Garcia, RPI), *Gordon Research Conference on Biopolymers*, Newport, RI, Jun 10-14, 2012.

Co-Chair, *Diversity of Motors*, Biophysical Society Annual Meeting, March 8, 2011.

Co-Organizer (with Josh Baker; U. Nevada), *Motility Research Symposium*, March 3, 2007.

Co-Chair (with Josh Baker; U. Nevada), *Motility Subgroup*, Biophysical Society, 2006-2007.

Co-Chair, *Actin, Microtubules and their Binding Proteins*, Biophysical Society Annual Meeting, Salt Lake City, UT, Feb., 2006.4

Co-Organizer, *Pan-American Advanced Study Institute on Unconventional Myosins*, Great Falls, Montana, August 13-19, 2005.

Ongoing Research Grant Support:

R35-GM136656 De La Cruz (PI) 04/06/20-01/31/30
National Institutes of Health
Actin filament mechanics and branched network turnover.

Inozyme Pharma Research Support Ongoing

Hellman Family Fellowship De La Cruz (PI) Ongoing

Lab personnel:

Current Trainees

1. Wenxiang Cao (research scientist)
2. Charles V. Sindelar (research scientist)
3. Nooshin Shatery Nejad (postdoctoral associate)
4. Zane Lombardo (postdoctoral associate)
5. Marisa Michalchik (BBQSB graduate student)

Visiting Professors

1. Edwin W Taylor, Louis Block Professor, Dept. of Molecular Genetics and Cell Biology, Univ. of Chicago (emeritus)
2. Daniel P. Kiehart, Professor, Department of Biology, Duke University

Former Trainees and their Subsequent Positions

***Post-doctoral Investigators*:**

1. Arnon Henn (post-doctoral associate), AHA postdoctoral fellowship (07/01/03-06/30/05);

Faculty of Biology, Technion - Israel Institute of Technology, Haifa, Israel
2. Robert Rambo (post-doctoral associate); Principal Beamline Scientist, Diamond Light Source synchrotron science facility, Oxfordshire, UK.
3. Michael Bradley (post-doctoral associate); Senior Scientist – Biochemistry, Syros Pharmaceuticals, Watertown, MA. *Current position*: Institute Research Scientist, Institute for Applied Cancer Science, The University of Texas MD Anderson Cancer Center
4. Hyeran Kang (post-doctoral associate); Assistant Professor, NanoScience Technology Center, Materials Science & Engineering, and Biomedical Sciences, University of Central Florida.
5. Austin Elam (post-doctoral associate); AHA postdoctoral fellowship; Research Scientist I, C4 Therapeutics, Cambridge, MA.
6. John S. Graham (associate research scientist); Faculty, Quinnipiac College, Hamden, CT.
7. Eric M. Johnson Chavarria (post-doctoral associate), NSF postdoctoral research fellowship (06/01/15-05/31/17); AAAS Science & Technology Policy Fellow, Bethesda, MD.
8. Jeffrey Bibeau (postdoctoral associate); Scientist, Millipore Corporation, Springfield, MA.
9. Shashank Chavali (postdoctoral associate); Treeline Biosciences, Watertown, MA.
10. Charles V. Sindelar (research scientist); Yale Center for Research Computing

***Graduate Students*:**
1. Miguel Talavera (MB&B graduate student, NIH predoctoral fellowship 09/15/01-08/31/04); Sr. Scientist, Denosumab - Analytical Sciences Team Leader, Amgen, Puerto Rico.
2. Diane Hannemann (MB&B graduate student); Science Policy Advisor, Bureau of East Asian & Pacific Affairs at U.S. Department of State, Washington D.C.
3. James Robblee (MB&B graduate student); Postdoctoral Fellow, Univ. Colorado (David Bain); *Current position*: Research Associate, University of Vermont, Burlington, VT.
4. Adrian Olivares (MB&B graduate student, NIH predoctoral fellowship 09/15/04-08/31/07; recipient of the 2008 Mary Ellen Jones dissertation prize); Postdoctoral Fellow, M.I.T. (Tania Baker & Bob Sauer); *Current position*: Assistant Professor, Department of Biochemistry, Vanderbilt University.
5. Nicholas Licciardello (MB&B graduate student); Medical Student, Univ Dominican Republic
6. Kendra Frederick (MB&B graduate student), HHMI predoctoral fellowship (9/01/03-05/31/08); Scientist, Process Development, Protein Sciences Corporation, Meriden, CT; *Current position*: Data Scientist, Booz Allen Hamilton, Broomfield, CO.
7. Harvey Chin (MB&B graduate student, NIH predoctoral fellowship 09/01/07-08/31/09; recipient of the 2010 Mary Ellen Jones dissertation prize); Life Sciences Research Foundation Postdoctoral Fellow, Columbia University (Ben O'Shaughnessy); *Current position*: Investigator at Novartis Institutes for Biomedical Research.
8. Lauren Saunders (MB&B graduate student); AHA predoctoral fellowship (07/01/09-06/30/11); Postdoctoral Fellow, University of Illinois; Current position: Research Molecular Biologist, U.S. Dept. Agriculture, National Center for Agricultural Utilization Research, Peoria, IL.
9. Brannon McCullough (MB&B graduate student); AHA predoctoral fellowship (07/01/09-06/30/11; recipient of the 2012 Mary Ellen Jones dissertation prize); Postdoctoral Fellow, University of Minnesota (David Odde); *Current position*: Assistant Professor at Northern Arizona University.
10. William Chang (MB&B graduate student; co-advisor with D. Braddock, Pathology), Postdoctoral Fellow, NIH.
11. Grace Peters (MB&B graduate student), Scientist at Tangen Biosciences, Branford, CT.
12. Emily Wong (MB&B graduate student); 2011 Gruber Science Fellow; NSF predoctoral fellowship (08/01/12-07/31/15); Postdoctoral Fellow, U.C.S.F. (Geeta Narlikar).
13. Sandy Hernandez (PEB/BME graduate student); NSF Graduate Research Fellowship

(09/01/14-08/30/19).
14. Anthony Schramm (MB&B graduate student); Data Scientist, Liquidnet, St. Paul. MN
15. Nandan Pandit (MB&B/PEB graduate student); Life Science Specialist at L.E.K. Consulting, Boston, MA.
16. Shawn Gray (MB&B graduate student); Senior Scientist at Quantum-Si, Guilford, CT.

***Yale University Undergraduate Students and Subsequent Positions*:**
1. Magni Homsa (Yale undergraduate student); Medical Student, Columbia University College of Physicians & Surgeons
2. Peter Barkett (Yale undergraduate BS/MS student); Medical Student, University of Michigan
3. Joshua Au (Yale undergraduate); Medical Student, Yale University School of Medicine
4. Sarah Marks (Yale undergraduate); Yale University undergraduate student
5. Melissa Lee (Yale undergraduate); Yale University undergraduate student
6. Meredith Redick (Yale undergraduate); Yale University undergraduate student
7. Alan Hutchison (Yale undergraduate); MD/PhD Student, Pritzker School of Medicine, University of Chicago
8. Vivienne Hay (Yale undergraduate); Business Analyst, McKinsey & Company
9. Catherine Harmer (Yale undergraduate); MD Student; University of Rochester
10. Nicole Tsai (Yale undergraduate; Forscher lab); MD/PhD student, UCSF
11. Mariel Moran Quintero (Yale undergraduate student; STARS program)
12. Nasser Odetallah (Yale undergraduate); graduate student, Columbia School of General Studies
13. Mary Martin (Yale undergraduate; Forscher Lab)
14. Tony Potchernikov (Yale undergraduate; Hahn Fellow) - *Outstanding oral presentation at the 2020 REU symposium*; Research Scientist, NIH

***International, non-Yale, and high school student interns*:**
1. Sofia Espinoza-Sanchez, Universidad Peruana Cayetano Heredia, Lima, Perú; 01/01 - 03/30/11
   -*Subsequent position: MB&B Graduate Student at Yale University (Tom Pollard)*
2. Anaëlle Pierre, École Normale Supérieure, Cachan, France; 04/15/11 - 08/30/11
   - *Subsequent position: Graduate Student at Institut Jacques Monod, Paris (Nicolas Minc)*
3. Michael Beuwer, Eindhoven University of Technology, Netherlands; 04/23/12 - 07/30/12
   -*Subsequent position: Graduate Student at Eindhoven University of Technology*
4. Karina Nieves (University of Puerto Rico, Cayey undergraduate); 06/01/13-07/31/13; Recipient of the Most Outstanding Oral Presentation of the 2013 Sackler/NSF REU: Integrated Research at the Frontiers of the Biological, Physical, and Engineering Sciences Summer Program
   -*Subsequent position: Graduate Student at Johns Hopkins University School of Medicine*
5. Jean Garcia (Turabo University, Puerto Rico undergraduate); 06/01/14-07/31/14; Recipient of the Most Outstanding *a*) Oral Presentation and *b*) Poster Presentation of the 2014 Sackler/NSF REU: Integrated Research at the Frontiers of the Biological, Physical, and Engineering Sciences Summer Program
   -*Subsequent position: Graduate Student at Johns Hopkins University School of Medicine*
6. Claudia Fernandes Brito (IBMC, Instituto de Investigação e Inovação em Saúde, Porto, Portugal); Co-sponsored with J. Sellers (NIH); 02/01/14-07/31/14
7. Lanna Knoll (MA high school student); 07/01/18-07/30/2018
   -*Subsequent position: Undergraduate student at Wesleyan University*
8. Julissa Cruz Bautista (Wesleyan University, Middletown, CT; 05/24/23 - 07/28/23; 06-07/2024)
   -*Subsequent position: Undergraduate Student at Wesleyan University*
7. Charlie Sudmyer (Hamden Hall School student, Hamden, CT; 06/2024)
8. Ellie Catalfo (Daniel Hand School student, Guilford, CT; 06/2024)

9. Neela Abedin Iydroose (Hamden High School student, Hamden, CT; 06/2024)

Department and University-wide Service

MB&B Department (*denotes current 2024-2025 committee)
*JBPO Quorum Member (2023-current)
*Retreat (2023-current)
*Seminar Committee (2023-current)
*Space Committee (2023-current)
Chair (2020-2023)
Diversity and Climate (2010-2020)
Undergraduate Education Committee and Advising (2010-2013; 2016-2020)
Search Committee (2019-20; Junior and Senior)
Vision Committee (2019-20)
Faculty Scholar Awards/Prize Coordinator (2016-18)
Seminar (2010-2015; 2016-18)
Chemical Biology Instrumentation Center CBIC Oversight (2012-16)
Executive Committee (2010-2015)
Space Committee (2010-2011; 2013-15)
Oversight Committee, BBSB Graduate Program (2013-14)
Search Committee 2012-13 (Junior, Nanobiology Institute at the West Campus)
Graduate Admissions (domestic) (2010-2012)
Diversity Recruitment Coordinator (2010-2011)
Search Committee 2011 (Junior Biochemistry & Molecular Biology; West Campus CBI)
Search Committee 2008 (Junior Biochemistry & Molecular Biology)
Faculty Search Committee 2007 (Junior Biochemistry & Molecular Biology)
Faculty Search Committee 2005 (Junior Biophysics)
Faculty Search Committee 2002 (Junior Biochemistry & Molecular Biology)

Yale University (*denotes current 2024-2025 committee)
*Advisory Board, Poorvu Center for Teaching and Learning (2023-current)
*Council of the Heads of College Representative to Intercultural Affairs Council (2023-current)
*Yale Medal Committee (2023, 2025-current)
Chair, Decadal Review Committee, First-Year Scholars at Yale (FSY) Program (2023)
Search Committee Member, Yale Health Director/CEO (2023)
*Biophysics Advisory Committee; Keck Laboratory (2022-current)
Heads of College Steering Group (2022-23)
Chair, Education and Student Life Committee (2022-23)
Chair, Search Committee, Residential College Dean, Branford College, Yale University (2022)
*Minority Organization for Retention & Expansion (MORE) Steering Committee (2020-current)
Committee on Teaching, Learning & Advising (2021-2022)
Education & Student Life Committee (2021-23)
*Committee of Art in Public Spaces (2020-current)
*Minority Organization for Retention & Expansion (MORE) FAS Expansion Executive Committee (2020-current)
Undergraduate Regulations (URegs) committee (2019-22)
QBio Advisory Committee
Committee on Teaching in the Residential Colleges (2019-2020)
Yale Science Building Art Initiative Committee (2019)

Faculty Committee on Athletics (2018-2020)
Faculty Organizer: Yale BBS Graduate Program Diversity Preview Days (2018)
*Head, Branford College (2017-current)
Art & Science Committee for Yale Young Global Scholars (2017-2021)
Chair, Yale College Dean Search Advisory Committee (2017)
*Advisory Committee, Biophysics Training Grant (2017-current)
*Advisory Board for Diversity and Faculty Development (2016-current)
Advisory Committee, Deputy Dean of Diversity and Faculty Development (2016-2019)
*Yale College Faculty Committee on Admissions & Financial Aid (2014-current)
*Advisory committee of Yale Post-baccalaureate Research Education Program (2014-current)
Committee on Promotions and Tenure Appointments for the Biological Sciences (2013-2020)
Biological Sciences Advisory Committee (2013-2020)
University-Wide Committee on Sexual Misconduct (2011-2017)
*Science, Technology, and Research Scholars (STARS) Advisory Board (2009-current)
*Sackler/PEB Executive Committee (2010-2022)
*Physical and Engineering Biology Graduate Program Admissions Committee (2010-current)
Steering Committee, Howard Hughes Undergraduate Science Education Program (2012-2019)
Faculty Advisory Committee for NSF New England Louis Stokes Alliance for Minority Participation (LSAMP) Alliance Grant (2010-2019)
Jonathan Edwards College Freshman Advisor (2002-2010; 2016)
Advisory Committee, Chemical Biology Instrumentation Center CBIC (2012-2016)
Advisory Committee, Search for potential candidates to lead Yale College and the Graduate School of Arts and Sciences (2014)
Faculty Diversity Hiring Committee (2013)
University Budget Committee (2010- 2013)
BBSB graduate program planning committee (2010-2013)
MB&B Diversity Representative (2007-2010)

Invited Research Seminars & Oral Presentations:

*Invited Speaker, University of Nevada Regents, *TBD

*Invited Speaker, Dept. of Physiology and The Pennsylvania Muscle Institute, University of Pennsylvania, Philadelphia, PA, March 31, 2025.

Invited Speaker, Jose Miguel Cimadevilla Memorial Seminar Series, St. Mary's University in San Antonio, San Antonio, TX, Oct. 4, 2024.

Invited Speaker, Frontiers of Biophysics: 20th Course of the International School for Biological Magnetic Resonance, Centro Ettore Majorana, Erice, Sicily, July 19-26, 2024.

Keynote Speaker, *Gordon Research Conference on Cytoskeletal Motors,* University of Southern Maine, Portland, Maine, July 7-12, 2024.

Invited Speaker, Department of Physics, Emory University, Atlanta, GA, Jan. 16, 2024.

Invited Speaker, Department of Biochemistry & Molecular Biotechnology, University of Massachusetts Medical School, Worcester, MA, Nov. 1, 2023.

Invited Speaker, Molecular Biophysics Training Program Seminar Series, Weill Cornell and Sloan Kettering Institute, New York, NY, Oct. 17, 2023

Invited Speaker, Department of Chemistry Colloquia, Columbia University, New York, NY, Sept. 14, 2023.

Invited Speaker, Frontiers of Biophysics: 20th Course of the International School for Biological Magnetic Resonance, Centro Ettore Majorana, Erice, Sicily, July 10-17, 2023.

Student Invited Speaker (BCMB and Biophysics graduate programs), Department of Biophysics and Biophysical Chemistry, Johns Hopkins University School of Medicine, Baltimore, MD, Apr. 25, 2023.

Invited Speaker, Advances in Skeletal Muscle Biology Conference, University of Florida, Gainesville, FL, March 15-17, 2023.

Invited Speaker, American Physical Society Annual Meeting, Las Vegas, NV, March 5-10, 2023.

Keynote Speaker, WesMass Program, Wesleyan University, Middletown, CT, February 10, 2023.

Invited Speaker, Cell and Developmental Biology Center (CDBC) Seminar Series, National Heart, Lung and Blood Institute (NHLBI), Bethesda, MD, Feb. 1, 2023.

Invited Speaker, Dept. of Cell and Developmental Biology, Vanderbilt University, Nashville, TN, Jan. 23, 2023.

Invited Speaker, Molecular Life Sciences Seminar Series, Ohio State University, Columbus, OH, Nov. 29, 2022.

Invited Speaker, *Gordon Research Conference on Cytoskeletal Motors,* Mount Snow Resort, West Dover, VT, July 10-15, 2022.

Keynote Lecturer, Graduate Student Research Day symposium, MD Anderson Cancer Center UT-Health Graduate School of Biomedical Sciences, Houston, TX, June 23, 2022.

Invited Speaker, Department of Molecular and Cellular Biology, University of Connecticut, March 29, 2021.

Invited Speaker, Rockefeller University Friday Lecture Series, New York, NY, Feb. 11, 2022.

Invited Speaker, Science of Teaching seminar series, UC San Diego Division of Biological Sciences, San Diego, CA, Jan. 21, 2022.

Invited Speaker, American Society for Cell Biology (ASCB) Annual Meeting, *Cell and Tissue Mechanics Symposium*, December 14, 2021. (*on-line event)

Invited Speaker, Biochemistry and Biophysics, Texas A&M University, College Station, TX, Nov. 16, 2021. (*on-line event)

Invited Speaker, Structural and Quantitative Biology seminar series, University of California, Berkeley, CA, March 15, 2021. (*on-line event)

Invited Speaker, Biochemistry & Cellular and Molecular Biology (BCMB) Department, University of Tennessee Knoxville, TN, March 10-11, 2021. (*on-line event)

Invited Speaker, *MCB Graduate Program Seminar Series*, Brown University, Providence, RI,

Dec 2, 2020. (*on-line event)

Invited Speaker, *NSF REU: PR CLIMB program*, University of Puerto Rico-Río Piedras, San Juan, PR, Nov. 10, 2020. (*on-line event)

Invited Speaker, *Inaugural TREaDS (Trainees Recognizing Excellence and Diversity in Science) Seminar Series*, National Institutes of Health (NIH)/National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), Bethesda, MD, Oct. 20, 2020. (*on-line event)

Invited Speaker, *Yale Science Summer Seminar Series*, July 15, 2020. (*on-line event)

Invited Speaker, *Gordon Research Conference on Cytoskeletal Motors,* Mount Snow Resort, West Dover, VT, July 12-17, 2020. (*Cancelled to 2022 due to COVID-19)

Invited Speaker, *Annual 3+1 BS/MS Cellular and Molecular Biology Dual Degree Seminar*, Quinnipiac University, Hamden, CT, April 15, 2020. (*Cancelled due to COVID-19)

Invited Speaker, *McGroddy Frontiers in Science Series*, St. Joseph's Univ, Philadelphia, PA, March 25, 2020. (*Cancelled due to COVID-19)

Keynote Speaker, 2nd PhDay at i3S – Instituto de Investigação e Inovação em Saúde, Universidade do Porto, Porto, Portugal, Sept. 26, 2019.

Invited Speaker, *Gordon Research Conference on Motile and Contractile Systems*, Colby-Sawyer College, New London, NH, July 28-August 2, 2019.

Dept. of Biochemistry and Molecular Biophysics, Washington University School of Medicine, St. Louis, MO, June 20, 2019.

Keynote Speaker, Inaugural Dr. Samuel M. Nabrit Conference for Early Career Scholars, Brown University, Providence, RI, June 6-7, 2019.

Invited Speaker, Harvard University Molecules, Cells, and Organisms graduate program retreat, Cambridge, MA, June 5, 2019.

Department of Biochemistry and Biophysics, Oregon State Univ., Corvallis, OR, April 24, 2019.

Department of Chemistry, Rutgers University – Newark, Newark, NJ, April 11, 2019

Computational Biology and Bioinformatics, Duke University, Durham, NC, April 1, 2019.

Department of Physics, Arizona State University, Tempe, AZ, March 14, 2019.

Department of Chemistry and Biochemistry, UCLA, Los Angeles, CA, February 8, 2019.

Invited Speaker, Cellular Developmental Biology's student-run seminar series committee, University of Michigan, Ann Arbor, MI, November 28, 2018.

Chemistry and Biochemistry, Skidmore College, Sarasota Springs, NY, October 3, 2018

Physical Biology of the Cell Course, Marine Biology Labs, Woods Hole, MA, Aug. 1-2, 2018.

Physiology Course, Marine Biology Labs, Woods Hole, MA, July 22-24, 2018.

Invited Speaker, *Generation and Control of Forces in Cells*, Nordic Institute for Theoretical Physics (Nordita), Stockholm, Sweden, June 21-29, 2018.

Department of Biochemistry and Molecular Biology, Drexel University College of Medicine, Philadelphia, PA, Nov. 13, 2017.

Worcester Polytechnic Institute, Biology and Biotechnology graduate seminar series, Worcester, MA, Oct. 24, 2017.

Dept. Biochemistry, *Frontiers in Biochemistry Seminar Series*, Vanderbilt University, Nashville, TN, Oct. 20, 2017.

Keynote Speaker, Initiative to Maximize Student Development (IMSD) Symposium, Washington University in St. Louis, St. Louis, MO, Oct. 17, 2017.

Keynote Speaker, *31st Annual Gibbs Conference on Biothermodynamics*, Carbondale, IL, Sept. 23-26, 2017.

Physical Biology of the Cell Course, Marine Biology Labs, Woods Hole, MA, August 18-22, 2017.

Dept. Biochemistry, California Institute of Technology (CalTech), Pasadena, CA, May 18, 2017.

Invited Speaker, *Motor Protein Research Reaching a New Stage Symposium*, Nagoya, Japan, Dec. 12-13, 2016.

Invited Speaker, 2016 Annual Biomedical Research Conference for Minority Students (ABRCMS), Tampa, FL, Nov. 9-12, 2016.

Center for Cell Analysis & Modeling, University of Connecticut Health Sciences Center, Farmington, CT, Oct. 13, 2016.

Keynote Speaker, Annual North Carolina Biosciences Collaborative for Research Engagement (BioCoRE) Symposium, Duke University, Durham, NC, July 28-29, 2016.

Invited Speaker, *Gordon Research Conference on Muscle & Molecular Motors*, Mount Snow Resort, West Dover, VT, July 17-22, 2016.

Keynote Speaker, U. Penn Physiology Department Retreat, Merion Station, PA, June 10, 2016.

Invited Speaker, Los Alamos National Laboratory Center for Nonlinear Studies Annual Conference, *Energy Landscapes: From Protein Folding to Molecular Assembly*, Sante Fe, NM, May 9-12, 2016.

Invited Speaker, Minority Biomedical Research Support (MBRS) Program Symposium, Rutgers University, Newark, NJ, April 13, 2016.

Invited Speaker, NIGMS, Division of Cell Biology and Biophysics (CBB), March 30, 2016.

Dept. of Biochemistry, *BioFrontiers Seminar Series*, U Colorado, Boulder, CO, Feb. 17, 2016.

Invited Speaker, Biochemistry and Molecular Pharmacology Seminar Series, U Mass Medical School, Worcester, MA, January 20, 2016.

Invited Speaker, *School & Practical Course on Cell and Molecular Physiopathology of Diverse Biological Paradigms Symposium*, Montevideo, Uruguay, Nov. 13-15, 2015.

Invited Speaker, *Polymers and Self-Assembly: From Biology to Nanomaterials*, Rio de Janeiro, Brazil, Oct. 25-30, 2015

Invited Speaker, *Quantitative Biology of Cytoskeletal Mechanics*, Chicago, IL, Oct. 22-24, 2016.

Department of Mechanics, Ecole Polytechnique (Paris), Palaiseau France Sept 17, 2015

Institut Curie Paris, Paris, France, September 9, 2015.

Institut Européen de Chimie et Biologie (CNRS, the Inserm and the Université de Bordeaux), Bordeuax, France September 4, 2015

Institut Curie Paris, Paris, France, July 8, 2015.

Institut Curie Orsay, Orsay, France, June 25, 2015.

Frontiers in Biology Seminar Series, Department of Biochemistry, Stanford University, Palo Alto, CA, May 20, 2015.

Dept. of Molecular Genetics & Cell Biology, University of Chicago, Chicago, IL, April 29, 2015.

Molecular Life Sciences Seminar Series (Biochemistry and Molecular and Cellular Developmental Biology programs), Ohio State University, Columbus OH, Nov. 25, 2014.

Keynote Speaker, *Dept. of Molecular Physiology & Biophysics Annual Retreat*, University of Vermont College of Medicine, Trapp Family Lodge, Stowe, VT, Nov. 20-21, 2014.

Department of Biochemistry, The Geisel School of Medicine at Dartmouth, Hanover, NH, Nov. 14, 2014.

Invited Speaker, *Cytoskeleton Dynamics from Molecules to Systems*, Stockholm, Oct. 27-31, 2014.

Institute for Biophysical Dynamics, University of Chicago, Chicago, IL, Oct. 7, 2014.

Department of Biology, University of Richmond, Richmond, VA, Sept. 1, 2014

Invited Speaker, *Gordon Research Conference on Muscle & Molecular Motors*, Mount Snow Resort, West Dover, VT, July 6-11, 2014.

John V. O'Connor Lectureship, 19th Annual Biochemistry Research and Education Conference, University of Notre Dame, Notre Dame, IN, June 11-12, 2014.

Department of Physics (Physikdepartment), Technische Universität München, Garching, Germany. May 15-16, 2014.

4th Annual Robert Davis Lecture in Cell and Molecular Biology, *Federated Department of Biological Science at Rutgers University and NJIT*, Newark, NJ, May 6, 2014.

Keynote Speaker, 10th Annual Biophysics and Computational Biology Symposium, Illinois Biophysics Society, University of Illinois Urbana Champaign, Urbana, IL, April 23, 2014.

Invited Speaker, Company of Biologists Workshop on *Navigating the cell: how motors function in vivo*. Sussex, England, March 23-26, 2014.

Invited Speaker, *Encounter in the Biological, Physical, and Engineering Sciences*, Weizmann Institute of Science, Rehovot, Israel, Jan 7-9, 2014.

Departments of Biology and Biochemistry, Brandeis University, Waltham, MA, Dec. 6, 2013.

Invited Speaker, *Science and Technology Competency and Education Core*, Alliance for the Advancement of Biomedical Research Excellence in Puerto Rico (AABRE-PR), Puerto Rico, Nov 11-15, 2013.

-this "seminar tour" represents four events at the four major AABRE-PR institutions; activities include a seminar presentation as well as meetings with Deans, Researchers and Students:

November 12: University of Puerto Rico (Humacao)
November 13: University of Puerto Rico (Cayey)
November 14: Universidad del Turabo (Gurabo)
November 15: Universidad del Esta (Carolina)

New York Structural Biology Group, City College, New York, NY, Oct. 9, 2013.

Department of Chemistry, Connecticut College, New London, CT, September 10, 2013.

Invited Speaker, *5th Structural Biology and Molecular Biophysics Workshop* at the University of Nebraska Medical Center, Omaha, NE, July 11, 2013.

Invited Speaker, *Gordon Research Conference on Proteins*, Holderness, NH, June 16-21, 2013.

Distinguished Lecturer (invited by graduate students and post-doctoral fellows), *Cell Biology and Physiology Center (CBPC)*, NHLBI, NIH, Bethesda, MD, May 23, 2013.

Distinguished Lecturer (invited by graduate students), *Molecular and Cellular Biophysics Graduate Program*, University of North Carolina, Chapel Hill, NC, May 14, 2013.

Department of Biochemistry & Cancer Biology, University of Toledo College of Medicine, Toledo, OH, May 2, 2013.

Invited Speaker, *Catalytic Mechanisms* Thematic Meeting, American Society for Biochemistry & Molecular Biology Annual Meeting, Boston, MA, Apr. 20-24, 2013.

Molecular Biosciences Colloquium, Dept. Chemistry, Wichita State University, Wichita, KS, April 3, 2013.

Dept. Biomedical Engineering, Yale University, New Haven, CT, Mar 28, 2013.

Invited Speaker, *Actin Organization and Dynamics* Mini-Symposium, American Society for Cell Biology Annual Meeting, San Francisco, CA, Dec. 15-19, 2012.

Invited Speaker, *ASCB Education Committee Undergraduate Session*, American Society for Cell Biology Annual Meeting, San Francisco, CA, Dec. 15-19, 2012.

Invited Speaker, *Science and Technology Competency and Education Core*, Alliance for the Advancement of Biomedical Research Excellence in Puerto Rico (AABRE-PR), Puerto Rico, Nov 13-15, 2012.

-this "seminar tour" represents three events at the three major AABRE-PR institutions; activities include a seminar presentation as well as meetings with Deans, Researchers and Students:
November 13: Inter-American University (Bayamon)
November 14: University of Puerto Rico (Río Piedras)
November 15: Universidad Metropolitana (San Juan)

Keynote Speaker, *Biochemistry and Computational and Molecular Biophysics* graduate program retreat, Washington University in St. Louis, Oct. 26-27, 2012.

Dept. of Cell & Developmental Biology, University of Michigan, Ann Arbor, MI, Oct. 17, 2012.

Distinguished Alumnus Speaker, *Biochemistry, Cell & Molecular Biology* graduate program, *Dept. of Biological Chemistry,* Johns Hopkins University School of Medicine, Baltimore, MD, October 11-12, 2012.

Invited Speaker, *26th Annual Gibbs Conference on Biothermodynamics*, Carbondale, Illinois, September 22-25, 2012.

Invited Symposium Speaker & Chair, *Physical Properties of Proteins* Symposium, Protein Society Annual Meeting, San Diego, CA, Aug. 15-19, 2012.

Dept. Physiology University of Massachusetts Medical School, Worcester, MA, May 8, 2012.

Dept. Molecular & Cellular Biochemistry, Indiana University, Bloomington, IN, April 27 2012.

Master Class Lecturer, Yale Engineering and Science Weekend, Yale University, New Haven, CT, February 19, 2012.

Dept. Biochemistry and Molecular Biology, University of Texas Medical Branch at Galveston, Galveston, TX, Feb. 16, 2012.

Invited Speaker, *Heart Hall Lecture,* American Heart Association Board Meeting, Hartford, CT, Dec. 8, 2011.

Department of Molecular Biosciences, Northwestern University, Evanston, IL, Dec. 1, 2011.

Invited Symposium Speaker, *IBRO School of Neuroscience: Probing normal and pathological neural cell functions*. San Juan, Puerto Rico, Nov 4 – Nov 7, 2011.

Dept. Physics, University of Illinois at Chicago, Chicago, IL, Oct. 26, 2011.

Dept. Cell and Dev. Biol, SUNY Upstate Medical University, Syracuse, NY, Sept. 28, 2011.

Invited Speaker, *Mathematical Biology of the Cell: Cytoskeleton and Motility*, Banff International Research Station, Alberta, Canada, July 31-August 5, 2011.

Invited Speaker, *Muscle & Molecular Motors Gordon Research Conference*, New London, NH, July 10-15, 2011.

Departments of Mechanical Engineering and Biomedical Engineering, Columbia University, New York, NY, April 22, 2011.

Invited Speaker, *Minority Student Researchers Lounge*, Yale University, April 12, 2011.

Center for Structural Biology, University of Florida, March 21, 2011.

Dept. Biochemistry, Molecular Biology & Biophysics, University of Minnesota, Minneapolis, MN, March 16, 2011.

Master Class Lecturer, Yale Engineering and Science Weekend, Yale University, New Haven, CT, February 20, 2011.

Department of Physics, School of Science and Engineering, Waseda University, Tokyo, Japan, November 24, 2010.

Invited Speaker, *American Society for Nephrology Advances in Research Conference: The Cytoskeleton and Cell Motility*, Denver, CO, Nov. 16-17, 2010

Institute of Molecular Biology, University of Oregon, Eugene, OR, November 9, 2010.

Dept. of Biochemistry and Molecular Biophysics, Washington University School of Medicine, St. Louis, MO, November 3, 2010.

Dept. Biology, Johns Hopkins University, Baltimore, MD, October 25, 2010.

Invited Speaker, *Pan American Studies Institute (PASI) Function and Regulation of the Cytoskeleton Research Symposium*, Buzios, Brazil, August 7-9, 2010.

Invited Speaker, *Gordon Research Conference on Biopolymers*, Newport, Rhode Island, June 6-10, 2010.

Department of Physics & Astronomy, University of Kansas, Lawrence, KS, March 22, 2010.

Invited Speaker & Lecturer, *Pierre-Gilles de Gennes Series, School on Cytoskeleton: Contractility and Motility*, Cargèse, Corsica, France, Feb. 22-27, 2010. (2 lectures)

Invited Speaker, *Gordon Research Conference on Biomolecular Interactions and Methods*, Galveston, TX, Jan 17-22, 2010.

Invited Speaker, *Gordon Research Seminar on Biomolecular Interactions and Methods*, Galveston, TX, Jan 16-17, 2010.

Department of Pathology, Columbia University, New York, NY, December 14, 2009.

Dept. Biochemistry and Molecular Biology, University of Chicago, Chicago, IL, Nov. 4, 2009.

Invited Speaker, *Gordon Research Conference on Motile & Contractile Systems*, New London, NH, July 12-17, 2009.

Dept. Structural and Molecular Biology, Instituto de Biologia Molecular e Celular (IBMC), Porto, Portugal, June 15, 2009.

Laboratoire Physico-Chimie Curie, Institut Curie Paris, Paris, France, June 3, 2009.

Pennsylvania Muscle Institute, University of Pennsylvania School of Medicine, Dec. 8, 2008.

Department of Biological Sciences, Smith College, Northampton, MA, Nov. 17, 2008.

Department of Biological Sciences, Mt. Holyoke College, South Hadley, MA, Nov. 14, 2008.

Department of Biology, University of Puerto Rico, Cayey, Puerto Rico, October 21, 2008.

Dept. Biochemistry, Univ. of Iowa Carver College of Medicine, Iowa City, IA, October 2, 2008.

Dept. Biological Engineering, Mass. Institute of Technology, Cambridge, MA, Sept. 23, 2008.

Invited Speaker, National Meeting of the American Chemical Society "*Recent Advances in Biophysical Chemistry of Transport by Biomolecular Motors and Machines*", Philadelphia, PA, Aug 17-21, 2008.

Invited Speaker, *Gordon Research Conference on Muscle & Motor Proteins*, New London, NH, June 29-July 4, 2008.

Dept. Molecular Physiology & Biophysics, University of Vermont College of Medicine, Burlington, VT, May 5, 2008.

Invited Speaker, *Heart Hall Lecture,* American Heart Association Founders Affiliate, Wallingford, CT, April 11, 2008.

Dept. Biochemistry, Case Western Reserve University School of Medicine, Cleveland, OH, Dec. 6 2007.

Dept. Pharmaceutical Sciences, Univ. of Nebraska Medical Center, Omaha, NE, Nov. 16, 2007.

Dept. Molecular and Cell Biology, University of Connecticut, Storrs, CT, Nov. 1, 2007.

Dept. of Biology, University of Puerto Rico, Cayey, Puerto Rico, October 25, 2007.

Dept. of Biology, University of Puerto Rico, Bayamón, Puerto Rico, October 23, 2007.

Dept. of Molecular Biophysics & Biochemistry, Yale Univ., New Haven, CT, Sept. 10, 2007.

Gordon Research Conference, Motile & Contractile Systems, New London, NH, July 8-13, 2007.

2007 FASEB Summer Research Conference, "*Helicases and NTP-Driven Nucleic Acid Motors: Structure, Function, Mechanism and Roles in Human Disease*", Indian Wells, CA, June 23-28, 2007.

Molecular Motors Day, Dept. Physics, University of Maryland, March 19, 2007.

Dept. Biology, Franklin & Marshall College, Lancaster, PA, March 7, 2007.

National Heart, Lung & Blood Institute, NIH, Bethesda, MD, March 2, 2007.

Dept. of Biophysics & Biophysical Chemistry, Johns Hopkins University School of Medicine, Baltimore, MD, February 28, 2007.

Dept. of Physics, Northeastern University, Boston, MA, January 25, 2007.

Molecular Biology & Biochemistry, Wesleyan University, Middletown, CT, December 7, 2006.

Fumio Oosawa Lecture, Institute of Molecular Biology, Nagoya University, Nagoya, Japan, November 25, 2006.

Center of Excellence (COE) Seminar Series (8th lecture), Department of Physics, School of Science and Engineering, Waseda University, Tokyo, Japan, November 22, 2006.

Plenary Lecturer, *44th Annual Meeting of the Biophysical Society of Japan*, Okinawa, Japan, November 12-16, 2006.

SACNAS National Conference, Tampa, FL, October 26-29, 2006.

Dept. of Biochemistry and Molecular Biophysics, Washington University School of Medicine, St. Louis, MO, October 11, 2006.

Invited Speaker, *20th Annual Gibbs Conference on Biothermodynamics*, Carbondale, Illinois, October 7-10, 2006.

Dept. Cellular & Molecular Biology & Pathology, University of São Paolo School of Medicine, Ribeirão Preto, São Paolo, Brazil, July 25, 2006.

III International Symposium on Myosin V, Armação de Búzios, Brazil, July 14-17, 2006.

Dept. of Biology, Rutgers University, Newark, NJ, April 17, 2006.

Dept. of Biochemistry, University of Puerto Rico School of Medicine, San Juan, Puerto Rico, October 27, 2005.

Dept. of Biology, University of Puerto Rico, Cayey, Puerto Rico, October 25, 2005.

Dept. Biological Sciences, Carnegie-Mellon University, Pittsburgh, PA, October 19, 2005.

Dept. Biology, Johns Hopkins University, Baltimore, MD, October 13, 2005.

Pan-American Advanced Study Institute on Unconventional Myosins, Great Falls, Montana, August 13-19, 2005.

7th Annual National GEM Consortium, Future Faculty and Professionals Symposium, June 29-July 1, 2005, Boston, MA.

2nd Annual Northeast Alliance for Graduate Education and the Professoriate Day, University of Massachusetts, Amherst, MA, May 2, 2005.

Dept. Biology, University of Utah, Salt Lake City, UT, April 14, 2005.

Dept. Biochemistry & Molecular Biophysics, University of Pennsylvania Medical School, Philadelphia, PA, April 6, 2005.

Molecular & Cellular Biology Program, Univ. of Massachusetts, Amherst, MA, March 8, 2005.

Symposium on Muscular Contraction & Cell Movement, Univ. of Colima, Mexico, Jan. 21, 2004.

Center for Interdisciplinary Research of Complex Systems, Northeastern Univ., Nov. 30, 2004.

Annual Biomedical Research Conference for Minority Students, Dallas, TX, Nov. 10-13, 2004

Dept. Biological Sciences, University of Pittsburgh, Pittsburgh, PA, Dec. 1, 2003.

Dept. Biochemistry, Molecular Biology & Biophysics, University of Minnesota, Minneapolis, MN, Nov. 19, 2003.

1st Annual Northeast Alliance for Graduate Education and the Professoriate Day, Boston University, Boston, MA, Nov. 14, 2003.

Ibero-American Congress of Biophysics Meeting, Río de Janeiro, Brazil, Oct. 12-15, 2003.

Dept. Cellular & Molecular Biology & Pathology, University of São Paolo School of Medicine, Ribeirão Preto, São Paolo, Brazil, Oct. 08, 2003.

Dept. of Neuroscience and Cell Biology, UMDNJ-Robert Wood Johnson Medical School, Piscataway, NJ, July 2, 2003.

Gordon Research Conference, Proteins, Plymouth, NH, June 22-27, 2003.

Chemical Biology Symposium, Yale University, New Haven, CT, May 16, 2003.

Institute of Molecular Biology, University of Oregon, Eugene, OR, April 22, 2003.

Abbott Distinguished Lectureship, *Department of Biological Sciences*, Purdue University, West Lafayette, IN, Nov. 20, 2002.

Department of Biology, University of Puerto Rico, Bayamón, Puerto Rico, October 29, 2002.

Gordon Research Conference, Muscle:Contractile Proteins, New London, NH, June 9-14, 2002.

Département Réponse et Dynamique Cellulaires (DRDC), Grenoble, France, April 2, 2002.

Molecular Motors, Society for General Physiologists, Woods Hole, MA, Sept. 5-9, 2001.

Dept. of Biochemistry and Molecular Biophysics, Washington University School of Medicine, St. Louis, MO, Feb. 28, 2001.

Dept. of Molecular Biophysics and Biochemistry, Yale University, New Haven, CT, Feb. 1, 2001.

National Academy of Sciences, Japanese-American Frontiers of Science, Irvine, CA, Sept. 22-24, 2000.

Biophysics and Biochemistry of Motor Proteins, Banff, Alberta, Canada, Aug. 27- Sept. 1, 2000.

Pennsylvania Muscle Institute Annual Retreat, University of Pennsylvania Nov. 19, 1999.

Molecular Motors, *EMBO Meeting*, Alpbach, Austria, March-April 1998.

Molecular Interactions of Actin, Maui, HI, April 1-6, 1997.

Howard Hughes Medical Institution Frontiers in Biomedical Science Seminar Series, Rutgers University, Newark, NJ, March 25, 1997.

NSF Program in Cellular and Molecular Biodynamics Monthly Seminar Series, Rutgers University, Newark, NJ, March 24, 1997.

“Outreach” Activities and Workshops (as an independent investigator):

Diversifying Faculty with Unbiased Hiring Protocols, Dept. of Physiology and Pennsylvania Muscle Institute, University of Pennsylvania, Philadelphia, PA, April 1, 2025.

Diversifying Faculty with Unbiased Hiring Protocols, Lund University, Sweden, Oct. 1, 2024.

Diversifying Faculty with Unbiased Hiring Protocols, HHMI Scientific Excellence Working Group Retreat, Sept. 12, 2024.

Keynote Speaker, BioMed Amgen Scholars Closing Symposium, August 1, 2024.

Organizer (with Mary Elting, North Carolina State University), The GRC Power Hour™, *Gordon Research Conference on Cytoskeletal Motors,* University of Southern Maine, Portland, Maine, July 7-12, 2024.

Panelist, Compass Scholars, *Fireside Chats*, April 3, 2024. (*on-line event)

Panelist, *Undergraduate speed networking workshop*. 2024 ASBMB annual meeting, San Antonio, TX, March 24, 2024.

Diversifying Faculty with Unbiased Hiring Protocols, Department of Chemistry, Columbia University, New York, NY, Sept. 14, 2023.

Teaching Sensitive Topics in STEM II: Integrating Sensitive Topics into STEM Courses, Yale Univ., New Haven, CT, Apr. 19, 2023.

Invited Speaker, SACNAS Chapter, Columbia University, New York, NY, March 3, 2023.

Keynote Speaker, WesMass Program, Wesleyan University, Middletown, CT, February 10, 2023.

Teaching Sensitive Topics in STEM: Teaching the Work of Controversial Figures in your Field, Poorvu Center for Teaching and Learning, Yale Univ., New Haven, CT, Nov. 15, 2022.

Broadneck High School, Physics Club, *Careers in Biophysics* (Hispanic Heritage Month), Annapolis, MD, Oct. 11, 2022. (*on-line event)

Invited Guest, Clinton Avenue Elementary School, Kindergarten Class, *What does a scientist do?* (Hispanic Heritage Month), New Haven, CT, Sept. 28, 2022.

Invited Speaker, *My experience as a LatinX Professor, Head of College, and Department Chair at Yale*. Yale Alumni Association, Yale University, Sept. 27, 2022.

Invited Speaker, Science of Teaching seminar series, UC San Diego Division of Biological Sciences, San Diego, CA, Jan. 21, 2022.

Invited Panelist, *Biophysicists Discuss "Picture a Scientist"*, Biophysical Society, March 28, 2021. (*on-line event)

Invited Speaker, *NSF REU: PR CLIMB program*, University of Puerto Rico-Río Piedras, San Juan, PR, Nov. 10, 2020. (*on-line event)

Invited Speaker, Undergraduate Biochemistry Society, Stony Brook University, Stony Brook, NY, Oct. 5, 2020. (*on-line event)

Keynote Speaker, Inaugural BioAcCES (Conference for Emerging Scholars), Rockefeller University, New York, NY, Oct. 3, 2020. (*on-line event)

Invited Panelist, Small Group Discussions, 2nd Dr. Samuel M. Nabrit Conference for Early Career Scholars, Brown University, Providence, RI August 3, 2020. (*on-line event)

Invited Speaker, Yale Science Summer Seminar Series (Dean Chang), July 15, 2020. (*on-line event)

Invited Speaker, Amgen Scholars Summer Science Series, July 15, 2020 (*on-line event)

NIGMS Webinar, *How I Got Here: Following Your Own Career Path*, July 2, 2020. (*on-line event)

Plenary Panelist, Re-imagining Graduate Education for the 21st Century, Rackham Graduate School, University of Michigan, Ann Arbor, MI, Feb. 7, 2020.

Keynote Speaker, 2nd PhDay at i3S – Instituto de Investigação e Inovação em Saúde, Universidade do Porto, Porto, Portugal, Sept. 26, 2019.

Keynote Speaker, Inaugural Dr. Samuel M. Nabrit Conference for Early Career Scholars, Brown University, Providence, RI, June 6-7, 2019.

Panelist, Yale BBS Diversity and Inclusion Collective (YBDIC) Career Development Workshop, Yale University, May 8, 2019.

Invited Speaker, Career seminar for graduate students and postdocs, Duke University, Durham, NC, April 2, 2019.

Invited Speaker, Career seminar for Cellular Developmental Biology students, University of Michigan, Ann Arbor, MI, November 28, 2018.

Invited Lecturer, Science on Saturday, Yale Univ., New Haven, CT, Nov. 10, 2018.

Keynote Speaker, BioMed Surf 2018 Symposium, Yale Univ., New Haven, CT, June 7, 2018.

Invited Speaker, *Book and Snake Society*, New Haven, CT, October 12, 2017.

Keynote Speaker, Initiative to Maximize Student Development (IMSD) Symposium, Washington University in St. Louis, St. Louis, MO, October 17, 2017.

Invited Speaker, *Cena a las Seis*, La Casa Cultural Center, New Haven, CT, September 8, 2017.

Invited Panelist, BioMed SURF Program Career Session, Yale University, August 2, 2017.

Young Global Scholars Summer Program, Yale University, New Haven, CT, July 31, 2017.

Keynote Speaker, 15th Annual NHLBI Research Festival, Bethesda, MD, June 9, 2017.

Plenary Speaker, Boston Regional SACNAS Meeting, Boston, MA, April 1, 2017.

Invited Speaker, *Education and Minority Affairs Committee*, Biophysical Society 61st Annual Meeting, New Orleans, LA, February 12, 2017.

Keynote Speaker, BioMed SURF Program Symposium, Yale University, August 1, 2016.

Invited Panelist, "Calling Out Microaggressions" Workshop, Annual North Carolina Biosciences Collaborative for Research Engagement (BioCoRE) Symposium, Duke University, Durham, NC, July 28-29, 2016.

STEM Profession Career Fair, Wilbur Cross High School, New Haven, CT, May 19 2016.

Invited Judge, Invention Convention, Ross Woodward Classical Studies Interdistrict Magnet School (4th grade), New Haven, CT, April 14, 2016.

Invited Speaker, Minority Biomedical Research Support (MBRS) Program, Rutgers University, Newark, NJ, April 13, 2016.

Outreach seminar; *CU Cafe Seminar Series*, U Colorado, Boulder, CO, Feb. 17, 2016.

2015-current Mentor, National Research Mentoring Network (NRMN)

Outreach seminar; Illini Union General Lounge, University of Illinois Urbana Champaign, Urbana, IL April 22, 2014.

2013- current: Virtual Mentor; Building Research Infrastructure and Capacity (BRIC) Program, University of Puerto Rico in Cayey.

Invited Speaker, *Science and Technology Competency and Education Core*, Alliance for the Advancement of Biomedical Research Excellence in Puerto Rico (AABRE-PR), Puerto Rico, Nov 11-15, 2013.
-this "seminar tour" represents four events at the four major AABRE-PR institutions; activities include a seminar presentation as well as meetings with Deans, Researchers and Students:
November 12: University of Puerto Rico (Humacao)
November 13: University of Puerto Rico (Cayey)
November 14: Universidad del Turabo (Gurabo)
November 15: Universidad del Esta (Carolina)

STARS Faculty Panel for incoming freshmen students, Yale University, Nov. 5, 2013.

Invited Speaker, *ASCB Education Committee Undergraduate Session*, American Society for Cell Biology Annual Meeting, San Francisco, CA, Dec. 15-19, 2012.

Invited Speaker, *Science and Technology Competency and Education Core*, Alliance for the Advancement of Biomedical Research Excellence in Puerto Rico (AABRE-PR), Puerto Rico, Nov 13-15, 2012.
-this "seminar tour" represents three events at the three major AABRE-PR institutions; activities include a seminar presentation as well as meetings with Deans, Researchers and Students:
November 13: Inter-American University (Bayamon)
November 14: University of Puerto Rico (Río Piedras)
November 15: Universidad Metropolitana (Cupey, San Juan)

Invited Speaker, *Education and Minority Affairs Travel Awardee Reception*, Biophysical Society 56th Annual Meeting, San Diego, CA, February 25, 2012.

Keynote Speaker, *Biochemistry and Computational and Molecular Biophysics* graduate program

retreat, Washington University in St. Louis, Oct. 26-27, 2012.

Master Class Lecturer, Yale Engineering and Science Weekend, Yale University, New Haven, CT, February 19, 2012.

Invited Speaker, *Heart Hall Lecture,* American Heart Association Board Meeting, Hartford, CT, Dec. 8, 2011.

Invited Roundtable Speaker, *Math and Science (MAS) Familias*, Yale University, Nov. 16, 2011.

Invited Lecturer and Instructor, *IBRO School of Neuroscience: Probing normal and pathological neural cell functions*. San Juan, Puerto Rico, Oct 31 – Nov 7, 2011.

Lecturer, *Yale Science & Engineering Forum*, Wheatley School, Old Westbury, NY, Sep. 8, 2011.

Invited Speaker, *Minority Student Researchers Lounge*, Yale University, April 12, 2011.

Invited Speaker, *Preparing Future Science Faculty - Engaging Science Students in the Science Classroom*, Yale University, New Haven, CT, March 31, 2011.

Master Class Lecturer, Yale Engineering and Science Weekend, Yale University, New Haven, CT, February 20, 2011.

Moving Cell Project, Institute for Advanced Study at the University of Minnesota, Jan. 3-5, 2011.

Invited Speaker, *New Faculty Orientation*, Yale University, August 25, 2010.

Invited Lecturer and Instructor, *Pan American Studies Institute (PASI) Function and Regulation of the Cytoskeleton*, Río de Janeiro, Brazil, August 2-13, 2010.

Invited Lecturer and Instructor, *Pierre-Gilles de Gennes Series, School on Cytoskeleton: Contractility and Motility*, Cargèse, Corsica, France, February 22-27, 2010.

Invited Panelist, *Biomolecular Interactions and Methods Gordon Research Seminar*, Galveston, TX, Jan 16-17, 2010.

Invited Speaker & Panelist, *New Faculty Orientation*, Yale University, August 26, 2009.

Speaker, *Careers in the Biomedical Sciences*, University of Puerto Rico* (Cayey, Bayamón & Mayaguez), Puerto Rico, October, 2008.
**these represent 3 different events*

Invited Speaker, *Heart Hall Lecture,* American Heart Association Founders Affiliate, Wallingford, CT, April 11, 2008.

Speaker, *Careers in the Biomedical Sciences*, University of Puerto Rico* (Cayey, Bayamón & Mayaguez), Puerto Rico, October, 2007.
**these represent 3 different events*

Invited Speaker & Faculty Panelist, Postdoctoral Career Development Lecture Series, Yale University, New Haven, CT, March 27, 2007.

Invited Speaker, SACNAS National Conference, *Science Revolution in Minority Communities: What Progress Have We Made?*, Tampa, FL, Oct. 26-29, 2006.

Faculty Panelist, *Latinos in Science Panel*, Yale University, New Haven, CT, Sept. 27, 2006.

Invited Lecturer and Instructor, *International Training Course: Proteins as Cellular Nano-machines: Molecular Motors, Channels & Pumps*, R. de Janeiro, Brazil, July 10-21, 2006.

Invited Speaker, *Annual National GEM Consortium Symposium, GEM @ 30: A National Imperative*, Chicago, IL, June 27-30, 2006.

Invited Speaker, *Minority Biomedical Research Support Program Seminar Series*, Rutgers University, Newark, NJ, April 17, 2006.

Invited Speaker, *Preparing Future Science Faculty*, Yale University School of Medicine, New Haven, CT, Jan. 19, 2006.

Speaker, *Careers in the Biomedical Sciences*, University of Puerto Rico* (School of Medicine, Mayaguez, Bayamón, Cayey & Río Píedras campuses), Puerto Rico, October 24-30, 2005. **these represent 5 different events*

Invited Speaker, *7th Annual National GEM Consortium, Future Faculty and Professionals Symposium*, Boston, MA, June 29-July 1, 2005.

Invited Speaker, *2nd Annual Northeast Alliance for Graduate Education and the Professoriate Day*, University of Massachusetts, Amherst, MA, May 2, 2005.

Invited Speaker, *Annual Biomedical Research Conference for Minority Students*, Dallas, TX, Nov. 10-13, 2004

Invited Speaker, *Northeast Alliance for Graduate Education and the Professoriate*, Boston University, Boston, MA, Nov. 14, 2003.

Invited Speaker, *Research Initiative for Scientific Enhancement (RISE)*, UMDNJ-Robert Wood Johnson Medical School, Piscataway, NJ, July 2, 2003.

Invited Speaker, *Science Writing After Graduate School*, McDougal Graduate Student Center, Yale University, New Haven, CT, May 8, 2003.

Invited Speaker, *Minorities Affairs Committee Annual Minority Mentoring Symposium*, American Society for Cell Biology (ASCB) Annual Meeting, San Francisco, CA Dec. 14, 2002.

Speaker, *Careers in the Biomedical Sciences*, University of Puerto Rico (Mayaguez, Bayamón, Cayey and Río Píedras campuses), Puerto Rico, October 25-Novermber 1, 2002.

Invited Speaker, *SURF/Leadership Alliance Summer Program 2002, Career Paths for PhD.*, Yale University, New Haven, CT, July 17, 2002.

Invited Speaker, *Working at Teaching, Advanced Sciences Workshop 2002, Future Faculty in the Sciences*, Yale University, New Haven, CT, Feb. 6, 2002.

McNair 2002, "Achieving Scholarship, Leadership and Excellence in the 21st Century", College Park, MD, March 14-17, 2002.

Compact for Faculty Diversity, 2001 Institute on Teaching & Mentoring, Atlanta, GA, Oct. 25-28.

Research Publications (Peer Reviewed):

103. M Michalchik, T Potchernikov, DT Braddock, W Cao & **EM De La Cruz (2024)** Kinetic mechanism of ENPP1 ATPase: Implications for aberrant calcification disorders and enzyme replacement therapy. ***Submitted***.

102. W Cao, TE Sladewski, AT Heaslip & **EM De La Cruz (2024)** Bending stiffness of *Toxoplasma gondii* actin filaments. ***Submitted***.

101. S Guo, Q Wu, J Zhang, B Long, X Hu, B Mafra de Faria, S Scalf, K Karatepe, W Cao, N Tsopoulidis, A Binkercosen, M Yagi, A Weiner, M Kaileh, **EM De La Cruz**, A Roy & K Hochedlinger (2024) Morphomechanic tuning of ERK by actin-TFII-IΔ regulates cell identity. ***Submitted***.

100. X-P Xu, W Cao, MF Swift, NG Pandit, AE Huehn, CV Sindelar, **EM De La Cruz**, D Hanein & N Volkmann **(2024)** High-resolution yeast actin structures indicate the molecular mechanism of actin filament stiffening by cations. ***Comm. Chemistry*** *7*, 164.

99. AJ Ansh, PR Stabach, C Ciccone, W Cao, **EM De La Cruz**, Y Sabbagh, TO Carpenter, CR Ferreira & DT Braddock **(2024)** Quantitative correlation of ENPP1 pathogenic variants with disease phenotype. ***Bone*** *186*, 117136.

98. SS Chavali, SZ Chou, W Cao, TD Pollard*, **EM De La Cruz*** & CV Sindelar* **(2024)** Cryo-EM structures reveal how phosphate release from Arp3 weakens actin filament branches with Arp2/3 complex. ***Nat. Comm.*** *15(1)*, 2059.
(Corresponding authors*)**

97. KL Hvorecny, TE Sladewski, **EM De La Cruz**, JM Kollman, AT Heaslip **(2024)** *Toxoplasma gondii* actin filaments are tuned for rapid disassembly and turnover. ***Nat. Comm.*** *15(1)*, 1840.

96. JA Sexton, T Potchernikov, JP Bibeau, G Casanova-Sepúlveda, W Cao, HJ Lou, TJ Boggon, **EM De La Cruz** & BE Turk **(2024)** Distinct functional constraints driving conservation of the cofilin N-terminal regulatory tail. ***Nat. Comm.*** *15(1)*, 1426.

95. ZG Sun, V Yadav, S Amiri, W Cao, **EM De La Cruz** & M Murrell **(2024)** Cofilin-mediated actin filament network flexibility facilitates 2D to 3D actomyosin shape change. ***Eur. J. Cell. Biol.*** *103 (1)*, 151379.

94. W Cao, EW Taylor & **EM De La Cruz (2023)** Cooperative ligand binding to a double-stranded Ising lattice – application to actin filaments. ***PNAS Nexus*** *2 (10)*, 1-13; pgad331.

93. A Colin, M Orhant-Prioux, C Guérin, Mariya Savinov, W Cao, B Vianay, I Scarfone, A Roux, **EM De La Cruz**, A Mogilner, M Théry & L Blanchoin **(2023)** Friction patterns guide actin network contraction. ***Proc. Natl. Acad. Sci. USA.*** *120(39):* e2300416120; https://doi.org/10.1073/pnas.2300416120.

92. JP Bibeau, NG Pandit, S Gray, N Shatery Nejad, CV Sindelar, W Cao & **EM De La Cruz (2023)** Twist Response of Actin Filaments. ***Proc. Natl. Acad. Sci. USA.*** *120(4)*: e2208536120; https://doi.org/10.1073/pnas.2208536120.

91. M Pochitaloff, M Miranda, M Richard, A Chaiyasitdhi, Y Takagi, W Cao, **EM De La Cruz**, JR Sellers, J-F Joanny, F Jülicher, L Blanchoin & P Martin, **(2022)** Flagella-like beating of actin bundles driven by self-organized myosin waves. ***Nature Physics*** *18*, 1240–1247.

90. S Gray, W Cao, B Montpetit & **EM De La Cruz (2022)** The Nucleoporin Gle1 Activates DEAD-box Protein 5 (Dbp5) by Promoting ATP Binding and Accelerating Rate Limiting Phosphate Release. ***Nucl. Acid. Res.*** *50*, 3998-4011.

89. AK Ganga, MC Kennedy, ME Oguchi, SD Gray, K Oliver, TA Knight, **EM De La Cruz**, Y Homma, M Fukuda & DK Breslow **(2021)** Rab34 GTPase mediates ciliary membrane formation in the intracellular ciliogenesis pathway. ***Curr. Biol.*** *31*, 2895-2905.e7. doi: 10.1016/j.cub.2021.04.075.

88. JP Bibeau, S Gray & **EM De La Cruz (2021)** Clusters of a few bound cofilins sever actin filaments. ***J. Mol Biol.*** *433*, 166833. doi: 10.1016/j.jmb.2021.166833.

87. GM. Hocky, CV Sindelar, W Cao, GA Voth & **EM De La Cruz (2021)** Structural basis of fast- and slow-severing actin-cofilactin boundaries. ***J. Biol. Chem.*** *296*, 100337. https://doi.org/10.1016/j.jbc.2021.100337.

86. PR Stabach, K Zimmerman, A Adame, D Kavanagh, CT Saeui, C Agatemor, S Gray, W Cao, **EM De La Cruz**, KJ Yarema KJ & DT Braddock **(2021)** Improving the Pharmacodynamics and In Vivo Activity of ENPP1-Fc Through Protein and Glycosylation Engineering. ***Clin Transl Sci.*** *14*, 362-372.

85. NG Pandit, W Cao, J Bibeau, EM Johnson-Chavarria, EW Taylor, TD Pollard & **EM De La Cruz (2020)** Force and phosphate release from Arp2/3 complex promote dissociation of actin filament branches. ***Proc. Natl. Acad. Sci. USA.*** *117*, 13519-13528.

84. AS Jermyn, W Cao, WA Elam, **EM De La Cruz*** & MM Lin* **(2020)** Directional allosteric regulation of protein filament length. ***Phys. Rev. E*** *101*, (3-1): 032409. **(**Corresponding authors**)**

83. A Lorenzo, **EM De La Cruz** & EF Koslover **(2020)** Thermal fracture kinetics of heterogeneous semiflexible polymers. ***Soft Matter*** *16*, 2017-24.

82. A Huehn, J Bibeau, AC Schramm, W Cao, **EM De La Cruz*** & CV Sindelar* **(2020)** Structures of cofilin-induced structural changes reveal local and asymmetric perturbations of actin filaments. ***Proc. Natl. Acad. Sci. USA.*** *117*, 1478-84. **(**Corresponding authors**)**

-Highlighted as a *PNAS Commentary* (S. Ono; ***Proc. Natl. Acad. Sci. USA****. 117*, 3349-51)

81. AC Schramm, GM Hocky, GA Voth, JL Martiel & **EM De La Cruz (2019)** Plastic Deformation and Fragmentation of Strained Actin Filaments. ***Biophys J.*** *117*, 453-463.

80. X-F Zhang, V Ajeti, N Tsai, A Fereydooni, W Burns, M Murrell, **EM De La Cruz** & P Forscher **(2019)** Chemotropic regulation of axon growth by myosin II-dependent mechano-catalysis of cofilin activity. ***J. Cell Biol.*** *218*, 2329-2349.

79. M Richard, C Blanch-Mercadera, H Ennomani, W Cao, **EM De La Cruz**, J-F Joanny, F Jülicher, L Blanchoin & Pascal Martin **(2019)** Active cargo positioning in antiparallel transport networks. ***Proc. Natl. Acad. Sci. USA.*** *116*, 14835-14842.

78. HH Katkar, A Davtyan, AEP Durumeric, GM Hocky, AC Schramm, **EM De La Cruz** & GA Voth **(2018)** Insights into the cooperative nature of ATP hydrolysis in actin filaments ***Biophys. J.*** *15*, 1589-1602.

77. T Karlberg, P Hornyak, AF Pinto, S Milanova, M Ebrahimi, M Lindberg, N Püllen, A Nordström, E Löverli, R Caraballo, EV Wong, K Näreoja, A-G Thorsell, M Elofsson, **EM**

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(‡*Authors contributed equally*; *Corresponding authors*)

74. WA Elam, W Cao, H Kang, A Huehn, GM Hocky, E Prochniewicz, AC Schramm, K Nieves-Torres, J Garcia, T Bonello, T Fath, PW Gunning, DD Thomas, GA Voth, CV Sindelar & **EM De La Cruz** **(2017)** Phosphomimetic S3D cofilin binds but only weakly severs actin filaments. ***J. Biol. Chem.*** *292*, 19565-79.

73. D Zimmermann, KE Homa, GM Hocky, LW Pollard, **EM De La Cruz**, GA Voth, KM Trybus & DR Kovar **(2017)** Mechanoregulated inhibition of formin facilitates contractile actomyosin ring assembly. ***Nat. Comm.*** *8*, 703.

72. AC Schramm, GM Hocky, GA Voth, L Blanchoin J-L Martiel & **EM De La Cruz** **(2017)** Actin filament strain promotes severing and cofilin dissociation. ***Biophys. J.*** *112*, 2624-33.

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69. EV Wong, W Cao, J Vörös, M Merchant, Y Modis, DD Hackney, Ben Montpetit & **EM De La Cruz** **(2016)** P_i release limits the intrinsic and RNA-stimulated ATPase cycles of DEAD-box protein 5 (Dbp5). ***J. Mol. Biol.*** *428*, 492-508.

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67. RA Albright, P Stabach, W Cao, D Kavanagh, I Mullen, AA Braddock, MS Covo, G Yang, M Tehan, G Yang, Z Cheng, K Bouchard, ZX Yu, EJ Folta-Stogniew, A Negrete, AJ Sinusas, J Shiloach, G Zubal, JA Madri, **EM De La Cruz** & DT Braddock **(2015)** ENPP1-Fc Fusion Protein Prevents Mortality and Vascular Calcifications in Rodent Model of Generalized Calcification of Infancy. ***Nat. Comm.*** *6*:10006 DOI: 10.1038/ncomms10006.
http://medicalxpress.com/news/2015-12-scientists-therapy-lethal-disease-affecting.html

66. ZA Oztug Durer, RM McGillivary, H Kang, WA Elam, CL Vizcarra, D Hanein, **EM De La Cruz**, E Reisler & ME Quinlan **(2015)** Metavinculin tunes the flexibility and the architecture of vinculin induced bundles of actin filaments. ***J. Mol. Biol.*** *427*, 2782-98.

65. **EM De La Cruz***, J-L Martiel* & L Blanchoin **(2015)** Mechanical heterogeneity favors

fragmentation of strained actin filaments. ***Biophys. J.*** *108*, 2270-81.
-Highlighted as *New and Notable*; **(**Corresponding authors*)**

64. H Kang, MJ Bradley, W Cao, K Zhou, EE Grintsevich, A Michelot, CV Sindelar, M Hochstrasser & **EM De La Cruz (2014)** Site-specific cation release drives actin filament severing by vertebrate cofilin. ***Proc. Natl. Acad. Sci. USA.*** *111*, 17821-6.

63. JS Graham, BR McCullough, H Kang, WA Elam & **EM De La Cruz (2014)** Multi-platform compatible software for analysis of polymer bending mechanics. ***PLoS One*** *9*, e94766 .

62. RA Albright, DL Ornstein, W Cao, WC Chang, D Robert, M Tehan, L Liu, P Stabach, **EM De La Cruz** & DT Braddock **(2014)** Molecular Basis of Purinergic Signal Metabolism by Ectonucleotide Pyrophosphatase/Phosphodiesterases 4 and 1 and Implications in Stroke. ***J. Biol. Chem.*** *289*, 3294-3306. *Selected as *JBC* "Paper of the Week."

61. W Cao & **EM De La Cruz (2013)** Quantitative full time course analysis of nonlinear enzyme cycling kinetics. ***Nature Scientific Reports*** *3*, 2658. DOI:10.1038/srep02658

60. S Xia, M Wood, MJ Bradley, **EM De La Cruz**, WH Konigsberg **(2013)** Alteration in the cavity size adjacent to the active site of RB69 DNA polymerase changes its conformational dynamics. ***Nucl. Acid. Res.*** *41*, 9077-89.

59. WA Elam, H Kang & **EM De La Cruz (2013)** Competitive displacement of cofilin can promote actin filament severing. ***Biochem. Biophys. Res. Commun.*** *438*, 728-31.

58. J Fan, MG Saunders, EJ Haddadian, KF Freed, **EM De La Cruz*** & GA Voth* **(2013)** Molecular Origins of Cofilin-linked Changes in Actin Filament Mechanics. ***J. Mol. Biol.*** *425*, 1225-40. **(**Corresponding authors*)**

57. H Kang, MJ Bradley, BR McCullough, A Pierre, EE Grintsevich, E Reisler & **EM De La Cruz (2012)** Identification of cation binding sites on actin that drive polymerization and modulate bending stiffness. ***Proc. Natl. Acad. Sci. USA.*** *109*,16923-7.

56. RA Albright, WC Chang, D Robert, DL Ornstein, W Cao, L Liu, ME Redick, JI Young, **EM De La Cruz** & DT Braddock **(2012)** NPP4 is a prothrombotic enzyme on the surface of vascular endothelium. ***Blood*** *120*, 4432-40.

55. AC Reymann, R Boujemaa-Paterski, J-L Martiel, C Guérin, W Cao, HF Chin, **EM De La Cruz**, M Théry & L Blanchoin **(2012)** Actin network architecture can determine myosin motor activity. ***Science*** *336*,1310-14.

54. B Ramamurthy, W Cao, **EM De La Cruz** & MS Mooseker **(2012)** Plus-End Directed Myosins Accelerate Actin Filament Sliding by Single-Headed Myosin VI. ***Cytoskeleton*** *69*, 59-69.

53. E Prochniewicz, A Pierre, BR McCullough, HF Chin, W Cao, LP Saunders, DD Thomas & **EM De La Cruz (2011)** Actin filament dynamics in the actomyosinVI complex is allosterically regulated by calcium-calmodulin light chain. ***J. Mol. Biol.*** *413*, 584-92.

52. X Wu, MJ Bradley, Y Cai, D Kümmel, **EM De La Cruz**, FA Barr, and KM Reinisch **(2011)** Insights regarding guanine nucleotide exchange from the structure of a DENN-domain protein complexed with its Rab GTPase substrate. ***Proc. Natl. Acad. Sci. USA.*** *108*, 18672-7.

51. LP Saunders, W Cao, WC Chang, RA Albright, DT Braddock & **EM De La Cruz (2011)**

Kinetic analysis of autotoxin reveals substrate-specific catalytic pathways and a mechanism for lysophophatidic actin distribution. ***J. Biol. Chem.*** *286*, 30130-41.

50. BR McCullough, E Grintsevich, C Chen, H Kang, A Hutchison, A Henn, W Cao, C Suarez, J-L Martiel, JL Blanchoin, E Reisler & **EM De La Cruz (2011)** Cofilin-linked changes in actin filament flexibility promote severing. ***Biophys. J.*** *101*, 151-9.

49. W Cao, MM Coman, S Ding, A Henn, ER Middleton, E Rhoades, DD Hackney, AM Pyle & **EM De La Cruz (2011)** Mechanism of Mss116 ATPase reveals functional diversity of DEAD-box proteins. ***J. Mol. Biol***. *409*, 399-414.

48. C Suarez, J Roland, R Boujemaa-Paterski, H Kang, BR McCullough, A- C Reymann, C Guérin, J-L Martiel, **EM De La Cruz***, Laurent Blanchoin* **(2011)** Cofilin Tunes the Nucleotide State of Actin Filaments and Severs at Bare and Decorated Segment Boundaries. ***Current Biology*** *21*, 862-8. **(*Corresponding authors)**

47. K Shiroguchi*, HF Chin, DE Hannemann, E Muneyuki, **EM De La Cruz*** & K Kinosita, Jr **(2011)** Direct observation of the myosin V recovery stroke. ***PLoS Biology*** *9*, e1001031. doi:10.1371/journal.pbio.1001031
-*Selected as "Weekly Editor's Picks"*
(*Corresponding authors)

46. K Islam, HF Chin, AO Olivares, LP Saunders, **EM De La Cruz***, and TM Kapoor* **(2010)** Myosin V Inhibitor Based on Privileged Chemical Scaffolds. ***Ang. Chem. Intl.*** *49*, 8484-8. **(*Corresponding authors)**

45. K Kucera, AA Koblansky, LP Saunders, KB Frederick, **EM De La Cruz**, S Ghosh, Y Modis **(2010)** Structure-Based Analysis of *Toxoplasma gondii* Profilin: A Parasite-Specific Motif is Required for Recognition by Toll-like receptor 11. ***J. Mol. Biol.*** *403*, 616-29.

44. **EM De La Cruz***, J Roland, BR McCullough, L Blanchoin, & J-L Martiel* **(2010)** Origin of Twist-Bend Coupling in Actin Filaments. ***Biophys. J.*** *99*, 1852-1860. **(*Corresponding authors)**

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37. LP Saunders, A Ouellette, H Zhou, R Bandle, **EM De La Cruz*** & DT Braddock* **(2008)** Identification and validation of small molecule inhibitors against the prometastatic enzyme Autotaxin, a lysophospholipase D. ***Mol. Cancer Ther****. 7*, 3352-62. **(**Corresponding authors**)**

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