## Curriculum Vitae

# Gary J. Pielak

Department of Chemistry University of North Carolina at Chapel Hill

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Home page: www.chem.unc.edu/people/faculty/pielak/group/

#### Research Interests:

Protein chemistry and biophysics, especially in living cells.

## **Employment:**

## July 2015-

Kenan Distinguished Professor of Chemistry

## **August 2013-**

Vice Chair of Facilities in Chemistry

### July 2013-July 2015

Glen H. Elder, Jr. Distinguished Term Professor of Research & Undergraduate Education

## January 2013-December 2014

Program Director, Molecular Biophysics Cluster, Division of Molecular and Cellular Sciences, Directorate for Biological Sciences, the National Science Foundation, Arlington, NC

## January 2000-

Professor of Chemistry, UNC

Professor of Biochemistry & Biophysics, UNC

Member, UNC Lineberger Comprehensive Cancer Center

#### July 2000 - June 2005 & July 2007 - June 2008

Vice Chair of Undergraduate Studies in Chemistry

### **January 2000-June 2006**

Faculty Director, UNC Macromolecular Interactions Facility

#### July 1998 - July 1999

Sabbatical Visitor: Professor Christopher M. Dobson, F.R.S.

Oxford Centre for Molecular Sciences

University of Oxford, England

## January 1995-December 1999

Associate Professor of Chemistry, UNC

#### January 1989-June 2016

Co-director UNC Biomolecular NMR Facility

#### January 1989 - December 1994

Assistant Professor, UNC

Member UNC Integrative Program for Biological & Genome Sciences (previously Program in Molecular Biology and Biotechnology)

#### June 1986 - January 1989

N.I.H Postdoctoral Fellow: R.J.P. Williams, F.R.S., M.B.E, deceased Inorganic Chemistry Laboratory, University of Oxford, England

#### March 1983 - June 1986

N.I.H., Postdoctoral Fellow: Professor M. Smith, F.R.S., deceased Department of Biochemistry University of British Columbia Vancouver, B.C. Canada

#### Education:

### January 1983

Ph.D. in Biochemistry

Laboratory of Professor J. Ivan Legg, deceased

**Department of Chemistry** 

Washington State University, Pullman, Washington

Dissertation: Characterization of Arsanilazo & Sulfanilazo Proteins

#### June 1977

B.A. in Chemistry, *Magna cum Laude* Bradley University, Peoria, Illinois

## Teaching/Mentoring:

## **Past Postdocs and Their Current Employer**

Dr. Guifang Wang (Chinese Academy of Sciences, Wuhan)

Dr. Conggang Li (Chinese Academy of Sciences, Wuhan)

Dr. Austin Smith (KBI)

### **Current Postdocs**

Dr. Thomas Boothby

## **Current Graduate Students**

Mr. Joseph (Joey) Thole

Ms. Shannon Speer

Ms. Candice Crilly

Ms. Samantha (Sam) Stadmiller

Ms. Samantha (Pixie) Piszkiewicz

Mr. Alex Guseman

#### **Past Graduate Students and Their Current Employer**

Dr. Annelise Gorensek Wake Forest University)

Dr. Rachel Cohen (Impact Pharmaceutical Services)

Dr. Austin Smith (KBI)

Ms. Torii Sutherland (Affinergy)

Dr. William Monteith (Alector)

Dr. Mohona Sarkar (St. Judes)

Dr. Jillian Tyrrell (Biocare Medical)

Dr. Yaqiang Wang (Chemistry & Biochemistry, UCLA)

Ms. Laura Benton (Holy Orders)

Dr. Imola-Gabriela Zigoneanu (Biomedical Engineering, UNC)

Dr. Alex Schlesinger (AgBiome)

Dr. Andrew Miklos (NIH)

Mr. Christopher Barnes, M.A. (Pitt)

Dr. Rebecca Ruf

Mr. Matthew Hrabak, M.S. (Naval Surface Warfare Center)

Dr. Kristin Slade (Hobart and William Smith Colleges)

Dr. Lisa Charlton (ERT)

Dr. Brian McNulty (Athenix)

Dr. Julie Bryant (Merck)

Dr. Alina Olteanu (Private practice, Houston)

Dr. Dana Albon (Moses Cone Mem. Hosp.)

Dr. Fang Yi (Centocor)

## Past Graduate Students and Their Current Employer, cont'd

- Dr. Chetan Patel (Lilly)
- Dr. Artemiza Morar (GlaxoSmithKline)
- Mr. Xuming Wang, M.A. (Intel)
- Dr. Gresham Weatherly (AbbVie)
- Dr. Paula Davis-Searles (Diosynth)
- Dr. Jennifer Waldner
- Ms. Devon Allen, M.S. (Diosynth)
- Dr. David Cohen (Advanced Liquid Logic)
- Dr. Aleister Saunders (Drexel)
- Dr. Jennifer Marmorino
- Dr. Donald Doyle (Georgia Tech.)
- Dr. James Beasley, (Venenum)
- Dr. Lixin Chen (New Engl. Biolabs)
- Dr. Zoey Fredericks (Amgen)
- Dr. Douglas S. Auld (Novartis)
- Dr. Stephen F. Betz (Crinetics)
- Dr. Sharon Hilgen-Willis (Integral Molecular)
- Ms. Xuhong Wang, M.A. (Synermore Biologics)

#### **Past STEM Teacher-researcher Fellows**

- Ms. Candice Jackson, Thomasville High School (2011)
- Mr. Oryan Lowry, South Robeson High School (2012)

## **Current Undergraduate Students**

- Mr. Jhoan Aguilar
- Mr. Owen Warmuth
- Mr. Francis Lauzier

#### Past Undergraduates and Where They Went Next

- Mr. Gerardo Perez (MIT)
- Mr. Cody Weyhrich (Virginia Tech)
- Mr. Aakash Mehta (NIEHS)
- Mr. Anthony Arrington (UNC Pembroke)
- Mr. Kenny Nguyen (GSK)
- Mr. Luis Acosta (Actuarial School)
- Mr. Thomas Lanier (UNC)
- Mr. Larry Zhou (NIH)
- Mr. Eduardo Guizan (Pharmacy School, UNC)
- Mr. Emilio Guzman (Med. School, UNC)
- Mr. Joe Lu (Actuary School)
- Ms. Beth Williard (Disney World)
- Mr. Vishavpreet 'Ricky' Singh (Med. School, UNC)
- Mr. Alexander Krois (Grad. School, Scripps)
- Ms. Yuri Yang (Technician, U. Toronto)
- Ms. Amanda Rosett (SURE, back to Susquehanna U.)
- Ms. Kristen Black (Colegio Bilingüe New Horizons, Dominican Republic)
- Mr. Emmanuel Chan (Technician, UNC)
- Ms. Heidi Scronce (Technician, Duke)
- Ms. Niama Sharaf (Grad. School, Pitt)
- Mr. Christopher Barnes (Grad. School, Chemistry, UNC)
- Mr. Evan Lutz (Med. School, ECU)
- Ms. Sandy An (MD/PhD program, Wake Forest, U.)
- Mr. Hao Wu
- Ms. Hayley Fischer (Med. School, ECU)
- Ms. Michelle Mian (Dental School, Harvard)

## Past Undergraduates and Where They Went Next, cont'd

- Ms. Essraa Bayoumi
- Mr. Michael Minder (Med. School, Duke)
- Mr. Chris Kragel (Med. School, ECU)
- Mr. Devin Barrett (Grad. School, Chemistry, UNC)
- Mr. Joseph Batchelor (University of California, Berkeley)
- Mr. Matthew Dedmon (Grad. School, University of Cambridge, UK)
- Mr. Scott Kennedy (Grad. School, UNC)
- Ms. Maria Lind (Grad. School, UGA)
- Mr. Ikey Kakouras (Duke)
- Ms. Kimberly Clay (Med. School, UNC)
- Ms. Amret Thompson (Med. School, Wake Forest)
- Mr. Daniel Hostetter (Grad. School, Stanford)
- Ms. Melisa Lehti (Grad. School, Botany, Wisconsin)
- Mr. Phil Hardwidge (Grad. School, Immunology, Mayo Clinic)
- Mr. Sherif Ghobrial (Grad. School, Env. Sci. & Eng., UNC)
- Mr. Chetan Patel (Grad. School, Chemistry, UNC)
- Ms. Sonja Trojak (Med. School, UNC)
- Mr. Bryan Fine (Med. School, U South Florida)
- Ms. Xecerla Littles (Med. School, Tulane)
- Ms. Shelly Finger (Vet. School, Texas A&M)
- Mr. Luiz Alcazar-Roman (Grad. School, Chemistry)
- Mr. Harvey Chui (Med. School, UNC)
- Ms. Kara Bortone (Grad. School, Chemistry, U. Texas)
- Mr. Sudip Parikh (Grad. School, Biochem., Scripps)
- Mr. Richard Bruick (Grad. School, Biochem., Scripps)
- Ms. Andrea Lee (Grad. School, Biochemistry, Scripps)
- Mr. Mark Dransfield (Med. School, UNC)
- Ms. Jennifer Fencl (Grad. School, Chemistry, UNC)
- Ms. Tori Williams (Grad. School, Yale)

#### Past High School Students and Where They Went Next

- Ms. Malika Rauf (back to North Chapel Hill High)
- Ms. Melanie Wiley (U. Maryland, then MD/PhD program, U. South Carolina)
- Ms. Ashlee Propst (NC State)
- Ms. Hanna Qu (back to Research Triangle High)

#### Courses:

#### **UNC**

Advances in Macromolecular Structure Macromolecular Structure and Metabolism

Macromolecular Interactions

**Practical Protein NMR** 

First Semester General Chemistry

First Year Seminar: You don't have to be a rocket scientist.

General Biochemistry Protein Chemistry

**Enzyme Mechanisms** 

Molecular Biology Laboratory

Practical Oligonucleotide-Directed Mutagenesis

#### Oxford

Biophysics Tutor. New College, 1988

## **Cold Spring Harbor**

Advanced Cloning Course, 1984, 1987 Advanced Techniques in Molecular Biology

## **University of British Columbia**

Site-specific Mutagenesis Directed by Oligodeoxyribonucleotides, 1985

## Service:

### **Current Committee Assignments in Chemistry**

X-Ray Core Director Search, 2018 NMR Core Search, 2018

Mass Spec Core Search, 2018

Approximately 10 Ph.D. Committees

Approximately 5 Undergraduate Honors Committees

## Past Committee Assignments in Biochemistry & Biophysics

Biophysics Search Committees; Campbell, Lee, and Kuhlman

Biomolecular NMR core director search, 2018

### **Past Committee Assignments in Chemistry**

Vice Chair of Chemical Research Instrumentation Teaching & Core Laboratories, 2014-2018

Lecturer Search, 2016-2017

Mass Spectroscopy Core Director Search, 2014

Post Tenure Review Committee, 2011-2012

Graduate Studies Committee, 2010-2011

Graduate Recruiting Committee, 2010-2011

Strategic Planning Committee, 2009 - 2010

2010 Departmental Program Review Committee

NMR Committee

Undergraduate Studies Committee, 1992-2008, 2012-2013

Inorganic Search Committee, 2009

Vice Chair of Undergraduate Studies, 2000-2005, 2007-2008

Chair Selection Committee, 2007

Ad hoc member Parking Committee

Search Committees; Forbes, Thorp, Erie, Morken, and Weeks Genomics Search Committee, 2001 Several Promotion/Tenure Committees

## **University Service**

University Teaching Awards Committee, 2018

University Distinguished Professorship Committee, 2017

Distinguished Dissertation Faculty Review, 2014, 2015

COI Monitoring Committee (Redinbo), 2014

Cross-listed Courses Task Force, 2012

Independent Studies Task Force, 2011

Chair, Curriculum Review Committee, Miscellaneous Subcommittee, 2010

University Research Day Judge, 2010

Chair, Admissions Committee, Biological & Biomedical Sciences Program, 2008 Administrative Boards of the General College, 2003-2013

Mock interviews for the Gates-Cambridge and Churchill Fellowships through the Office of Distinguished Scholarships, 2007

Reviewer, Smallwood Undergraduate Summer Research Grants, 2006

Summer Undergraduate Research Fellowship Committee, 2007-2010, 2015, 2018 Mock interviews for the Gates-Cambridge and Churchill Fellowships through the Office of Distinguished Scholarships, 2007

Undergraduate Orientation (CTOPS) Professor's Perspective sessions, 2006, 2007, 2008, 2015, 2016, 2017

Financial Exigency and Program Change Committee, 2006-2008

Reviewer, Postdoctoral Awards for Research Excellence,

Office of Postdoctoral Services, 2005

Division of Natural Sciences Curriculum Committee

General Education Implementation Committee for the New Undergraduate Curriculum, 2002 - 2003

UNC Curriculum Review, Committee N

**Faculty Council** 

Rhodes Scholarship Mock Interview Committee

Churchill Scholarship Selection Committee

Admissions Committee, Program in Molecular & Cellular Biophysics

Advisory Committee, Curriculum in Applied Sciences

Biomolecular NMR Facility Committee

Macromolecular Interactions Facility Committee

Summer Undergraduate Research Program Selection Committee

Graduate Student Committees:

**Environmental Sciences** 

Engineering, Biochemistry & Biophysics,

Immunology/Microbiology

Cell & Developmental Biology

Presenter, Project Uplift

Presenter, NC Renaissance Program

#### **Regional/National/International Service**

2016 Outside Honors Examiner, Hobart and William Smith Colleges
2016 Chair, Biophysics *in vivo* subgroup of the Biophysical Society
2015 Chair-elect, Biophysics *in vivo* subgroup of the Biophysical Society
2011-2015, Member at Large, Biophysics *in vivo* subgroup of the Biophysical Society

2013-2014 Program Director, Molecular Biophysics Cluster, Division of Molecular and Cellular Sciences, Directorate for Biological Sciences, the National Science Foundation

Faculty Search Committee Biochemistry, Washington State University, 2003

One or more tenure/promotion letters per year

#### Ph.D. Committees

Duke, Georgia Tech., University of Barcelona, Yale

## **Manuscript Referee**

ACS Chemical Biology

Angewandte Chemie

Archives of Biochemistry and Biophysics

**Biochemistry** 

Biochimica et Biophysica Acta

Accounts of Chemical Research

**Biochimie** 

Biomacromolecules

**Biophysical Chemistry** 

**Biophysical Journal** 

Biopolymers

BioTechniques

Biotechnology

ChemBioChem

Chemical Neuroscience

**Chemical Physics Letters** 

Coordination Chemistry Reviews

**FEBS Letters** 

Folding and Design

Inorganica Chimica Acta

**Inorganic Biochemistry** 

Journal of the American Chemical Society

Journal of Biological Chemistry

Journal of Biological Inorganic Chemistry

Journal of Biomolecular NMR

Journal of Chromatography

Journal of Inorganic Biochemistry

Journal of Chromatography

Journal of Magnetic Resonance

Journal of Molecular Biology

Journal of Physical Chemistry

Journal of Physical Chemistry Letters

Journal of Proteome Research

Macromolecules

**Molecular Pharmaceutics** 

Nature

Nature Methods

Nature Structural Biology

Nucleic Acids Research

**Protein Science** 

Proteins: Structure, Function, Genetics/Bioinformatics

Proceedings of the National Academy of Sciences, U.S.A.

Scientific Reports

Softmatter

## **Editorial Duties**

1998-1999 Paper Alerts contributor, Current Opinions in Structural Biology

2011- Editorial Advisor, BMC Biophysics

2017- Editorial Advisory Board. Protein Science

## **Proposal Review:**

#### **Panels**

Graduate Women in Science Scholarships

Internal Review for Lockheed Martin 2010 University Research Initiative

University Cancer Research Fund, 2009

NIH New Innovators Award, 2008, 2009

NSF Molecular Biochemistry Review Panel, 2007, 2009, 2011

NIH Special Emphasis Panel to review proposals in response to RFQ NIH ES2007006, entitled "Scientific Research Analysis," 2007

NIH NIH-NIDDK, Kidney, Urologic and Hematologic Diseases D Sub Committee, 2007

Gordon Research Foundation, 2005

NIH Physical Biochemistry Study Section, Ad hoc, 1996

NIH Metallobiochemistry Study Section, Ad hoc, 2001

NIH Special Emphasis Panel: Technology Development for Biomedical Applications, 2001

NIH Macromolecular Structure & Function A Study Section, Ad hoc, 2011

## Ad Hoc, Mail/Email Reviews

Canada: NSERC

**Czech Science Foundation** 

Danish Council for Independent Research

Israel Science Foundation

Netherlands Organisation for Scientific Research Switzerland: ETH Zurich Research Commission

UK: BBSRC, MRC, Wellcome

U.S.: AAAS Research Competitiveness Program, Cottrell NSF, Nebraska Experimental Program to Stimulate Competitive Research, PRF, Research

Corporation

Wellcome trust/DBT India Alliance

## Meetings Organized/Convened:

Program Committee, Protein Society Symposium, Barcelona, 2015

Program Committee Chair, 26th Annual Protein Society Symposium, 2012

Biophysics Society Subgroup, Biopolymers in vivo, 2012

Chemistry Spectrum: recruiting high school students interested in science to UNC, 2008

Co-chair Proteins Gordon Research Conference, 2007

Vice Co-chair Proteins Gordon Research Conference, 2005

Triangle Biophysics Symposium, 1998

Glaxo-Wellcome UNC Symposium, 1989, 1998

Protein Structure Minisymposium, 1993

Southeastern Magnetic Resonance Conference, 1993

Second Carolina Conference on Protein Engineering, 1989

## Research:

#### **Current Grants**

MRI: Purchase of a 600 MHz Spectrometer for high-sensitivity NMR

Source: NSF CHE 1828183 Total award amount: \$444750

Total period covered: 08/01/18 - 07/31/2020

Impact of cosolutes on protein folding

Source: United States - Israel Binational Science Foundation

Total award amount: \$216,000

Total period covered: 08/01/18-07/31/22

Tardigrade proteins as Novel Pharmaceutical Excipients

Source: North Carolina Biotechnology Center

Total award amount: \$75,000

Total period covered: 07/01/18-06/30/19

MRI: Acquisition of a Mass Spectrometer (Co-PI)

Source: NSF 1726291

Total award amount: \$1,157,551

Total period covered: 08/15/2017 - 07/31/2020

Macromolecular Crowding and Protein Stability In Vitro and in Cells

Source: NSF MCB 1410854 Total award amount: \$ 990,000

Total period covered: 09/01/14-08/31/19

**Encapsulation and Protein Stability** 

Source: NSF CHE 1607359 Total award amount: \$ 353927

Total period covered: 07/01/2016-06/30/2018

#### **Recent Grants**

Intergovernmental Mobility Award

Source: NSF 1410854

Total award amount: \$171,167

Total period covered: 12/31/12 - 06/31/13

Macromolecular Crowding and Protein Stability In Vitro and in Cells

Source: NSF MCB 1051819

Total award amount: \$ 792,597.00 Total period covered: 02/01/11-01/31/14

E.T.S. Walton Visitor Award: Protein Chemistry in Living Cells

Source Science Foundation of Ireland

Total award amount: \$57,484

Total period covered: 01/01/12-12/30/12

In-Cell NMR of Disease-Related Proteins

NIH Pioneer Award 5DP1OD783 Total award amount: \$3,750,000

Total period covered: 10/01/2006 - 09/31/2011

Protein Biophysics in Cells,

Source: NSF MCB 0516547 Total award amount: \$592,931

Total period covered: 03/01/2006 - 02/28/2009

**Electron Transfer Proteins** 

Source: NIH R01GM020488 (Francis Millett, PI) Total award amount: \$87,300 (to my laboratory) Total period covered: 08/01/03 – 07/31/08

This was a subcontract to Professor Francis Millet's NIH grant. Prof. Millett is at the University of Arkansas. Our laboratories have collaborated on protein electron transfer for over 10 years. The funds support our work to produce cytochrome c variant proteins.

Perturbation Calorimetry & Protein Surface Area

Source: PRF 42748-AC4 Total award amount: \$80,000

Total period covered: 05/01/05-08/31/07

Protein Biophysics in Cells

Source: NSF MCB 0212939 Total award amount: \$446,735

Total period covered: 09/01/02 - 08/31/05

Patterned Library Analysis

Source: NIH R01GM058665 (Marshall Edgell, PI)

Total award amount: \$873,000

Total period covered: 07/01/00 – 06/30/04 co-PI with Marshall Edgell on this grant.

Free Radicals, Proteins Aggregates & Parkinson's Disease

Source: NIH R21 ES 10774 Total award amount: \$290,000

Total period covered: 10/01/00 - 9/30/02

Cytochrome c & Apoptosis

Source: NSF MCB0109366 Total award amount: \$145,000 Total period covered: 9/01/01-8/31/02

Expansion of the UNC Macromolecular Interactions Facility

Source: North Carolina Biotechnology Center

Total award amount: \$88,895

Total period covered: 7/01/2001-6/30/2003

Protein Hydrogen Bonding and NMR Redox Shifts of Cytochrome c

Source: PRF

Total award amount: \$60,000

Total period covered: 6/01/00-5/31/02

Replacement of a Failed Centrifuge Rotor

Source: University Research Council

Total award amount: \$4,000

Total period covered: 6/01/00-5/31/02

Bringing State-of-the-art NMR to UNC

Source: University Research Council

Total award amount: \$2,500

Total period covered: 1/01/00-12/31/01

#### Honors:

**DuPont Young Faculty Award** 

Morrow Young Faculty Award

Folding & Binding Paper Alert selector for Current Opinions in Structural

Biology, 1997-1998

Underwood Fund Award (BBSRC, U.K.)

Invited Speaker, Proteins Gordon Conference, 2001

Invited Speaker, Biopolymers Gordon Conference, 2002, 2010

Invited Speaker, RASMB Gordon Conference, 2002

Invited Speaker FASEB Meeting: Protein Folding in the Cell, 2002

Invited Speaker, Toronto Chemical Biophysics Symposium, 2003, 2011

Invited Speaker 13th Conversation in Biomol. Stereodynamics, 2003

Invited Speaker, 18th Annual Gibbs Conference on Biothermodynamics, 2004

Invited Speaker, Eighth Johns Hopkins Folding Meeting, 2005

Invited Speaker, Colorado Protein Stability Conference, 2005

Invited Speaker, Cellular Osmoregulation: Sensors, Transducers & Regulators GRC, 2005

Invited Speaker Trends in Microcalorimetry 2005

Session Chair, Proteins GRC, 2005

Vice co-chair Proteins Gordon Research Conference, 2005

NIH Pioneer Award, 2006

Co-chair Proteins Gordon Research Conference, 2007

Invited Speaker, Southeast Magnetic Resonance Conference, 2007

Invited Speaker, Ions & Osmolytes Symposium, Salt Lake City ACS Meeting, 2008

Plenary Speaker, Beijing Conference & Exhibition on Instrumental Analysis, 2011

Program Committee Chair, 26th Annual Protein Society Symposium, 2012

Science Foundation of Ireland, E.T.S. Walton Visitor Award

Invited Speaker, Molecular Crowding: Chemistry & Physics Meet Biology (Switzerland), 2012

Invited Speaker, 12th Chianti/INSTRUCT Workshop on BioNMR (Italy) 2012

Invited Speaker, EUROMAR (Dublin, Ireland), 2012

Glen H. Elder, Jr. Distinguished Term Professor of Research and Undergraduate Education, 2013-

Invited Speaker, Annual Protein Society Symposium, 2013

Invited Speaker, American Chemical Society National Meeting, New Orleans, April 7-11, 2013

Invited Speaker Graduate School Solvation Science Summer School, Bochum Germany, June 10-13, 2014

Invited Speaker Annual Meeting of the Biophysical Society of Japan. September 25-27, 2014

TC Wang Lecturer, Wuhan Institute of Physics and Mathematics, Chinese Academy of Sciences, March 18, 2015

Kenan Distinguished Professorship 2015-

2016 Chair, Biophysics In Vivo subgroup of the Biophysical Society

Invited Speaker, EMBO Conference on The Biochemistry and Chemistry of Biocatalysis: From Understanding to Design, Oulu, Finland, June, 2016

Carl Brändén Award from the Protein Society, 2016

Invited Speaker, Intrinsically Disordered Proteins: Structure, Function & Interactions, Philadelphia, August 23

Invited Speaker, Nobel Symposium on Protein Folding: From Mechanisms to Impact on Cells, Stockholm, Sweden, June 11-14, 2017
University Mentor Award for Lifetime Achievement from UNC-CH. 2017
Invited Speaker, First International Symposium on Chemistry for Multimolecular Crowding Biosystems, Kobe, Japan, December 12-13, 2017
Invited Speaker, Physical and Quantitative Understanding of Cells at Molecular

## Honors, continued

Level, Chemical Society of Japan, Kyoto, December 14-16, 2017 Invited Speaker, Mini-workshop on Protein Biophysics: Interplay Between Experiments and Theories, Kyoto University, December 18, 2017

Invited Speaker, EMBO Workshop, *In situ* methods in Cell Biology and Cellular Biophysics, Berlin, July 26-28, 2018

Invited Speaker, Gibbs Conference on Biothermodynamics, Carbondale, IL, October 6-9, 2018

Invited Speaker, Appalachian State University, Boone, NC, October 19

Invited Speaker, Wake Forest University, Winston-Salem, NC, November 28, 2018

Invited Speaker, Intrinsically Disordered Protein Subgroup Symposium, Biophysical Society Meeting, Baltimore, March 2, 2019

#### Research Seminars:

#### May 1, 2018-April 30, 2019

Suzhou Institute of Biomedical Engineering, Suzhou, China, May 10 Soochow University, Suzhou, China, May 11

Wuhan Institute of Physics and Mathematics, Chinese Academy of Sciences, Wuhan, China, May 17

EMBO Workshop, *In situ* methods in Cell Biology and Cellular Biophysics, Berlin, July 26-28

 2018 Gibbs Conference on Biothermodynamics, Carbondale, IL, October 6-9
 2019 Intrinsically Disordered Protein Subgroup Symposium, Biophysical Society Meeting, Baltimore, March 2, 2019

## May 1, 2017-April 30, 2018

China-Japan Joint Symposium on Functional Supramolecular Systems, Wuhan China, May 16

Wuhan Institute of Physics and Mathematics, Chinese Academy of Sciences, Wuhan, China, May 19

Nobel Symposium on Protein Folding: From Mechanisms to Impact on Cells, Stockholm, Sweden, June 11-14

New England Biolabs, December 7

First International Symposium on Chemistry for Multimolecular Crowding Biosystems, Kobe, Japan, December 12-13

Physical and Quantitative Understanding of Cells at Molecular Level, Chemical Society of Japan, Kyoto, December 14-16

Mini-workshop on Protein Biophysics: Interplay Between

Experiments and Theories, Kyoto University, December 18

Penn State University, February 22

UNC-CH, Department of Biochemistry and Biophysics, April 24

#### May 1, 2016-April 30, 2017

Appalachian State University, April 21

University of Wisconsin, March 3

Loyola University New Orleans, February 13

ACS Meeting, Philadelphia, August 21-25

Annual Protein Society Symposium, Baltimore, July 16-19

Ruhr-University Bochum, Germany, June 23

Leibniz-Institut für Molekulare Pharmakologie (FMP), Berlin, June 20

EMBO Conference on The Biochemistry and Chemistry of Biocatalysis: From Understanding to Design, Oulu, Finland, June 12-15

#### May 1, 2015-April 30, 2016

Higher Order Structure Conferences, Long Beach, CA, April 11-13 Hobart and William Smith Colleges, April 28

#### May 1, 2014-April 30, 2015

Workshop on Macromolecular Crowding, Telluride, CO, June 23-27 Washington Area NMR Group, December 4 California Separation Science Society, Higher Order Structure (CASSS-HOS) April 11-13

#### May 1, 2014-April 30, 2015

Graduate School Solvation Science Summer School, Bochum Germany, June 10-13

Novartis, Emeryville, July 22

Annual Meeting of the Biophysical Society of Japan, Sapporo, September 26 Tokyo Metropolitan University, September 30

University of North Carolina-Chapel Hill, October 8

University of Virginia, November 7

School of Life Sciences, U. of Science & Technology of China, Hefei, March 13

TC Wang Lecturer, Wuhan Institute of Physics and Mathematics, Chinese Academy of Sciences, March 18

#### May 1, 2013-April 30, 2014

Workshop on Macromolecular Crowding, Telluride, CO, June 25-29

Annual Protein Society Symposium, Boston, July 20-24

National Institute of Environmental Health Science, RTP, NC, September 5

University of Maryland, November 18

University of Puerto Rico, Rio Piedras Campus, November 22

Simon Fraser University, Vancouver, BC Canada, December 6

University of British Columbia, Vancouver, BC Canada, December 9

Florida State University, Tallahassee, January 21

Johns Hopkins, March 10

UNC Greensboro, March 28

#### May 1, 2012-April 30, 2013

University of Durham (UK), June 1

National University of Ireland, Galway, May 28

Molecular Crowding: Chemistry and Physics meet Biology (Switzerland), June 12

12th Chianti/INSTRUCT Workshop on BioNMR (Italy) June 18

EUROMAR (Dublin, Ireland), July 1

University of Tennessee, October 17

ACS Southeastern Regional Meeting (SERMACS). Raleigh, NC, November 16

Drexel University, February 18

University of Pennsylvania, Hershey, March 18

American Chemical Society National Meeting, New Orleans, April 7-11

## May 1, 2011-April 30, 2012

Yale, March 19

King's College London, January 20

National Institute for Medical Research (UK), January 19

University of Oxford (UK), January 17

National Institutes of Health Pioneer Symposium, September 21

Beijing Conference & Exhibition on Instrumental Analysis, Oct 13

National Science Foundation, June 8

University of Minnesota Duluth, May 26

#### May 1, 2010-April 30, 2011

University of Toronto, June 3

Biopolymers Gordon Conference, June 6-11

IRB Barcelona, July 2

Swedish Royal Academy of Sciences, August 26

James Madison, September 3

Biological Diffusion & Brownian Dynamics Brainstorm 2 (Heidelberg, Germany)

October 11

University of Indiana, October 25

National Science Foundation, November 10

University of Wisconsin, Madison, November 23

Toronto Chemical Biophysics Symposium, April 9

# May 1, 2009 – April 30, 2010

University of Richmond, September 4 UCLA, March 11

Davidson, January 29

## May 1, 2008 – April 30, 2009

Biophysical Society Workshop on Protein Folding, Stability, and Aggregation, Boston, March 3

Symposium on the Influence of Ions & Osmolytes on Aqueous Macromolecules, ACS Meeting, Salt Lake City, March 23

Workshop on Macromolecular Crowding, Telluride, CO, July 6-10

UNC Wilmington, September 28 Appalachian State University, November 21

### May 1, 2007 - April 30, 2008

UNC Chemistry, September 12 NIH Pioneer Symposium, September 19 University of Kansas, October 5

Southeastern Magnetic Resonance Conference, U. Alabama November 10 Honors Chemistry, UNC, November 19

## May 1, 2006 - April 30, 2007

UNC, Chemistry, September 6

Duke, Biochemistry, October 2

University of Pennsylvania, Biophysics, October 18

Drexel University, Bioscience and Biotechnology, October 19

Virginia Tech, Chemistry, January 26

Biophysical Society, Intrinsically Disordered Proteins Subgroup, Baltimore, March 3

Seeing is Believing: The Future of Molecular and Biomolecular Imaging Meeting, Duke, March 11

UNC, Biochemistry & Biophysics, April 17

#### May 1, 2005 – April 30, 2006

Colorado Protein Stability Conference, Breckenridge, CO Trends in Microcalorimetry, Boston, MA

Cellular Osmoregulation: Sensors,

Transducers & Regulators GRC, Newport, RI

UNC Chemistry, Chapel Hill, NC

UNC Biochemistry & Biophysics, Chapel Hill, NC

Cold Spring Harbor Meeting on the Intracellular Molecular Environment,

Cold Spring Harbor, NY

University of Pittsburgh, Pittsburgh, PA

University of Denver, Denver, CO

University of Colorado, Health Sciences, Denver, CO

U. Massachusetts, Amherst, MA

NIH, Bethesda, MD

## May 1, 2004 – April 30, 2005

Northern Illinois University, DeKalb, IL Rutgers University, New Jersey Johns Hopkins Folding Meeting, St. Michaels, MD Duke University, Durham University of Richmond, Chemistry

#### May 1, 2003 - April 30, 2004

Gibbs Conference, Carbondale, IL
Microcalorimetry Conference, Atlanta
Yale University, Molecular Biophys. & Biochemistry
Emory University, Chemistry
University of Kentucky, Biochemistry
Wake Forest University, Physics
UNC-Chapel Hill, Chemistry
13th Conversation in Biomolecular Stereodynamics, SUNY Albany

## May 1, 2002 - April 30, 2003

Biopolymers Gordon Conference
FASEB Protein Folding in the Cell Meeting
Toronto Biophysics Symposium
Rensselaer Polytechnic, Chemistry
Penn. State, Chemistry
Washington University, Biochemistry
UNC-Chapel Hill, Biochemistry & Biophysics
NC State University, Biochemistry
UNC-Chapel Hill, Chemistry
Drexel University, Biology
University of Pennsylvania, Biophysics

## May 1, 2001 – April 30, 2002

Proteins Gordon Conference
Reversible Assoc. in Structural Molecular Biology Gordon Conference
Boston ACI Proteomics Symposium
University of Virginia, Biophysics
Washington State University, Chemistry
Sunesis, Inc., South San Francisco
Stanford University, Biochemistry
Georgia Tech., School of Chemistry and Biochemistry.
Georgia State University, Chemistry

#### Patents:

Tardigrade disordered proteins as protein stabilizers US provisional patent application 62/375,238, August 15, 2016 Boothby T, Goldstein B, Pielak GJ, Piszkiewicz S, Brozena A

Device for particulate NMR samples in fluid US 8,773,130 B2 Pielak GJ, Barnes C, Sharaf N, Young G, Pinero F, Charlton L, Seagle C

## Publications: [167 total, >7900 citations, h-index (Google Scholar) 52]

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