September 2022

Curriculum Vitae

Ann H. West
Grayce B. Kerr Centennial Chair
Department of Chemistry and Biochemistry, University of Oklahoma
Stephenson Life Sciences Research Center (SLSRC)
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Education:
B.A. in Biology, June 1983, Wesleyan University, Middletown, CT
Ph.D. in Genetics, December 1991, Yale University, New Haven, CT

Positions held:

1981 – 1983	Undergraduate Research Assistant, Wesleyan University, Middletown, CT Laboratory of Dr. William Firshein
1983 – 1984	Research Assistant, University of Connecticut Health Center, Farmington, CT Laboratory of Dr. Stanley Cohen
1984 – 1985	Research Assistant, Wesleyan University, Middletown, CT Laboratory of Dr. Lewis Lukens
1985 – 1991	Graduate student, Yale University, New Haven, CT Laboratory of Dr. Arthur L. Horwich
1991 – 1996	Jane Coffin Childs Postdoctoral Fellow, Center for Advanced Biotechnology and Medicine, UMDNJ, Piscataway, NJ., Laboratory of Dr. Ann M. Stock
1996 – 2002	Assistant Professor, Dept. of Chemistry and Biochemistry, University of Oklahoma (OU)
2001 – 2005	Edith Kinney Gaylord Presidential Professor, Dept. of Chemistry & Biochemistry, OU
2002 – 2006	Associate Professor, Dept. of Chemistry and Biochemistry, OU
2006 – present	Professor, Dept. of Chemistry and Biochemistry, OU
2008 – 2015	Joseph A. Brandt Professor, Dept. of Chemistry and Biochemistry, OU
2007 – present	Member, Cellular and Behavioral Neurobiology Graduate Program, OU
2008 – present	Chief Coordinator, Oklahoma Structural Biology Nexus
2012 – present	Director and PI, NIH-sponsored Oklahoma COBRE in Structural Biology, OU
2014 – present	Director, Price Family Foundation Institute of Structural Biology, OU
2015 – present	Grayce B. Kerr Centennial Chair, Dept. of Chemistry and Biochemistry, OU
2018 – 2019	Faculty Fellow, Office of the Vice President for Research, OU
2019 – present	Associate Vice President for Research and Partnerships, OU

Honors and Awards:

1992-1995	Postdoctoral Fellowship, Jane Coffin Childs Memorial Fund for Medical Research (UMDNJ)
1997	Junior Faculty Research Award (OU)
1999	Cottrell Scholar Award (Research Corporation)
2001	Irene Rothbaum Award, Outstanding Assistant Professor, OU College of Arts & Sciences
2001	Edith Kinney Gaylord Presidential Professorship (OU)
2005	Most Inspiring Faculty Award (OU Scholar Athlete Banquet)
2008	Joseph A. Brandt Professorship (OU)
2015	Grayce B. Kerr Centennial Chair (OU)
2021	Fellow, American Association for the Advancement of Science

Membership in Professional Societies/Editorial and Advisory Boards:

1991 – present	American Association for the Advancement of Science
1995 – present	American Crystallographic Association
1998 – present	American Chemical Society
2000 – present	American Society for Microbiology

2008 – present Oklahoma Structural Biology Nexus
2013 – present Editorial Advisory Board, *Protein Science*
2014 – present Executive Committee, Oklahoma Shared Clinical and Translational Resources
2015 – present Scientific Advisory Board, Laboratory of Biomolecular Structure and Function (OUHSC)
2016 – 2017 Executive Committee, U.S. DOT Southern Plains Transportation Center (OU)
2018 – present Project Evaluation Committee for the Stanford-SLAC Cryo-EM National Center
2019 – 2020 Aeroecology NSF-NRT Advisory Board (OU)
2020 – present Member, Governor's Science and Innovation Council
2021 – present American Society for Biochemistry and Molecular Biology (ASBMB)
2021 – present ASBMB Public Affairs Advisory Committee
2022 – present ASBMB Public Affairs Advisory Executive Committee

Teaching Experience (at OU):

Undergraduate Courses (3-credit courses)
General Chemistry I (CHEM 1315; Sp97; Sp98; Sp02; Sp04; Fa04; Fa05; Fa06; Sp08; Fa10; Sp11)
Introductory Biochemistry Laboratory (CHEM 3652; Fa96)
Introduction to Biochemical Methods (CHEM 3753; Sp00; Sp01)
Senior Project – Biochemistry Capstone course (CHEM 4923; Fa14; Fa16)

Graduate Courses (3-credit courses)
Protein Structure and Function (CHEM 6853; Fa97; Fa98; Fa01; Fa03; Sp06; Fa09; Sp13)
Introduction to Biochemical Methods (CHEM 6813; Fa99; Fa00; Fa07; Fa08; Fa11; Sp14)
Biochemistry Graduate Student Seminar (CHEM 6721; 1996-present)
Macromolecular Structure and Function (CHEM 5750; Fa18)
Special Topics in Structural Biology (CHEM 5760; Fa18)

Student/Postdoctoral Advisees (at OU):

Research Assistant Professor
Smita Menon, Ph.D., 2014 – 2022

Postdoctoral associates
Megan Kempher, Ph.D., 2020 - present
Skyler Hebdon, Ph.D., 2018 - 2020
Smita Menon, Ph.D., 2012 – 2014
Babak Andi, Ph.D., 2008 – 2010
Xiaodong Zhao, Ph.D., 2005 – 2009
Hui (Toni) Tan, Ph.D., 2007 – 2008
Daniel Copeland, Ph.D., 2006 – 2007
Fabiola Janiak-Spens, Ph.D., 1996 – 2006
Stace Porter, Ph.D., 2004
Muthuvel Suresh Kumar, Ph.D., 2000 – 2001
Lilian Chooback, Ph.D., 2001 – 2002

Graduate students
Savannah Morris, Ph.D. graduate student; Fa18 – present
Kriti Shukla, M.S. graduate; Fa18 – Sp22; M.S. thesis: "Biochemical Characterization of Sporulation-Related Histidine Kinases in *Clostridioides difficile*"
Skyler Hebdon, Ph.D. graduate; Fa13 – Fa18; Ph.D. thesis: "Determinants of Gene Targeting and Regulation by Response Regulators in *Clostridioides difficile*"
Bosun (Rachel) Kim, M.S. (non-thesis) graduate; Fa16 – Fa18
Jamie Sykes, M.S. (non-thesis) graduate; Sp13 – Sp17

Emily (Markadakis) Kennedy, Ph.D. graduate; Sp10 – Su16; Ph.D. thesis: "Biochemical Characterization of Phosphorelay Signaling Protein, Ypd1, from *Cryptococcus neoformans* and *Saccharomyces cerevisiae*"

Clay Foster, Ph.D. graduate; Sp12 – Su16; Ph.D. thesis: "A Computational Approach for Accessing Phosphorylated Response Regulator Conformations and Signaling Complexes Involving the Fungal Phosphorelay Protein Ypd1"

Katie Branscum, Ph.D. graduate; Fa11 – Fa15; Ph.D. thesis: "Structural and Mutagenesis Studies of the Yeast Phosphorelay Signaling Proteins Ypd1 and Ssk1"

Sana Fazal, M.S. (non-thesis) graduate; Fa13 – Sp14

Brittany Kitchens, M.S. (non-thesis) graduate; Sp09 – Su13

Shelley Plant, M.S. (non-thesis) graduate; Sp10 – Fa11

Lu Zhou, M.S. (non-thesis) graduate; Fa08 – Su11

Joshua Trice, M.S. (non-thesis) graduate; Fa09 – Su11

Alla (Dubrovska) Kaserer, Ph.D. graduate; Fa03 – Fa09; Ph.D. thesis: "Effect of Osmolytes on Regulating the Activities of the SSK1 Response Regulator from *Saccharomyces cerevisiae*"

Tao Chen, M.S. (non-thesis) graduate; Fa04 – Sp07

Hui Tan, Ph.D. graduate; Fa00 – Sp07; Ph.D. thesis: "Functional Characterization of the Phosphorelay Protein MPR1 from *Schizosaccharomyces pombe*"

Hengyu Xu, Ph.D. graduate; joint student with Professor Cook; Fa02 – Sp07; Ph.D. thesis: "Mechanism of Saccharopine Dehydrogenase: The Last Enzyme in the Lysine Biosynthetic Pathway in *Saccharomyces cerevisiae*"

Daniel Copeland, Ph.D. graduate; joint student with Professor Richter-Addo; Sp00 – Su06; Ph.D. thesis: "A Study of the Interactions of Nitric Oxide and Nitric Oxide Containing Molecules With Heme Proteins"

Babak Andi, Ph.D. graduate; joint student with Professor Cook; Fa01 – Fa05; Ph.D. thesis: "Studies on Selected Enzymes of the α-Aminoadipate Pathway for Lysine Biosynthesis in *Saccharomyces cerevisiae*"

Stace Porter, Ph.D. graduate; Sp97 – Fa03; Ph.D. thesis: "Identification and Analysis of the Response Regulator Binding Site on the Surface of the Histidine-Containing Phosphotransfer Protein YPD1 in *Saccharomyces cerevisiae*"

Nadine Keller, M.S. graduate; Fa00 – Sp02; M.S. thesis: "The Function of the 'EF'-Linker Region in the Phosphorelay Protein YPD1"

Qingping Xu, Ph.D. graduate; Fa96 – Fa01; Ph.D. thesis: "The Structure and Function of YPD1, a Histidine-Containing Phosphotransfer Protein from Yeast"

<u>Undergraduate students</u>

Dannielle Branam, 1996 – 1997

Gretchen Twork, 1996 – 1998; Honors thesis: "Cloning and Expression of the SLN1 Histidine Kinase Domain, a Yeast Protein Involved in Osmoregulation"

Viet Nguyen, 1996 – 1998; Honors thesis: "Cloning, Purification, and Crystallization of the Yeast Phosphorelay Protein YPD1"

David Magstadt, 1996 – 1997

Michael Gurfinkel, 1996 – 1998

Jeffrey Sparling, 1997 – 1998

Sayeda Asad, 1997 – 1999; Honors thesis: "Cloning, Purification, and Characterization of a YPD1 Mutant Phosphorelay Protein"

David Sparling, 1998 – 2001; Honors thesis: "Characterization of SSK1-R2, a Yeast Response Regulator Domain"

Michael Vogt, 1999

Jennifer Larsen, 1999 – 2001

Ian Fischer, 2001

Hamed Khalili, 2001 – 2002

Oanh Pham, 2001 – 2002

Amanda Ward, 2004 – 2007; Honors thesis: "Expression, Purification, and Characterization of Phosphorelay Signaling Proteins from *Saccharomyces cerevisiae* and *Schizosaccharomyces pombe*"
Brian Howard, 2005
Sini Babu, 2006 – 2007
Christopher Pack, 2007 – 2010; Honors thesis: "Purification and crystallization of MPR1, a yeast histidine phosphotransfer protein, and characterization of mutant SSK1-R2, a yeast osmoregulatory response regulator"
Valerie (Norris) Pack, 2007 – 2010
Kjell Sawyer, 2007
Carolyn Maher, 2008
Maryum Shahzad, 2013 – 2014; Honors thesis: "A mutation of Ile 518 to Ser in receiver domain of Ssk1 in *Saccharomyces cerevisiae* disrupts interaction with Ypd1"
Emily Frech (Cornell U.), Summer 2014
Graycen Wheeler, 2013 – 2015
Margaret Bourlon, 2015
Danielle Ketterer, NSF REU student, Summer 2015
Abby Ballard, NSF REU student, Summer 2016
Krutik Soni, 2013 – 2017; Senior thesis: "Characterization of Cellular Signal Transduction Proteins and Development of an *In Vitro* Transcription System"
Seung Ah (Ashley) Kang, NSF REU student, Summer 2017
James Maher, 2016 – 2018
Ashley Lesser, 2018
Jared Haymore, 2019
Alexis McCalla, 2018 – 2021; Senior thesis: "Studies of RolA and HK CD1579, Members of Two-Component Regulatory Systems in *Clostridioides difficile*"

<u>High School Student</u>
Krutik Soni, OSSM, Summer 2012, Summer 2013
Abby Ballard, Norman High School, Summer 2013, 2014, 2015

<u>Research technician</u>
Jennifer Gray, 2000 – 2004

<u>Visiting Faculty</u>
Professor George B. Richter-Addo (Inorganic Division); Sabbatical, Jan. 2000 – Dec. 2000
Professor Hui Tan, Cameron University, Summer 2010
Professor John McMurray, Oklahoma City Community College, Summer 2010

Professional Service (at OU):
<u>Department</u>
Secretary at Departmental Faculty Meetings (Fa96 – Su98)
Member, Departmental General Chemistry Committee (Sp97 – Su98)
Member, Departmental Library Committee (Fa98 – Su99)
Member, Departmental Biochemistry Faculty Search Committee (Fa99 – Sp00)
Faculty Advisor, Phi Lambda Upsilon (Sp98 – Sp00)
Member, Departmental APEX Magazine Committee (Fa00 – Sp01)
Member, Departmental Physical Chemistry Faculty Search Committee (Fa01 – Sp02)
Chair, Departmental Seminar Committee (Sp02 – Sp03)
Member, Departmental Critical Space Needs Committee (Sp01 – Sp02)
Member, Departmental Undergraduate Committee (Fa03 – Sp05)
Member, Departmental Faculty Search Committee (Fa04 – Sp05)
Member, Departmental General Chemistry Textbook Selection Committee (Sp05 –Su05)
Secretary, Biochemistry Division (Fa04 – Su05)

Member, Departmental Ad Hoc Committee on IT Support (Fa05)
Member, Departmental Program Review/Strategic Planning Committee (Fa04 – Sp05)
Chair, Departmental Seminar Committee (Sp05 – Su06)
Member, Departmental *Ad hoc* Chair Election Committee (Sp06)
Chair, Departmental "Vision" Committee (Fa05 – Fa06)
Member, Departmental Executive Committee (Committee "A") (Sp06 – Su07)
Chair, Departmental Macromolecular Crystallography Staff Search Committee (Sp08 – Su08)
Departmental Graduate Liaison (Su06 – Sp09)
Member, Departmental Graduate Committee (Su06 – Sp09)
Member, Departmental General Chemistry Textbook Selection Committee (Su10)
Member, Departmental New Building Committee (Fa05 – Sp10)
Member, Departmental Biochemistry Faculty Search Committee (Sp08 – Sp10)
Chair, Departmental Graduate Committee (Fa10 – Su12)
Member, Departmental General Chemistry Committee (Sp12)
Member, Departmental Strategic Planning Committee (Sp12)
Chair, Departmental Faculty Search Committee (X-ray Crystallography) (Su13 – Sp14)
Member, Departmental Internal Chair Search *ad hoc* Committee (Fa13)
Member, Departmental Faculty Search Committee (Natural Products) (Fa12 – Sp14)
Chair, Departmental Faculty Search Committee (Structural Biology-Natural Products) (Fa12 – Fa14)
Member, *Ad hoc* Committee for Graduate Curriculum Reform (Fa14 – Sp15)
Chair, Departmental Seminar Committee (Fa12 – Sp17)
Chair, Departmental Research Support Services Users Group Committee for Macromolecular Crystallography (Fa03 – present)
Member, Protein Production Core Advisory Committee (Sp15 – Sp18)
Chair, Macromolecular Crystallography Laboratory Advisory Committee (Sp17 – Sp18)
Member, Departmental Graduate Recruiting Committee (Sp17 – Sp18)
Member, Departmental Executive Committee (Committee "A") (Su17 – Fa18)
Member, Macromolecular Crystallography Laboratory Advisory Committee (Su18 – present)
Chair, Protein Production Core Advisory Committee (Su18 – Su20)
Member, Protein Production and Characterization Core Advisory Committee (Su20 – present)
Member, Departmental Graduate Committee (Fa21 – Su22)
Member, Faculty Search Committee (Fa22 – present)

College
Member, Zoology Department Faculty Search Committee (Fa00 – Sp01)
Member, College of Arts & Sciences Executive Committee (Fa01 – Fa02)
Member, College of Arts & Sciences Advisory Committee on Women's Issues (Fa00 – Sp04)
Member, College of Arts & Sciences Irene Rothbaum Award Selection Committee (Sp05)
Founding Member, College of Arts & Sciences Teaching Scholars Initiative (Sp03 – Sp05)
Chair, College of Arts & Sciences Executive Committee (Fa03 – Sp05)
Member, College of Arts & Sciences Integrative Life Sciences Initiative Faculty Search Committee (Fa07 – Fa08)
Member, College of Arts & Sciences Irene Rothbaum Award Selection Committee (Sp08)
Member, College of Arts & Sciences Academic Appeals and Misconduct Committee (Fa06 – Sp07)
Member, College of Arts & Sciences Tenure and Promotion Advisory Committee (Fa06 – Sp08)
Member, College of Arts & Sciences Dean's Search Committee (Fa13 – Sp14)
Member, College of Arts & Sciences Tenure and Promotion Committee (Fa14 – Sp15)
Member, College of Arts & Sciences Tenure and Promotion Committee (Fa16 – Sp17)
Member, College of Arts & Sciences Dean's Search Committee (Fa17 – Sp18)
Member, Physics Department Faculty Search Committee (Fa19 – Sp22)

University
Member, Graduate College Ph.D. Dissertation Prize Committee (Sp02)

Member, University's Life Sciences Taskforce Committee (Fa03 – Sp04)
Member, University Faculty Appeals Board (Fa05 – Sp09)
Member, University Academic Program Review Committee (Fa10 – Sp11)
Member, University Natural Sciences General Education Sub-Committee (Sp11)
Member, University Ph.D. Dissertation Prize Committee (Sp12)
Member, University *ad hoc* STEM Education Task Force (Fa12 – Sp13)
Member, University Strategic Organizations Assessment Task Force (Sp15 – Fa15)
Member, U.S. DOT Southern Plains Transportation Center Executive Committee (Fa16 – Fa17)
Member, VPR Faculty Postdoctoral Advisory Committee (Sp17 – Fa18)
Member, OU Aeroecology National Research Traineeship (NRT) Board Member (Sp19 – Sp20)
Faculty Fellow, Office of the Vice President for Research (Fa18 – Fa19)
Member, Gallogly College of Engineering Dean Search (Fa19 – Sp20)
Member, Graduate College, Postdoctoral Advisory Committee (Fa19 – Fa20)
Co-Chair, Faculty Retention Advisory Committee (Fa19 – Su20)
Chair, Faculty Retention Advisory Committee (Su20 – present)
Member, International Student Response Task Force (Fa20 – present)
Member, University Conflict of Interest Committee (Fa20)
Co-lead, Research Strategic Plan working for Future of Health (Fa19-Fa20)
Member, Environmental Health Safety Officer director search (Fa21)
Member, Strategic Faculty Recruitment Review Committee (Su21 – Fa22)
Sub-committee Chair, Higher Learning Commission Reaccreditation Committee (Sp22 – present)
Co-chair, Integrated Life Sciences Institute Director Search (Sp22 – present)

Professional Service (external to OU):
Manuscripts reviewed for the following journals: *Acta Crystallographica (Sect. D), Biochimica Biophysica Acta, Biochemistry, BMC Systems Biology, Current Genetics, Eukaryotic Cell, Journal of Bacteriology, Journal of Biological Chemistry, Journal of Molecular Biology, Microbiology, Mitochondrion, Molecular Microbiology, Plant Physiology, PLoSONE, Proceedings of the National Academy of Sciences (USA), Structure, Trends in Genetics*

Grant proposals reviewed (*ad hoc)* for the National Science Foundation, Research Corporation for Science Advancement, and American Chemical Society Petroleum Research Fund.

Grant Review Panelist for Joint NSF-NIH Program in Mathematical Biology (Sept. 2004)
Ad hoc member, NIH Molecular Structure and Function-C Study Section (June 2005, June 2006)
Ad hoc member, NIH Prokaryotic Cell and Molecular Biology Study Section (Feb. & June 2007)
Ad hoc member, NIH Molecular Structure and Function-E Study Section (Oct. 2007)
Regular member, NIH Prokaryotic Cell and Molecular Biology Study Section (2008–2012)
Grant Review Panelist for NSF Structural Biochemistry Program (Sept. 2012)
Grant Review Panelist for NIH P41 Biomedical Technology Research Resources (Aug. 2014)
Grant Review Panelist for NSF Protein Structure and Recognition CAREER Panel (Oct. 2014)
Member, NIH Special Emphasis Panel, COBRE Phase 2 applications (March 2016)
Member, NIH Special Emphasis Panel, COBRE Phase 1 applications (July 2016)
Member, NIH/NIGMS Legacy Community-Wide Scientific Resources (R24) reviewer (March 2017)
Panel Chair, NIH/NIGMS Legacy Community-Wide Scientific Resources (R24) review (November 2019)
Member, NIH Special Emphasis Panel, COBRE Phase 3 applications (November 2020)
Panel Chair, NIH/NIGMS Legacy Community-Wide Scientific Resources (R24) review (July 2021)
Panel Chair, NIH Special Emphasis Panel, COBRE Phase 2 applications (Feb. 2022)

Vice-Chair (2008) and Chair (2010), Gordon Research Conference on Sensory Transduction in Microorganisms (STIM), Ventura, CA

Member, Oklahoma Shared Clinical and Translational Resources Executive Committee, Oklahoma Medical Research Foundation (Fa14 – present)

Member, Laboratory for Biomolecular Structure and Function (LBSF) Advisory Committee, OUHSC (Sp15 – present)

Member, Project Evaluation Committee for the Stanford SLAC CryoEM National Center (Fa18 – present)

Research Support:

Active:

West, A.H. (PI), NIH NIGMS, Grant #P30GM145423, 2022-2027; $5,721,420; "Oklahoma COBRE in Structural Biology" (Phase 3)

West, A.H. (PI), NIH NIGMS, Grant #P20GM103640, 2017-2022 (no-cost extension until May 2023); $10,524,241; "Oklahoma COBRE in Structural Biology" (Phase 2)

West, A.H. (PI), Research Corporation for Science Advancement (RCSA) Cottrell SEED (Singular Exceptional Endeavor of Discovery) Award #27333; 2020 – 2022 (no-cost extension until Oct. 2023); $50,000; "How does an anaerobic microbial pathogen sense oxygen stress?"

West, A.H., Grayce B. Kerr Centennial Chair endowment funds (OU), 2015 – present

Past:

West, A.H. (PI), Research Corporation for Science Advancement (RCSA) Cottrell Fellowship Award #27962; 2021 – 2022; $62,500; "Elucidating the role of a novel response regulator in sporulation of *Clostridioides difficile*"

West, A.H. (PI), Oklahoma Center for the Advancement of Science and Technology Health Research Program (HR18-110); 2018 – 2021; $135,000; "Two-component Signal Transduction in the human bacterial pathogen *Clostridioides difficile*"

West, A.H. (PI), NIH NIGMS, Grant #P20GM103640, 2012-2017; $9,690,904; "Oklahoma COBRE in Structural Biology" (Phase 1)

West, A.H. (PI), Richter-Addo, G., Karr, E.A. (co-PIs), 2014-2017; $2,999,600; Price Family Foundation gift to fund collaborative research project with Albert Einstein College of Medicine (S. Almo, V. Schramm) focused on anaerobic structural biology

West, A.H. (PI), National Science Foundation, Grant #1158319, 2012-2016; $626,455; "Molecular Interactions in Fungal Multistep Phosphorelay Signaling Pathways"

West, A.H. (PI), Oklahoma Center for the Advancement of Science and Technology Health Research Program; 2012 – 2015; $135,000. "Stress Response Proteins as Targets for Antifungal Drug Design"

Richter-Addo, G.B. (PI), West, A.H. (co-PI), Schroeder, S.J. (co-PI), Thomas, L.M. (co-PI), National Science Foundation, Major Research Instrumentation Grant (#0922269), 2009-2012 (no-cost extension until 7/31/13, $359,381; "MRI: Acquisition of Robotics Instrumentation for Crystallization of Biomacromolecules"

West, A.H. (PI), University of Oklahoma, PI Research Investment Program; 2011-2012; $10,000; "Stress Response Proteins as Novel Targets for Antifungal Drug Design"

West, A.H. (PI), National Institutes of Health, GM59311-06; 2005 – 2009; $1,036,000; "Histidine to Aspartate Phosphoryl Transfer in Yeast" (no-cost extension until April 2011)

Cook, P.F. (PI), West, A.H. (co-PI), National Institutes of Health, GM71417-01; 2004 – 2009; $1,015,633; "Lysine Biosynthesis in Yeast"

West, A.H. (PI), Oklahoma Center for the Advancement of Science and Technology Health Research Program; 2006 – 2009; $135,000. "Phosphorelay-dependent Signal Transduction in Yeast"

West, A.H. (PI), National Institutes of Health, GM59311-01; 1999 – 2005; $1,013,115; "Histidine to Aspartate Phosphoryl Transfer in Yeast"

West, A.H. (PI), University of Oklahoma, PI Research Investment Program; 2004-2005; $6,638. "Histidine to Aspartate Phosphoryl Transfer in Yeast"

West, A.H. (PI), Research Corporation, Cottrell Scholar Award; 1999 – 2004; $50,000. "X-Ray Crystallographic Analysis of a Phosphorylation-Regulated Molecular Switch Protein"

Cook, P.F. (co-PI), West, A.H. (co-PI), University of Oklahoma, PI Research Investment Program; 2002 – 2003; $10,000. "Lysine Biosynthesis in Yeast"

West, A.H. (PI), Oklahoma Center for the Advancement of Science and Technology; 1999 – 2002; $135,000. "Protein Phosphorylation as a Molecular "On/Off" Switch"

University of Oklahoma, Interdisciplinary Research Incentive Program; co-PI (with Roger Harrison, Chem. Eng.); 1999 – 2001; $20,000. "Purification and Preliminary Crystal Characterization of Recombinant Tyrosinase Expressed in *Escherichia coli*"

West, A.H. (PI), University of Oklahoma, PI Research Investment Program; 1997 – 1998; $10,000. "*In Vitro* Biochemical Analysis of an Environmental Sensor Protein"

Junior Faculty Research Award (OU); 1997; $6,000. "X-Ray Crystallographic Analysis of a Phosphorylation-Regulated Molecular Switch Protein"

Jane Coffin Childs Postdoctoral Fellowship; 1992 – 1995; $79,500. "Activation of a Bacterial Signal Transduction Protein"

Invited Seminar/Conference Presentations:

1. University of Oklahoma Health Sciences Center, Oklahoma City, OK; Dept. of Microbiology & Immunology, December 1, 1997.
2. Oklahoma Medical Research Foundation, Oklahoma City, OK; Dept. of Mol. & Cell Biology, February 19, 1998.
3. Wesleyan University, Middletown, CT; Alumni Symposium on Biological Sciences and the New Pharmacopoeia, May 30, 1998.
4. University of Oklahoma, Norman, OK; Panelist for "Perspectives in Science: A Look from a Woman's Point of View", hosted by the Assoc. for Women in Science.
5. University of Iowa, Iowa City, IA; Dept. of Biochemistry, December 10, 1998.
6. University of Oklahoma Health Sciences Center, Oklahoma City, OK; Dept. of Pathology, October 29, 1999.
7. Gordon Conference on Sensory Transduction in Microorganisms, Ventura, CA, January 20, 2000.
8. University of Oklahoma, Norman, OK; Dept. of Botany and Microbiology, March 30, 2000.
9. Molecular Structure Corporation 5th Annual Raxis Users Meeting, The Woodlands, TX, Nov. 10-12, 2000.
10. University of Missouri, Columbia, MO; Dept. of Biochemistry, March 12, 2001.
11. Annual Meeting of the American Society for Microbiology, Orlando, FL, May 20-24, 2001.
12. University of Pittsburgh, Pittsburgh, PA; Dept. of Biological Sciences, November 16, 2001.
13. Texas Christian University, Fort Worth, TX; Dept. of Chemistry, April 16, 2002.
14. University of Oklahoma Health Sciences Center, Oklahoma City, OK; Dept. of Biochem. & Mol. Biol., December 11, 2002.
15. Hendrix College, Conway, AR; Dept. of Chemistry, March 17, 2003.
16. Baylor College of Medicine, Houston, TX; Dept. of Molecular Virology and Microbiology, March 25, 2003.
17. University of Missouri - Columbia, Dept. of Biochemistry, May 8, 2003.
18. Max Planck Institute for Molecular Physiology, Dortmund, Germany, June 17, 2003.
19. University of Texas Southwestern Medical Center, Dallas, TX; Dept. of Pharmacology, Oct. 2, 2003.
20. West Virginia University, Morgantown, WV; Dept. of Microbiology, Immunology & Cell Biology, Dec. 3, 2003.
21. Gordon Conference on Sensory Transduction in Microorganisms, Ventura, CA, January 13, 2004.
22. Georgetown University Medical Center, Washington, D.C.; Dept. of Microbiology & Immunology, April 2, 2004.
23. University of Arkansas, Fayetteville, AR; Dept. of Chemistry and Biochemistry, September 27, 2004.
24. Oklahoma State University, Stillwater, OK; Dept. of Biochemistry & Molecular Biology, February 18, 2005.

25. Sam Roberts Noble Foundation, Ardmore, OK; Plant Biology Division, March 23, 2006.
26. Iowa State University, Ames, IA; Dept. of Biochemistry, Biophysics & Molecular Biology, April 13, 2006.
27. University of Pittsburgh, Pittsburgh, PA; Dept. of Biological Science, September 24, 2007.
28. University of Oklahoma Health Sciences Center, Oklahoma City, OK; Dept. of Biochem. & Mol. Biol., May 7, 2008.
29. Oklahoma State University, Stillwater, OK; Dept. of Microbiology and Molecular Genetics, October 6, 2008.
30. Cameron University, ACS local chapter, Lawton, OK; Dept. of Physical Sciences, March 24, 2009.
31. Oklahoma State University, Stillwater, OK; Dept. of Biochemistry and Molecular Biology, November 13, 2009.
32. University of Oklahoma Health Sciences Center, Oklahoma City, OK; College of Pharmacy, April 22, 2010.
33. Center for Advanced Biotechnology and Medicine, UMDNJ/Rutgers, Piscataway, NJ; May 27, 2010.
34. UMDNJ, Public Health Research Institute, Newark, NJ; December 14, 2010.
35. University of Kansas 10th Annual COBRE Symposium on Protein Structure and Function, Lawrence, KS; October 8, 2012.
36. University of Oklahoma Health Sciences Center, Oklahoma City, OK; Dept. of Microbiology & Immunology; October 30, 2012.
37. Loyola University, Chicago, IL; Dept. of Chemistry and Biochemistry; January 17, 2013.
38. Baylor University, Waco, TX; Dept. of Chemistry and Biochemistry; April 12, 2013.
39. Oklahoma State University, Stillwater, OK; Dept. of Chemistry, April 13, 2017.
40. University of Hawaii at Manoa, Honolulu, HI; Pacific Biosciences Research Center, February 28, 2020.
41. NIH/NIGMS Invited Speaker Seminar, October 26, 2021 (virtual).

Conference Presentations:

Talks

1. Bacterial Locomotion and Signal Transduction (BLAST II), Austin, TX, January 14-18, 1993.
2. Bacterial Locomotion and Signal Transduction (BLAST III), Austin, TX, January 12-16, 1995.
3. Symposium on Structure-Based Drug Design, Piscataway, NJ, June 13-16, 1995.
4. Bacterial Locomotion and Signal Transduction (BLAST IV), Cuernavaca, Mexico, January 9-13, 1997.
5. Oklahoma Macromolecular Crystallography Conference, Oklahoma Medical Research Foundation, Oklahoma City, OK, April 26, 1997.
6. Gordon Conference on Sensory Transduction in Microorganisms, Ventura, CA, January 11-16, 1998.
7. Alumni Symposium on Biological Sciences and the New Pharmacopoeia, Wesleyan University, May 30, 1998.
8. Bacterial Locomotion and Signal Transduction (BLAST V), Cuernavaca, Mexico, January 16-21, 1999.
9. Minisymposium on Protein Biology, Oklahoma State University, Stillwater, OK, June 24-25, 1999.
10. 1999 Lost Pines Molecular Biology Conference, University of Texas M.D. Anderson Cancer Center, Smithville, TX, October 8-10, 1999.
11. Gordon Conference on Sensory Transduction in Microorganisms, Ventura, CA, January 16-21, 2000.
12. 5th Annual Raxis Users Meeting, sponsored by Molecular Structure Corporation, The Woodlands, TX, Nov. 10-12, 2000.
13. Annual Meeting of the American Society for Microbiology, Orlando, FL, May 20-24, 2001.
14. Minisymposium on Protein Structure and Function, Oklahoma State University, Stillwater, OK, June 14-15, 2001.
15. Annual Technical Meeting of the Oklahoma Academy of Science, Cameron University, Lawton, OK, Nov. 2, 2001.

16. 2002 Yeast Genetics and Molecular Biology Meeting, University of Wisconsin, Madison, WI, July 30 - August 4, 2002.
17. Bacterial Locomotion and Signal Transduction (BLAST VII), Cuernavaca, Mexico, January 19-24, 2003 (graduate student presented talk).
18. Gordon Conference on Sensory Transduction in Microorganisms, Ventura, CA, January 11-16, 2004.
19. 25th Midwest Enzyme Chemistry Conference, Chicago, IL, Oct. 8, 2005.
20. American Chemical Society Southwest Regional Meeting, Houston, TX, Oct. 19-22, 2006.
21. NIH NIGMS IDeA PI meeting, Bethesda, MD September 23-24, 2019.
22. NIH Common Fund Transformative High Resolution Cryo-Electron Microscopy 2021 PI Annual Meeting Agenda, Panelist for Session on Research in IDeA-Eligible States, May 12-13, 2021.
23. Gordon Conference on Sensory Transduction in Microorganisms, Ventura, CA, September 26-30, 2022.

Posters

1. Annual Meeting of the American Crystallographic Association, Montreal, Canada, July 23-28, 1995.
2. Annual Meeting of the American Crystallographic Association, St. Louis, MO, July 19-25, 1997.
3. Bacterial Locomotion and Signal Transduction (BLAST V), Cuernavaca, Mexico, January 16-21, 1999.
4. 4th Annual Structural Biology Symposium, University of Texas Medical Branch at Galveston, TX, March 19-21, 1999.
5. 1999 Lost Pines Molecular Biology Conference, University of Texas M.D. Anderson Cancer Center, Smithville, TX, October 8-10, 1999.
6. Gordon Conference on Sensory Transduction in Microorganisms, Ventura, CA, January 16-21, 2000.
7. Oklahoma Health Research Conference, sponsored by OCAST, Langston University, Oklahoma City, OK, April 18, 2000.
8. 5th Annual Structural Biology Symposium, University of Texas Medical Branch at Galveston, TX, May 19-21, 2000.
9. Golden Anniversary Meeting of the American Crystallographic Association, St. Paul, MN, July 22-27, 2000.
10. Bacterial Locomotion and Signal Transduction (BLAST IV), Cuernavaca, Mexico, January 14-19, 2001.
11. Oklahoma Health Research Conference, sponsored by OCAST, Langston University, Oklahoma City, OK, April 24, 2001.
12. Gordon Conference on Sensory Transduction in Microorganisms, Ventura, CA, January 13-18, 2002.
13. Oklahoma Health Research Conference, sponsored by OCAST, Langston University, Oklahoma City, OK, April 16, 2002.
14. 2002 Yeast Genetics and Molecular Biology Meeting, University of Wisconsin, Madison, WI, July 30 - August 4, 2002.
15. Gordon Conference on Sensory Transduction in Microorganisms, Ventura, CA, January 22-27, 2006.
16. Annual Meeting of the American Crystallographic Association, Honolulu, HI, July 22-27, 2006.
17. Oklahoma Health Research Conference, sponsored by OCAST, Oklahoma City, OK, April 9, 2007.
18. Gordon Conference on Sensory Transduction in Microorganisms, Ventura, CA, January 13-18, 2008.
19. Oklahoma Health Research Conference, sponsored by OCAST, Oklahoma City, OK, April 21, 2008.
20. Bacterial Locomotion and Signal Transduction (BLAST X), Cuernavaca, Mexico, January 18-23, 2009.
21. Oklahoma Health Research Conference, sponsored by OCAST, Oklahoma City, OK, April 16, 2009.

22. Oklahoma Health Research Conference, sponsored by OCAST, Oklahoma City, OK, March 13, 2013.
23. 1st Annual Symposium on Structural Biology, sponsored by Oklahoma COBRE in Structural Biology, Norman, OK, May 20, 2013.
24. Oklahoma Health Research Conference, sponsored by OCAST, Oklahoma City, OK, March 31, 2014.
25. 2nd Annual Symposium on Structural Biology, sponsored by Oklahoma COBRE in Structural Biology, Norman, OK, June 9, 2014.
26. Oklahoma Health Research Conference, sponsored by OCAST, Oklahoma City, OK, April 8, 2015.
27. 20th Annual Sealy Center for Structural Biology Symposium, University of Texas Medical Branch, Glaveston, TX, May 2, 2015.
28. 3rd Annual Symposium on Structural Biology, sponsored by Oklahoma COBRE in Structural Biology, Norman, OK, June 8, 2015.
29. Gordon Conference on Sensory Transduction in Microorganisms, Ventura, CA, January 17-22, 2016.
30. 4th Annual Symposium on Structural Biology, sponsored by Oklahoma COBRE in Structural Biology, Norman, OK, June 14, 2016.
31. Bacterial Locomotion and Signal Transduction (BLAST XIV) Conference, New Orleans, LA, January 15-20, 2017.
32. 5th Annual Symposium on Structural Biology, sponsored by Oklahoma COBRE in Structural Biology, Norman, OK, June 15, 2017.
33. Gordon Conference on Sensory Transduction in Microorganisms, Ventura, CA, January 14-19, 2018.
34. Bacterial Locomotion and Signal Transduction (BLAST XV) Conference, New Orleans, LA, January 20-25, 2019.
35. 64th Annual Pentasectional Meeting of the American Chemical Society, Norman, OK, April 13, 2019.
35. Bacterial Locomotion and Signal Transduction (BLAST XVI) Conference, virtual conference, January 18-22, 2021.
36. 9th Annual Symposium on Structural Biology, sponsored by Oklahoma COBRE in Structural Biology, virtual conference, June 24, 2021.
37. 12th International Conference on the Molecular Biology & Pathogenesis of the Clostridia (ClosPath 12), virtual conference, September 13-16, 2021.
38. Gordon Conference on Sensory Transduction in Microorganisms, Ventura, CA, September 26-30, 2022.

Publications:

1. Kornacki, J.A., **West, A.H.** and Firshein, W. (1984). Proteins encoded by the trans-acting replication and maintenance regions of broad host range plasmid RK2. *Plasmid* **11**: 48-57.

2. Gutowski, J.K., **West, A.** and Cohen, S. (1985). The regulation of DNA synthesis in quiescent lymphocytes by cytoplasmic inhibitors. *Proc. Natl. Acad. Sci. (USA)*. **82**: 5160-5164.

3. Horwich, A.L., Cheng, M., **West, A.** and Pollock, R.A. (1991). Mitochondrial protein import. In *Current Topics in Microbiology and Immunology, vol. 170*. R.W. Compans, ed. Springer-Verlag, Berlin-Heidelberg-New York. pp. 1-42.

4. **West, A.H.**, Clark, D.J., Martin, J., Neupert, W., Hartl, F.-U. and Horwich, A.L. (1992). Two related genes encoding extremely hydrophobic proteins suppress a lethal mutation in the yeast mitochondrial processing enhancing protein. *J. Biol. Chem.* **267:** 24625-24633.

5. Stock, A.M., Martinez-Hackert, E., Rasmussen, B.F., **West, A.H.**, Stock, J.B., Ringe, D. and Petsko, G.A. (1993). Structure of the Mg^{2+}-bound form of CheY and mechanism of phosphoryl transfer in bacterial chemotaxis. *Biochemistry* **32:** 13376-13380.

6. **West, A.H.**, Martinez-Hackert, E. and Stock, A.M. (1994). Structural basis for the mechanism of phosphoryl transfer in bacterial chemotaxis. In *Phosphate in Microorganisms. Cellular and Molecular Biology*, A. Torriani-Gorini, E. Yagil, and S. Silver, eds., Amer. Soc. Microbiol. Press, Wash., D.C., pp. 309-314.

7. **West, A.H.**, Djordjevic, S., Martinez-Hackert, E. and Stock, A.M. (1995). Purification, crystallization, and preliminary X-ray diffraction analyses of the bacterial chemotaxis receptor modifying enzymes. *Proteins: Struct., Funct., and Genet.* **21:** 345-350.

8. **West, A.H.**, Martinez-Hackert, E. and Stock, A.M. (1995). Crystal structure of the catalytic domain of the chemotaxis receptor methylesterase, CheB. *J. Mol. Biol.* **250:** 276-290.

9. Djordjevic, S., Goudreau, P.N, Xu, Q., Stock, A.M. and **West, A.H.** (1998). Structural basis for methylesterase CheB regulation by a phosphorylation-activated domain. *Proc. Natl. Acad. Sci. (USA)*. **95:** 1381-1386. [PMCID: PMC19010]

10. Xu, Q., Nguyen, V. and **West, A.H.** (1999). Purification, crystallization, and preliminary X-ray diffraction analysis of the yeast phosphorelay protein YPD1. *Acta Cryst*. **D55:** 291-293.

11. Janiak-Spens, F., Sparling, J.M., Gurfinkel, M. and **West, A.H.** (1999). Differential stabilities of phosphorylated response regulator domains reflect functional roles of the yeast osmoregulatory SLN1 and SSK1 proteins. *J. Bacteriol*. **181:** 411-417. [PMCID: PMC93393]

12. Xu, Q. and **West, A.H.** (1999). Conservation of structure and function among histidine-containing phosphotransfer (HPt) domains as revealed by the crystal structure of YPD1. *J. Mol. Biol*. **292:** 1039-1050.

13. Janiak-Spens, F. and **West, A.H.** (2000). Functional roles of conserved amino acid residues surrounding the phosphorylatable histidine of the yeast phosphorelay protein YPD1. *Mol. Microbiol.* **37:** 136-144.

14. Janiak-Spens, F., Sparling, D.P. and **West, A.H.** (2000). Novel role for an HPt domain in stabilizing the phosphorylated state of a response regulator domain. *J. Bacteriol.* **182:** 6673-6678. [PMCID: PMC111409]

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17. Lee, J., Chen, L., **West, A.H.** and Richter-Addo, G.B. (2002). Interactions of organic nitroso compounds with metals. *Chem. Rev.* **102:** 1019-1065.

18. Stock, A.M. and **West, A.H.** (2003). Response regulator proteins and their interactions with histidine protein kinases. In *Histidine Kinases in Signal Transduction* M. Inouye and R. Dutta, eds., Academic Press, San Diego, pp. 237-271.

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