

CURRICULUM VITAE
David J. Weber, PhD

Distinguished University Professor
Department of Biochemistry and Molecular Biology
University of Maryland, Baltimore
School of Medicine (SOM)

Professor, Department of Chemistry and Biochemistry
University of Maryland, College Park
College of Mathematics and Natural Sciences (CMNS)

Date: November 26, 2024

Contact Information

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Education

1980-1984 B.S. Chemistry
Muhlenberg College, Allentown, PA

1984-1988 Ph.D. Chemistry
University of North Carolina, Chapel Hill, NC
Advisor: Dr. Richard G. Hiskey (*Deceased*)

Dissertation: "*Investigation of Gla-domain Peptides of Prothrombin Binding to Synthetic Phospholipid Membranes*"

Post Graduate Education and Training:

1988-1992 Post-Doctoral Fellow, Biological Chemistry
The Johns Hopkins University School of Medicine
Advisor: Dr. Albert S. Mildvan (*Deceased*)

Employment History

Academic Appointments

1984-1985	Teaching Assistant Chemistry University of North Carolina-Chapel Hill
1985-1988	Research Assistant Chemistry University of North Carolina-Chapel Hill
1988-1993	Post-Doctoral Fellow Biological Chemistry The Johns Hopkins University School of Medicine
1993-1998	Assistant Professor (Tenure track) Biochemistry and Molecular Biology University of Maryland, Baltimore School of Medicine
1995-2011	Director UMB-NMR Facility University of Maryland, Baltimore School of Medicine
1999-2004	Associate Professor (tenured) Biochemistry and Molecular Biology University of Maryland, Baltimore School of Medicine
2001-2009	Director Intercampus Biochemistry Doctoral Program University of Maryland, Baltimore University of Maryland, Baltimore County
2004-present	Professor (tenured) Biochemistry and Molecular Biology University of Maryland, Baltimore School of Medicine
2006-2007	Professor and Interim Department Chairman Department of Biochemistry and Molecular Biology University of Maryland, Baltimore School of Medicine
2009-2011	Co-Director Intercampus Biochemistry Doctoral Program (with Mike Summers) University of Maryland, Baltimore University of Maryland, Baltimore County

2009-2011	Director High-Throughput Screening Shared Service (HTSSS) Marlene and Stuart Greenebaum Cancer Center University of Maryland, Baltimore School of Medicine
2011-2020	Adjunct Professor Department of Chemistry and Biochemistry University of Maryland, College Park College of Mathematics and Natural Sciences
2011-present	Director, Center of Biomolecular Therapeutics University of Maryland, Baltimore
2011-2020	Associate Director Joint Institute of Bioscience and Biotechnology Research University of Maryland, College Park University of Maryland, Baltimore National Institute of Standards and Technology
2011-present	Program Co-leader and member Molecular and Structural Biology Program Marlene and Stuart Greenebaum Comprehensive Cancer Center University of Maryland, Baltimore School of Medicine
2012-present	Professor (secondary appointment) Department of Medicine University of Maryland, Baltimore School of Medicine
2019-present	Director Maryland Center for Advanced Molecular Analyses (M-CAMA)
2020-present	Professor (tenured) Department of Chemistry and Biochemistry University of Maryland, College Park College of Mathematics and Natural Sciences (CMNS)
2020-2021	Interim Co-Director Joint Institute of Bioscience and Biotechnology Research (IBBR) University of Maryland, College Park, University of Maryland, Baltimore, National Institutes of Standards and Technology (NIST)
2021-2024	Co-Director Joint Institute of Bioscience and Biotechnology Research (IBBR) University of Maryland, College Park, University of Maryland, Baltimore National Institute for Standards and Technology

2024-present Associate Director
(nominated, appointment is under consideration)
Joint Institute of Bioscience and Biotechnology Research (IBBR)
University of Maryland, College Park,
University of Maryland, Baltimore
National Institute for Standards and Technology

Professional Society Membership

1984-present American Chemical Society
1980-present American Association for the Advancement of Science
1990-present Biophysical Society
1992-present New York Academy of Sciences
1992-present American Society of Biochemistry and Molecular Biology
1997-present European Calcium Society

Honors and Awards

1984 University of North Carolina First-Year Graduate Fellow Award
1989-1992 National Research Service Award (NIH)
1992 The Johns Hopkins University School of Medicine Young Investigator Award
1993-1996 Special Research Initiative Award, University of Maryland School of Medicine
1995 Cambridge Isotope Research Award
1996-2003 American Cancer Society Junior Faculty Research and Project Awards
2004-2006 American Cancer Society Research Scholar Award
2004 Board of Scientific Counselors (NIH) for Molecular & Structural Biology (MSB)
2006 American Cancer Society Celebration on the Hill – Ambassador
for Maryland Congressional District 3 (Washington, D.C.)
2012 Honorary Professorship, College of Biology and Experimental Medicine of the
Perugia University, Perugia Italy (2012 until present).
2019-2022 Scientific Advisory Council (SAC), Mathematics and Artificial Reasoning in Science
(MARS), Pacific Northwest National Laboratory (PNNL)
2022-2025 MPower Professorship, University of Maryland Strategic Partnership Award
2024-present Distinguished University Professor, University of Maryland, Baltimore

Administrative Service

Department Service

1993-1994 Department Seminar Program - co-director
1993-1996 Computer Graphics Facility - director
1993-present Graduate Governing Committee - member
1995-present Graduate Student Admission Committee
1995-1998 Chairman-Molecular and Cellular Biology Honors Student Selection Committee
1995-1997 Department Review Committee
1998-2002 Chairman-Structural Biology Promotion Committee
1999 Organizer-Symposium on Structural Biology
1999 Department DRIF distribution committee
2000 Faculty Tenure Review Committee
2006 Acting Chairman of the Department of Biochemistry & Molecular Biology
2001-2010 Director, Joint Graduate Program in Chemistry and Biochemistry
2007-2011 Chairman, Faculty Search Committee
2007-2012 Member, Departmental Steering Committee
2007-2010 Member, Departmental Research Committee

2008-2010	Member, Departmental review committee for Human Research Protocols
2012-2020	Political outreach committee
2021-present	Department of Biochemistry & Molecular Biology, APT committee

School of Medicine Service

1993	Strategic Planning Committee Meetings - Promoted NMR Core Facility
1993-2005	Molecular and Cellular Biology Graduate Program - associate member
1994-2005	Molecular and Cellular Biology Graduate Program - admissions committee
1995-2005	Molecular and Cellular Biology Graduate Program - advisory committee
1995-present	M.D./Ph.D. Program Core Faculty Member
1994	Problem based learning workshop
1995	LCME Accreditation Committee-Junior Faculty Representative
1995	Surgery Junior Clerkship Peer Review Committee
1996	Molecular and Cell Biology Course Committee
1996	SRIS/DRIF Internal Grant Review Committee
1999	Co-chairman-Structural Biology Session-UMB Sch. of Med. Research Retreat
1999	Member, Research subcommittee of the School of Medicine Strategic Plan
	2000-2005 Steering Committee
2000-present	Member, Muscle training program
2001-2009	Member, Research Affairs Advisory Committee (RAAC)
2002-2003	Member, Subcommittee to RAAC on Graduate Programs
2002	Chairman-Structural Biology Session – MCB retreat
2003	Co-Chair, Proteomics Session-UMB Sch. of Med. Research Retreat
2003-2005	School of Medicine Representative on the Graduate Council
2003-2006	Basic Science Representative on the Executive Committee of the School of Medicine Council (elected by council)
2004-2006	Member, Search Committee for an Associate Dean of Research
2005	Chair, Subcommittee of the RAAC evaluating Research Core facilities
2006-2007	Member, Search Committee for Chair of Medicine
2006-2011	Member, Advisory committee for the X-ray crystallography Center (now in the CBT)
2006-2012	Member, Advisory committee for the Proteomics Core Facility
2007-2010	Member, CTSA Translational Technologies Committee
2008-2011	Participant, SOM Legislative Day
2009-2012	Basic Science Representative on the Executive Committee of the School of Medicine Council (elected by council)
2010-2011	Technology Resource Center Advisory Committee
2010-2012	Medical School Student Admission Committee (interviewer)
2013-2019	Member, Research Resources Advisory Group
2013-2019	Member, Advisory committee for the Center for Integration of Metabolic Imaging & Therapeutics (CIMIT) research center
2014-2015	Member, Search Committee for the Director of the <i>Center for Vaccine Development (CVD)</i> , Chair: Dr. Claire Fraser.
2014-present	Member, Graduate Program in Life Sciences (GPILS) Advisory Committee Chair, Dr. James Kaper.
2023-2024	Member, University of Maryland School of Medicine Strategic Planning Process – <i>Research Prioritization Meeting</i>
2023-2024	Member, University of Maryland School of Medicine Strategic Planning Process – <i>Research Working Group</i>

UMB Campus Service

1999-present	Member, UMB Greenebaum Comprehensive Cancer Center
2006-2013	Director, High-Throughput-Screening Core Facility
1993-present	Director, NMR Core Facility
1993-present	Chairman-UMB NMR committee
1997-present	Judge for Graduate Student Research Day (most years)
2000	Health Science Facility Phase 2 Planning Committee
2002-2003	HFSII Ribbon-Cutting Ceremony Committee
2004-2005	Member, Faculty Search Committee in the School of Pharmacy
2006-2007	American Cancer Society IRG Committee, Greenebaum Cancer Center
2008-2011	Oversight Committee for the X-ray crystallography core facility (This is now part of the CBT and the SBSS under my direction)
2011-present	Director, The Center for Biomolecular Therapeutics
2011-present	Co-Program leader in the Molecular Structural Biology program in the GCC
2012-2014	Member, GCRC Advisory Committee (GAC)
2013-present	Director, The Structural Biology Shared Service in the Greenebaum Cancer Center (This shared service works in conjunction with the CBT)
2018-2019	GPILS review committee (Chair: Scott Thompson)
2011- 2020	Associate Director, The Institute of Bioscience and Biotechnology Research
2020- 2022	Interim Co-Director, The Institute of Bioscience and Biotechnology Research
2022-2024	Co-Director, The Institute of Bioscience and Biotechnology Research
2024-present	Associate Director, The Institute of Bioscience and Biotechnology Research

University of Maryland System Service

2001- present	Participating Faculty member in the Meyerhoff Graduate Fellows Program
2003	Promotion and tenure committee for Dr. Jim Ames CARB/UMBI
2003-2005	Member of the Graduate Council
2003-2005	The Graduate Council Long Range Planning and New Program Committee
2004-2005	Member of the Advisory Committee for Minority Biomedical Research Support (MBRS) and the Initiative for Minority Student Development (IMSD)
2004-2005	Chairman, Long Range Planning and New Programs Committee in the Graduate Council
2005-2006	Promotion committee for Dr. John Orban CARB/UMBI
2010-present	Co-director, Greenebaum Cancer Center Structural Biology Shared Service
2011-2020	Associate Director, The Institute of Bioscience and Biotechnology Research (IBBR)
2011-present	Director, The Center of Biomolecular Therapeutics (CBT)
2016	Search Committee at the request of Dr. Loh, President, University of Maryland – College Park (Position: Associate Vice President for Economic Development)
2020 – 2021	Interim Co-Director, The Institute of Bioscience and Biotechnology Research
2021-present	Co-Director, The Institute of Bioscience and Biotechnology Research (IBBR)
2023-present	Full Member, Intercampus Member, Graduate Faculty (UMCP)

Statewide and National Service

2006-2007	Celebration Ambassador representing Maryland on Capitol Hill – Celebration on the Hill (a National Advocacy Event Sponsored by The American Cancer Society)
2008-2011	Legislature Day, Advocating in Annapolis for The University of Maryland School of Medicine
2022-present	Pediatric Cancer Research Moonshot Program, Advisory Committee
2023-present	Member, Big Ten Academic Alliance of Research Institute Directors

Editorial Service

Editorial Board Member

The International Journal of High-Throughput Screening (2009-present)
Anti -Cancer Drug Discovery (2007-present)
The Open Magnetic Resonance Journal (2007-present)
The Journal of Biological Chemistry (2010-2016)
The American Journal of Translational Research (2010-present)
The Journal of Biomolecular Therapeutics (2012-present)

Journal Referee

Annals of Neurology
Archives of Biochemistry and Biophysics
BBA - Molecular Cell Research
Biochemistry
Bioinformatics
Biophysical Chemistry
Biophysical Journal
Biopolymers
Cell Calcium
Cellular and Molecular Life Sciences
DNA and Cell Biology
Endocrinology
European Journal of Biochemistry
FASEB Journal
FEBS Letters
International Journal of High-throughput Screening
Journal of the American Chemical Society
Journal of Biomolecular NMR
Journal of Biological Chemistry (Associate Editor)
Journal of Biological Inorganic Chemistry
Journal of Molecular Biology
MedChemMed
Molecular Biosystems
Nature
Nature Structural Biology
Protein Science
Proteins: Structure Function and Genetics
Proceedings of the National Academy of Sciences
Science
Structure

International Service

Grant Reviewer

National Science Foundation Grants (**NSF-MSB**)
NIH Ad Hoc Reviewer (S10, P01, P30, R01, R29, F30, F31, F32, K99, RC1, intramural grants)
National Institutes of Health Grants (**NIH-BBCA** panel member 2000-2004)
National Institutes of Health Grants (**NIH-MSFE** panel member 2013-2014)
National Institutes of Health Grants (**NIH-MSFA** panel member 2014-2019)
National Institutes of Health Grants (**NIH-DMPC** ad hoc panel member 2024)
National Institutes of Health Grants (**NIH-ZRG1s**; 2000, 2002)
National Institutes of Health, Review of Center for Information Technology (CIT; 2017)

National Institutes of Health, Chair, P41 Site-visit of Cornell Protein Crystallography Lab (2007)
National Institutes of Health, P41 Site-visit reviewer of NMRFAM (2014)
National Institute of Environmental Health Sciences (**GISBL, Board of Council Review**; 2017)
American Chemical Society Grants (Petroleum Research Fund)
American Cancer Society (**ACS**)
Swiss National Science Foundation Project Grants (**SNSF**)
Israel Science Foundation Grants (**ISF**)
Searle Scholar Grants
Grant Agency, Academy of Sciences of the Czech Republic (**ASCR**)
Narodowe Centrum Nauke, (**NCN**), Poland

National Program Reviews

Board of Scientific Counselors (2004; ad hoc reviewer of the intramural Molecular and Structural Biology Unit (MSBU) at the National Institutes of Health
Site-visit reviewer – Georgetown University School of Medicine Graduate Program in Biochemistry and Molecular Biology
Chair, NIH P41 Site Visit Team to review the Cornell Macromolecular X-ray Crystallography Research Resource (MaCHESS). July 2007.
Member, NIH PSI: Biology Site Visit Team (Visited multiple PSI: Biology Centers throughout United States), 2/2013 until 7/2013.
Member, NIH panel to review P41 of NMRFAM at the University of Wisconsin-Madison, PI: John Markely, July 2014
Member, NIH panel to review P30 NCI Comprehensive Cancer Center Grant at The University of California-Irvine.
Member, NIH panel for internal review of the National Institutes of Health (NIH), Center for Information Technology (CIT). November 2017.
Member, NIEHS Division of Intramural Research Board of Scientific Counselors for the Review of the Genome Integrity and Structural Biology Laboratory. November 2017.

Teaching Service

Medical Student Teaching

1993-2024 Medical School Cell and Molecular Biology Course
Small Group Discussion Leader
5-7, 1st year medical students - 3-4 contacts hours/year

Graduate Student Teaching

1993-2006 Introduction to Biochemistry and Molecular Biology (MBIC 608; 4 hrs)
1993-2012 Advanced NMR (every other year) (CHEM 601; 12 hrs)
1993-2000 Seminars in Biochemistry & Molecular Biology (MBIC 713; 16 hrs)
1996-2012 Molecular Structure and Function in Biochemistry (MBIC 701; 12 hrs)
1997-2001 Membrane Biochemistry (MBIC 710; 4 hrs)
2006-present Graduate Program in Life Science Core course (GPLS 601; 4 hrs)

Undergraduate Students (Advisor)

1995-1998 Gentzen Hall - Undergraduate Student (advisor for short-term research training program for minority undergraduate students)

Graduate Students (Advisor)

2024-present Joseph Kousouros – Graduate Student (Biochemistry)
2023-present Christopher Krauss – Postdoctoral Fellow

2022-present	Spiridon “Spiro” Sevdalis - Graduate Student (Biochemistry)
2021-present	Xinhao Zhuang – Graduate Student (Chemistry & Biochemistry, UMCP)
2021-present	Danial Hunter – Graduate Student (Chemistry & Biochemistry, UMCP)
2018-2022	Brianna Young (Biochemistry) – Current Position: Research Scientist, Novavax
2017-2022	Katherine Coburn – MD/PhD Graduate Student (Biochemistry) (current position; Resident, University of Michigan – Ann Arbor
2012-2017	Zephan Melville – Graduate Student (Biochemistry) Current Position: Research Associate, The New York Structural Biology Center
2014-2017	Milad Alasady – Graduate Student (Biochemistry) Current Position: Post-Doctoral Fellow, Northwestern Sch of Medicine
2009-2012	Laura Thompson – GPILS Graduate Student BMB (advisor) Current position: Research Associate, University of Washington-Seattle
2007-2011	Melissa Liriano Vyfhuis – MD/PhD & GPILS graduate Student BMB - Current Position: Associate Professor, Radiation Oncologist, University of Maryland Medical System (UMMS)
2007-2012	Kira Gianni – GPILS Graduate Student Molecular Medicine - Current Position: Associate Director, BioCryst Pharmaceuticals Smithers Avanza
2006-2011	Brian Howard – GPILS Graduate Student BMB (master’s degree) - Current position: Research Associate, Paragon Bioservices
2004-2009	Thomas Charpentier – GPILS Graduate Student BMB - Current position: Senior Scientist, Johnson & Johnson
2003-2008	Nathan Wright – GPILS Graduate Student BMB - Current position: Associate Professor (tenured) James Madison University.
2001-2006	Ruiqing Yang – GPILS Graduate Student BMB - Current Position: Post-Doctoral Fellow, NIH
2000- 2005	Joseph Markowitz– GPILS M.D./Ph.D. student BMB - Current Position: Assistant Professor, Moffat Cancer Center
1999-2004	Kristen Vallely- Graduate student (Biochemistry) (current last name - Varney) Current Position: Professor, Univ of Maryland Sch of Med, and Director of the UMB NMR center and Structural Biology Section in the CBT
1996-2002	Keith Inman – Biochemistry Graduate Student (advisor) - Current Position: Senior Staff Scientist, Paragon Sciences
1996-2002	Karen Ellis (formally Klenk) - Biochemistry Graduate Student/Post Doc (advisor) - Current Position: Consultant, Science Systems Consulting
1994-1998	Todd Tennenholz - MD/Ph.D. Biochemistry Student (advisor) Current Position: Assistant Professor of Radiology, Vanderbilt University School of Medicine
1993-1997	Alex Drohat – Biochemistry Graduate Student (advisor) - Current Position: Professor, University of Maryland School of Medicine, Department of Biochemistry and Molecular Biology (tenured).

Graduate Student Committees

2022-present	Noha Ghonim – PhD candidate, UMB-SOM (Committee member)
2021-2024	Riya Samantra – PhD candidate, UMCP-CMNS (Committee member)
2021-present	Rui Yin – Graduate Student, UMB, SOM (Committee member)
2021-present	Aishwarya Iyer – MD/PhD candidate, UMB, SOM (Committee member)
2019-present	James Field – PhD candidate, UMB, SOM (Committee member)
2011-2013	Carrie Campbell, MD – Research Fellow, MD research (IVBDT in CBT)
2008-2011	Xiao Heng, - PhD candidate, UMB, SOM (advisory committee)
2008-2013	Jonathan Levine – PhD candidate, UMB, SOM (advisory committee)
2008-2011	Brittney Manvilla – PhD candidate, UMB, SOM (advisory committee)

2007-2011	Bryan McCranor – PhD candidate, UMB, SOM (advisory committee)
2007-2011	Leon De Masi – PhD candidate, UMB, SOM (advisory committee)
2007-2011	Benjamin Prosser – PhD candidate, UMB, SOM (advisory committee)
2007-2008	Sarah Garrett – PhD candidate, Albert Einstein SOM (advisory committee)
2007-2011	Casiah Smith – PhD candidate, UMB, SOM (advisory committee)
2006-2010	Lianko Garyu – PhD candidate, UMB, SOM (advisory committee)
2003-2009	Kalola Andrews – PhD candidate, UMB, SOM (advisory committee)
2001-2008	Shardell Hawkins - PhD candidate, UMB/UMBC, SOM (advisory committee)
2001-2007	Jing Zhou - PhD candidate, UMB, SOM (advisory committee)
1999-2003	Chun Tang – PhD candidate, UMB, SOM (advisory committee)
1999-2003	Jorge Velarde – MD/PhD candidate, UMB, SOM (advisory committee)
1995-2000	Bindi Dangi - PhD candidate, UMB, SOM (advisory committee)
1995-2000	Tracy Lessor – PhD candidate, UMB, SOM (advisory committee)
1995-2000	Xiang Yao – PhD candidate, UMB, SOM (advisory committee)
1995-2000	David Bradbury - PhD candidate, UMB, SOM (Advisory committee)
1995-2000	Zhongsen Zhang – PhD candidate, UMB, SOM (advisory committee)
1995-1999	Zhengrong Wu – PhD candidate, UMB, SOM (advisory committee)
1994-1998	Roberto Deguzman – PhD candidate, UMB, SOM (advisory committee)
1993-1998	Deepa Mehta – PhD candidate, UMB, SOM (advisory committee)
1993-1997	Chunhau Yan – PhD candidate, UMB, SOM (advisory committee)
1993-1996	Li Chen – PhD candidate, UMB, SOM (advisory committee)
1993-1996	Brian Lee - PhD candidate, UMB/UMBC, SOM (advisory committee)
1993-1995	Xinmei Zhao – PhD candidate, UMB, SOM (advisory committee)
1993-1995	Mary Starich – PhD candidate, UMB/UMBC, SOM (advisory committee)
1993-1995	Gabriella Perez-Alvarado – PhD candidate, UMB, SOM (advisory committee)
1992-1995	David Frick - PhD candidate, JHU (advisory committee)

Postdoctoral Training and Advising

2022-present	Dr. Chris Kraus - Post Doctoral Fellow (advisor)
2020-present	Dr. Ace St. John – Post Doctoral Fellow (T32 mentoring committee)
2019-2022	Dr. Dinendra L. Abeyawardhane – Post Doctoral Fellow (advisor), Current Position: Roche Pharmaceuticals
2017-2018	Dr. Sreya Mukherjee – Post Doctoral Fellow (co-advisor, in the CBT), Current Position: Research Fellow, Lieber Institute for Brain Development
2014-2016	Dr. Lei Fang – Post Doctoral Fellow (co-advisor, in the CBT), Current Position: Research Associate, University of Kentucky
2014-2017	Dr. Braden Roth – Post Doctoral Fellow (advisor), Current Position: Research Assistant Professor, Medical University of South Carolina (MUSC)
2013-2016	Dr. Sean Stowe – Post Doctoral Fellow (advisor), Current Position: Senior Research Scientist, Diosynth Biotechnologies.
2013-2016	Dr. Shardell Spriggs – Post Doctoral Fellow (advisor), Current Position: Program Director, Division of Translational Research, NIH
2012-2016	Dr. Michael Cavalier – Post Doctoral Fellow (advisor), Current Position: Senior Research Scientist and Manager, XBiotech
2012-2014	Dr. Adam Pierce – Post Doctoral Fellow (advisor)
2011-2014	Dr. Yan Zhang (MD/PhD) – Post Doctoral (co-advisor, in the CBT)
2011-2015	Dr. Raquel Godoy Ruiz – Post Doctoral Fellow (advisor), Current Position: Assistant Professor, University of Maryland School of Medicine
2012-2016	Dr. Lalji Gadiya – Research Associate (co-advisor; in the CBT)
2012-2016	Dr. Purushottamachar Puranik “Puru” - Res Assoc (co-advisor; MC in CBT). Current Position: Assistant Professor, Univ of Maryland School of Medicine

2011-2013	Dr. Arghya Barman – Post Doctoral Fellow (co-advisor; CADD in CBT), Current Position: Senior Scientist, Diosynth Biotechnologies
2011-2013	Dr. Carrie Campbell – McDaniel College Res Fellow (co-advisor; in CBT); Current Position: Physician, Dedicated to Women OBGYN
2012-2014	Dr. Kate Campbell – UMCP Research Fellow (co-advisor; IVBDT in CBT); Current Position: Instructor, Rollins School of Public Health
2008-2011	Dr. Brian Cannon – Post Doctoral Fellow (advisor); Current Position: Patent Attorney, University of Maryland Office of Research and Development
2007-2008	Dr. Michele Vitolo– Post Doctoral Fellow (advisor); Current Position: Assistant Professor, Physiology, University of Maryland School of Medicine.
2005-2010	Dr. Paul Wilder– Post Doc (advisor; also, from 1994-1996; 2001-2005); Current Position: Technology Transfer Consultant, FDA
2006-2007	Dr. Jing Lin – Post Doctoral Fellow (advisor, as Grad student 2001-2006); Current Position: Scientist, FDA
2003-2004	Dr. Alex Herrera – NSF fellow (Herman R. Branson Biophysics program)
1996-2000	Dr. Richard Rustandi - Post Doctoral Fellow (advisor), Current Position: Senior Scientist, Merck
1998-2002	Dr. Donna Baldiserri – Post Doctoral Fellow/Research Assistant for NMR (advisor), Current Position: Applications Scientist, Bruker Biospin
1993-1995	Dr. Judy Amburgey- Post Doctoral Fellow (advisor), Current Position: Associate Professor, College of Wooster

Grant Support (1995 – 2029)

Total Grant & Contract Support (Federal, Industry, Foundations): \$62,580,588 (avg = \$1,840,606/year)

Total NIH support: \$34,098,727 (avg = \$1,002,903/year)

Active Grants

9/1/23 – 8/31/28	(Weber, MPI: 10%), Carrier (PI), Fletcher (MPI) <i>“First in Class Small molecules to simultaneously inhibit protein translation and an immune checkpoint in cancers”</i> National Institutes of Health (R01CA285468) Annual Direct Cost: \$ 413,806 Total Direct Costs: \$ 3,202,038
4/1/17 – 3/31/28	(Weber, CoI: 3%) PI: Felippo Mancia <i>“Structural basis of receptor-mediated cellular vitamin A uptake”</i> National Institutes of Health (R01EY027405) Annual Direct Costs: \$ 97,596 (subcontract) Total Direct Costs: \$487,982 (subcontract)
7/1/23 – 6/30/27	Weber (PI; 0%, Institutional Award) “Institute of Bioscience and Biotechnology Research (IBBR) and the Center for Biomanufacturing and Biomeasurement Innovation (CBBI)”. MPowering the State Annual Direct Costs: \$2,747,163 Total Direct Costs: \$11,638,638

9/25/23 – 8/31/27	(Weber, MPI: 10%) PI: Jason J. Rose, Karl V. Steiner (MPI) <i>“University of Maryland Baltimore Life Science Discovery (UM-BILD) Accelerator”</i> National Institutes of Health (U01GM152511) Annual Direct Costs: \$ 999,971 Total Direct Costs: \$3,999,884 MPI
8/8/08 – 7/31/26	(Weber, CoI: 15%) PI: Toafeek K. Owanikoko <i>“University of Maryland Greenebaum Cancer Center Support Grant”</i> National Institutes of Health (P30CA134274) Full Grant Award: \$11,587,500 (Owanikoko) Subawards listed under direction of Weber (CoI) Annual Direct Costs: \$125,542 (Weber, components) Total Direct Costs: \$1,277,311 (Weber; 2016 to present) <i>Co-Director of Molecular and Structural Biology Program (MSB), Co-Director of Structural Biology Shared Services (SBSS).</i> Note – SBSS and MSB did not show up on eRA commons until 2016.
9/16/21-9/15/29*	(Weber, PI: 1%) <i>“Joint program in biomolecular measurement science”</i> National Institute of Standards & Technology (70NANB18H252) NIST Cooperative Agreement Annual Direct Costs: \$ 3,232,850 Total Direct Costs: \$ 16,864,401 (Costs of original award, to FY26). *NOTE: This grant was extended for 5-years starting in FY25: 10/1/2024 until 9/30/2029 at \$6,600,000 per year. Total costs for the 5-year program FY25-FY29: \$33,000,000, when awarded.
4/1/24 – 3/30/25	(Weber, PI: 0%, instrumentation via Congressional Earmark) <i>“Cryogenic electron microscope (Cryo-EM)”</i> Department of Commerce/NIST (60NANB24D147) FY24 Community Funding Commerce, Justice, Science – Offices of Chris Van Hollen & Jamie Raskin https://www.vanhollen.senate.gov/fy24-community-funding-project-requests Annual Direct Costs: \$ 963,000 Total Direct Costs: \$ 963,000
7/1/21 – 6/30/25	(Weber, PI: 0%, fee for service) <i>“CryoEM and biophysics of bacterial and viral proteins and assemblies”</i> Merck contract Annual Direct Costs: \$ 250,000 Total Direct Costs: \$ 1,250,000
2/1/23 – 1/30/26	(Weber, PI: 0%, fee for service) <i>“CryoEM of Detergent solubilized SARS-CoV-2 rS variants, and RSV F nanoparticle antigens”</i> Novavax contract

	Annual Direct Costs:	\$ 391,400
	Total Direct Costs:	\$ 706,440
11/1/23 – 10/31/26	(Weber, PI: 0%, award) <i>“MPowering the State Professorship”</i>	
	Annual Direct Costs:	\$ 50,000
	Total Direct Costs:	\$ 150,000
3/1/2024 – 2/28/25	(Weber, CoI: 0%, fee for services) <i>“Towards the development of precision treatments for different types of ataxias linked to transglutaminase 6 protein”</i> National Ataxia Foundation (NAF-Ibarra-Molero et al)	
	Annual Direct Costs:	\$ 50,000
	Total Costs:	\$ 50,000
7/1/24 – 6/30/25	(Weber, PI: 10%) <i>“Cryo-electron microscopy for atomic structures of biomolecular samples”</i> Maryland Center for Advanced Molecular Analysis (M-CAMA) MPower	
	Annual Direct Costs:	\$ 280,000
	Total Direct Costs:	\$ 280,000
Note: This grant has \$250K, \$200K, and \$150K competitive renewal applications to submit for FY26-FY28, respectively		

Completed Grants

9/16/21-9/30/24*	(Weber, PI: 1%) <i>“Joint program in biomolecular measurement science”</i> National Institute of Standards & Technology (70NANB18H252) NIST Cooperative Agreement	
	Annual Direct Costs FY24:	\$ 3,232,850
	Total Direct Costs:	\$ 10,118,641 (see note below).
* <u>NOTE</u> : Costs of this award were originally \$16,864,401 (until 9/15/26), but the cooperative agreement was renewed 2 years early. The new 5-year contract started in FY25: 10/1/2024 until 9/30/2029 at \$6,600,000 per year. Total costs for new the 5-year program FY25-FY29: \$33,000,000, when awarded (10/1/2024).		
7/1/19 – 6/30/24	(Weber, PI: 10%) <i>“Cryo-electron microscopy for atomic structures of biomolecular samples”</i> Maryland Center for Advanced Molecular Analysis (M-CAMA) MPower (M-CAMA)	
	Annual Direct Costs:	\$ 301,095
	Total Direct Costs:	\$ 1,505,475
4/01/19-12/31/23	(Weber, PI: 20%) <i>“Signal Propagation in Protein Allostery: Mechanism and Evolution”</i> National Institutes of Health (R01 GM129327)	
	Annual Direct Costs:	\$ 313,665
	Total Direct Costs:	\$1,254,653

2/1/22 – 6/30/23	(Weber, PI: 0%, instrumentation) <i>“\$1.4M Upgrade the Talos Arctica cryoEM with new detector and energy filters”</i> Maryland Center for Advanced Molecular Analysis (M-CAMA) MPower Annual Direct Costs: \$ 700,000 Total Direct Costs: \$ 700,000 Note: remaining funds to reach \$1.4M were from SOM (\$200,000), UMCP Provost (\$200,000), NIST (\$300,000).
9/01/21-8/30/23	(Weber, PI: 15%) <i>“Structure-based targeting of the C. difficile toxin (CDT) from hypervirulent bacterial strains”</i> National Institute of Health (R56 AI152397) Annual Direct Costs: \$ 364,693 Total Direct Costs: \$ 521,751
9/16/21-9/15/22	(Weber, PI: 0%; instrumentation) <i>“\$1.4M Upgrade the Talos Arctica cryoEM with new detector and energy filters”</i> National Institute of Standards & Technology (70NANB18H252) Annual Direct Costs: \$ 300,000 Total Direct Costs: \$ 300,000 Note: remaining funds to reach \$1.4M were from SOM (\$200,000), UMCP Provost (\$200,000), MPower (\$700,000).
9/16/20-9/15/21	(Weber, PI: 1%) <i>“Joint program in biomolecular measurement science”</i> National Institute of Standards & Technology (70NANB18H252) NIST Cooperative Agreement Annual Direct Costs: \$ 2,110,000 Total Direct Costs: \$ 2,110,000 Note: This grant was transferred from Fuerst to Weber upon becoming Interim Co-Director of the IBBR in 2020.
7/1/20 – 6/30/24	(Weber, PI, 0%; Institutional Grant, IBBR) <i>“The Institute of Bioscience and Biotechnology Research”</i> MPowering the State Annual costs (FY23): \$2,997,801 Total costs (FY21-FY23): \$8,8391,406 Note: Annual competitive renewals: (FY21, \$2,400,000; FY22, \$2,993,605; FY23, \$2,997,801) with no indirect costs during this timeframe.
4/1/17 – 3/31/21	(Weber, CoI: 5%) PI: Felippo Mancia <i>“Structural basis of receptor-mediated cellular vitamin A uptake”</i> National Institutes of Health (R01EY027405) Annual Direct Costs: \$ 65,763 (subcontract)

	Total Direct Costs: \$ 328,815 (subcontract) <i>Co-Investigator</i>
2/28/2017 – 2/27/20	(Weber, PI: 10%) <i>“Design of novel acetylcholinesterase reactivators”</i> US Army Medical Research Institute of Chemical Defense Proposal Number: 00226353 Annual Direct Costs: \$ 213,453 Total Direct Costs: \$ 853,811
1/1/19 – 12/31/19	(Weber, PI: 0%, instrumentation) <i>“Cryo-electron microscopy for measurement of atomic resolution structures of biomolecular samples (Glacios 200 kV cryoEM system)”</i> Maryland Center for Advanced Molecular Analysis (M-CAMA) State of the Maryland Board of Public Works (Capital Equipment Funding) Annual Direct Costs: \$ 2,500,000 Total Direct Costs: \$ 2,500,000
7/1/19 – 6/30/20	(Weber, PI: 0%, building funds) <i>Design, renovation, and construction of new cryoEM space for Glacios 200 kV instrument and future space for a 300 kV cryoEM system”</i> Maryland Center for Advanced Molecular Analysis (M-CAMA) Annual Direct Costs: \$ 800,000 Total Direct Costs: \$ 800,000
7/1/13 – 6/30/19	(Weber, MPI:10%) MPI: France Carrier <i>“Rational targeting of protein translation of cancer treatments”</i> National Institutes of Health (R01 CA177981) Annual Costs: \$ 318,513 Total Costs: \$ 1,583,009
7/1/2017-6/30/19	(Weber, PI: 0%, instrumentation) <i>“Cryo-electron microscopy for measurement of atomic resolution structures of biomolecular samples (Talos Arctica 200 kV cryoEM system)”</i> National Institute of Standards & Technology (70NANB17H254) Annual Direct Costs: \$ 800,000 Total Direct Costs: \$ 1,600,000 Note: Total costs for the \$3.2M system was matched by UMCP Provost (\$400,000), UMSOM (\$800,000), and MPower (\$400,000).
7/1/2017-6/30/18	(Weber, PI: 0%, instrumentation) <i>“Cryo-electron microscopy for measurement of atomic resolution structures of biomolecular samples (Talos Arctica 200 kV cryoEM system)”</i> MPower Annual Direct Costs: \$ 400,000 Total Direct Costs: \$ 400,000 Note: Total costs for the \$3.2M system was matched by UMCP Provost (\$400,000), UMSOM (\$800,000), and NIST (\$1,600,000).

11/1/2017 – 10/30/18	(Weber, CoI: 0%, instrumentation) PI: Arthur G. Palmer <i>"475 MHz NMR Spectrometer"</i> National Institutes of Health (S10 D021673) Annual Direct Costs: \$ 600,000 Total Direct Costs: \$ 600,000 <i>Co-Investigator, provides 950 MHz NMR time to 475 MHz users (not counted for Weber total)</i>
7/1/06 - 10/31/16	(Weber, PI: 15%) <i>"Restoration of p53 function in malignant melanoma"</i> National Institutes of Health - (R01 CA107331) Annual Direct Costs: \$ 538,520 Total Direct Costs: \$ 5,385,197 <i>(This award included a minority supplement award to Dr. Shardell Spriggs)</i>
10/1/12 – 9/31/16	(Weber, CoI: 5%). PI: Wuyuan Lu <i>"HTS for HIV assembly & maturation inhibitors"</i> National Institutes of Health – R01 AI098498 Annual Direct Costs: \$ 195,000 Total Direct Costs: \$ 1,173,000 <i>Co-Investigator (not counted in totals for Weber funding)</i>
1/1/12 – 12/31/14	(Weber, CoI: 0%) PI: Danna B. Zimmer <i>"Phase I S100B Inhibitor Clinical Trial for Canine Melanoma Therapy"</i> American Kennel Association Canine Health Foundation (Grant No. 01633) Annual Direct Costs: \$ 80,000 Total Direct Costs: \$160,000 <i>Co-Investigator</i>
2/1/09 – 1/31/14	(Weber, CoI: 0%) PI: Michael F. Summers <i>"Expand Participation by Minorities in Biomedical Science"</i> National Institutes of Health – R25 GM55036 Annual Direct Costs: \$ 1,070,321 Total Direct Costs: \$ 5,147,507 <i>Co-Investigator, mentor, and member of the executive committee (not counted for Weber funding)</i>
7/1/08 – 6/30/13	(Weber, CoI: 1%) PI: Edward Sausville <i>"Treatment of melanoma with wild type p53 and detectable S100B using pentamidine: a Phase II trial with correlative biomarker endpoints"</i> National Institutes of Health (R21CA135624) Annual Direct Costs: \$ 375,000 Total Direct Costs: \$ 750,000 <i>Co-Investigator (This grant is not counted in Weber total funding)</i>
4/1/11 - 3/31/12	(Weber, PI: 0%, instrumentation) <i>"Multimode fluorescent plate reader"</i> National Institutes of Health (S10RR031729) Annual Direct Costs: \$ 164,375

5/27/10 - 5/26/12	Total Direct Costs: \$ 164,375 (Weber, PI: 0%, instrumentation) <i>"950 MHz NMR spectrometer with a cryogenic probe"</i> National Institutes of Health (S10RR029601) Annual Direct Costs \$ 7,994,900 Total Direct Costs \$ 7,994,900
7/1/08 – 6/30/12	(Weber, CoI) PI: William F. Morgan <i>"High Throughput Screens of Novel Radiation Sensitizers and Protectors"</i> Annual Direct Costs: \$ 77,000 (subcontract) Total Direct Costs: \$ 391,500 (subcontract) <i>Core facility work</i>
10/1/09 – 9/30/12	(Weber, mentor, 0%, MD/PhD training grant) PI: Melissa Liriano <i>"Protein dynamics of Ca-S100A5 in the presence and absence of target peptide"</i> National Institutes of Health – F30CA144560 Annual Direct Costs \$ 38,049 Total Direct Costs \$ 114,147 <i>Mentor</i>
7/1/09- 10/31/11	(Weber, PI, 2%) <i>"Restoration of p53 function in malignant melanoma"</i> National Institutes of Health - R01 CA107331-04-S1 ARRA Competitive Revision application Annual Direct Costs \$ 376,297 Total Direct Costs \$ 376,297
2/1/07 – 7/31/11	(Weber, PI, 20%) <i>"The structure and function of S100 proteins"</i> Annual Direct Costs \$ 304,425 Total Direct Costs \$1,217,700
2/1/09 – 7/31/11	(Weber, PI, 1%) <i>"S100A1 augments Cav1 channel currents and action potential duration in sympathetic ganglion neurons via interaction with protein kinase A (PKA)"</i> NIGMS Supplement for Collaborative Science – competitive grant Annual Direct Costs \$ 134,157 Total Direct Costs \$ 268,314
8/24/07 - 11/17/10	(Weber. CoI, 1%) PI: Edward Sausville <i>"Role of Aryl Hydrocarbon Receptor and Cross Talk with Estrogen Receptor in Response of Breast Cancer Cells to the Novel Antitumor Agent Aminoflavone"</i> Susan G. Komen Breast Cancer Foundation - BCTR0707527 Annual Direct Costs \$ 100,000 Total Direct Costs \$ 300,000 <i>Co-Investigator</i>
1/1/06 – 12/31/08	(Weber, mentor, 0%) PI: Michele Vitolo <i>"The Role of PTEN in Hormone Refractory Breast Cancer"</i> Susan G. Komen Breast Cancer Foundation Postdoctoral Award (PDF104506) Annual Direct Costs \$ 45,000

	Total Direct Costs	\$135,000
2/1/05 – 1/31/09	(Weber, CoI: 0%) PI: Michael F. Summers <i>"Expand Participation by Minorities in Biomedical Science"</i> National Institutes of Health – R25 GM55036 Annual Direct Costs: \$ 1,070,321 Total Direct Costs: \$ 5,147,507 <i>Co-Investigator, mentor, and member of the executive committee; <u>not</u> counted in Weber funding</i>	
5/26/06 – 5/25/08	(Weber, mentor, 0%) PI: Nathan T. Wright <i>"Structure/function studies of S100A1, a calcium-binding protein in EC coupling in cardiomyocytes"</i> American Heart Association (AHA 0615343U) Annual Direct Costs \$ 20,000 Total Direct Costs \$ 40,000 <i>Mentor</i>	
4/1/04 – 3/31/08	(Weber, CoI, 5%) PI: Anne Bresnick <i>"Novel Mechanisms of Myosin-II Mediated Motility"</i> National Institutes of Health – (R01 GM069945) Annual Direct Costs \$ 175,000 Total Direct Costs \$ 1,036,000 <i>Co-Investigator</i>	
4/1/07 – 3/31/08	(Weber, PI, 0%, instrumentation) <i>"600 MHz NMR console"</i> National Institutes of Health (S10 RR023447) Annual Direct Costs \$ 362,400 Total Direct Costs \$ 362,400	
7/1/04 – 6/30/07	(Weber, PI, 10%) <i>"Small molecule inhibitors of S100 proteins"</i> American Cancer Society – (CDD-107745) Annual Direct Costs \$ 180,000 Total Direct Costs \$ 540,000	
2/1/03 - 1/31/07	(Weber, PI, 20%) <i>"Structure/function studies of S100 proteins and p53"</i> National Institutes of Health - R01 GM58888 Annual Direct Costs \$ 296,012 Total Direct Costs \$ 1,184,050	
5/24/02 – 5/23/06	(Weber, mentor, 0%) PI: Joseph Markowitz, MD/Ph.D. candidate <i>"Design of inhibitors for S100B"</i> National Institutes of Health - (F30-NS43916-01) Annual Direct Costs \$ 32,968 Total Direct Costs \$ 131,870 <i>Mentor</i>	
1/1/00 – 12/31/03	(Weber, 20%, PI)	

	<i>"Studies of interactions between p53 and S100 proteins"</i> American Cancer Society Research Project Grant (ACS375) Annual Direct Costs \$ 100,000 Total Direct Costs \$ 300,000
4/1/02 - 3/31/03	(Weber, PI, 0%) <i>"Cryoprobe for a 600MHz NMR Spectrometer"</i> National Institutes of Health - (S10RR16812) Annual Direct Costs \$ 230,725 Total Direct Costs \$ 230,725
2/1/99 - 1/31/03	(Weber, PI, 30%) <i>"Studies of the Interaction of S100 proteins with their Respective Target Proteins"</i> National Institutes of Health - (R01 GM58888) Annual Direct Costs \$ 218,983 Total Direct Costs \$ 980,795
4/1/01 - 3/31/02	(Weber, PI, 0%, instrument) <i>"800MHz NMR Spectrometer"</i> NIH/NSF S10 - (S10RR15741, DBI 0115795) Annual Direct Costs \$ 900,000 Total Direct Costs \$ 900,000 Note: The grant was cost-shared by the NIH/NSF (\$500,000/\$400,000) Note: The NSF grant dates are (4/15/01 – 3/14/02).
8/22/02 – 8/21/03	(Weber, PI, 0%) <i>"Supplement for purchasing stopped-flow equipment"</i> National Institutes of Health (3R01GM058888-03S1) Annual Direct Costs \$ 56,000 Total Direct Costs \$ 56,000
9/1/00-8/31/01	(Weber, CoI, 5%) NIH <i>"Structure determination of the MutY C-terminal domain by NMR"</i> Supplement to R01 GM35132, PI: A-lien Lu-Chang Annual Direct Costs \$ 50,000 Total Direct Costs \$ 50,000 <i>Co-Investigator</i>
7/1/96 – 6/30/99	(Weber, PI, 10%) <i>"Structure/Function Studies of S100β"</i> American Cancer Society – (JFRA-641) Annual Direct Costs \$30,133 Total Direct Costs \$90,500
1/1/95 – 1/31/99	(Weber, PI, 50%) <i>"Structure/Function Studies of S100β Complexes by NMR"</i> National Institutes of Health (R29GM52071) Annual Direct Costs \$104,309 Total Direct Costs \$ 521,544

4/1/95 – 3/31/96	(Weber, PI, 0%; instrumentation) “600MHz NMR Spectrometer” National Institutes of Health (S10RR10441-01) Annual Direct Costs \$ 400,000 Total Direct Costs \$ 400,000
11/1/89 – 10/31/92	(Weber, PI, 100%) “Structure/function studies of staphylococcal nuclease by NMR” National Institutes of Health - (F32GM013324) Annual Direct Costs \$ 22,833 Total Direct Costs \$ 68,500 Role: Postdoctoral Fellow training grant

Issued Patents

1. **Weber, D.J.**, Markowitz, J., Carrier, F., MacKerell, A.D. “Inhibitors of the S100-p53 protein-protein interaction and method of inhibiting cancer employing the same”. **Australian Letters Patent number: 2003230705. Issued September 11, 2008.**
2. **Weber, D. J.**, Markowitz, J., Carrier, F., MacKerell, A.D. Invention Title: “Inhibitors of S100 proteins for the treatment of cancer and other diseases involving uncontrolled cell growth via an S100-dependent pathway”, NIH EIR #: 0820104-02-0006; Date Invention reported to PHS: 4/9/02; US Provisional Patent Application Number 60/368,835 was reported to PHS on 3/29/02 US Patent Application Number: **10/397,239** was reported to PHS on 3/27/03. **Issued: United States Patent 8,053,477 Weber et al. November 8, 2011.**
3. Carrier, F., Mackerell, A.D., **Weber, D.J.**, and Yu, W. “Protein Translation Inhibitors and Uses Thereof” US Patent Application Number: **16/879,226** was filed on 5/20/20. **Issued: United States Patent 11,510,908 Carrier et al. November 29, 2022.**

Provisional Patents

1. **Weber, D. J.**, Markowitz, J. Carrier, F., MacKerell, A.D. Invention Title: “Identification and characterization of small molecule inhibitors of the calcium-dependent S100B-p53 tumor suppressor interaction” NH EIR#: 0820104-04-0040; Date Invention reported to PHS: 10/22/04; US Provisional Patent Application Number 60/581,081 was reported to PHS on 6/20/05; US **Patent number: 11/155,617** was reported to PHS on 3/30/09.
2. **Weber, D.J.**, Markowitz, J. Invention Title: “SBI2a binds to both apo and holo S100B”; NIH EIR #: 0820104-05-0020; Date Invention reported to PHS: 3/31/05; US Provisional Patent application number 60/669,452 – **UMB waived rights** to PHS on 5/26/06 because it was decided not to pursue further patent protection for this invention.
3. **Weber, D.J.**, Wilder, P., Markowitz, J., Charpentier, T., Toth, E. Invention Title: “Dual site inhibition of the S100B protein to restore functional wild type p53 tumor suppressor protein levels and function”; NIH EIR #: 0820104-07-0006; Date invention reported to PHS: 2/28/07; US Provisional Patent application number 60/859,794 reported to PHS on 11/7/07; **UMB waived rights** to PHS on 11/13/07 because it was decided not to pursue further patent protection for this invention.
4. **Weber, D.J.**, Wright, N., Cannon, B., Zimmer, D.B. Invention Title: “Inhibitors of S100A1”; NIH EIR#: 0820104-08-0037; Date invention reported to PHS: 10/21/08; US Provisional Patent

application number 61/107,130 reported to PHS on 10/6/09; UMB waived rights to PHS on 10/6/09 because it was decided not to pursue further patent protection for this invention.

5. **Weber, D.J.**, Coop, A., MacKerell, A.D., Thompson, L., Wilder, P., Kudrimoti, S., Bezawada, P., Raman, E. P. Invention Title: "Inhibitors of the S100B-p53 interaction"; NIH EIR #: 0820104-09-0025; Date invention reported to PHS: 10/21/09.
6. Weiss, M., **Weber, D.J.**, and Bachman, K. "TP53 Gene-Knockout in Human Epithelial Cells"; Biological Material. Reported to PHS: 01/05/10.
7. Vitolo, M., **Weber, D.J.** "S100A4 (mts1) Gene-Knockout in human MCF7 Cells' Biological Material. Reported to PHS: 01/25/10 (for GM58888; CA107331).
8. **Weber, D.J.**, Wilder, P.T., Gianni, K. "Inhibiting the S100B-p53 protein-protein interaction with SC00931" NIH EIR# is 0820104-10-0012; Reported to PHS: 05/10/10; US Provisional Patent application number 61/333,431. Not converted.
9. **Weber, D. J.**, Cavalier, M.C., Wilder, P.T., Charpentier, T.H. "Pentamidine Analog Inhibitors of S100B and Uses Thereof", US Provisional Patent Application Number 62/240,600. Not converted.
10. **Weber, D.J.**, Cavalier, M.C., Wilder, P.T., Kales, S.C., Simeonov, A., Maloney, D., Jansen, D.J., Hongmao, S., Luci, D., Jadhav, A. "Inhibitors of S100B and Methods using the Same" US Provisional Patent Application Number 62/459,830. One-year conversion deadline: 2/16/18.
11. Carrier, F., **Weber, D.J.**, MacKerell, A.D., and Yu, W. "Small Molecule Inhibitors of hnRNP A18 for Targeting Cancer Cell Progression and Immune Evasion" U.S. Provisional Application Number: 62/892,138. UMB Docket Number: FC-2019-108.
12. Fulton, A.M., **Weber, D.J.**, Kundu, N., and Godoy-Ruiz, R. "Inhibition of metastasis with recombinant plant products" U.S. Provisional Application Number: 63/505,048 UMB Docket Number: AF-2021-040. Filed on 5/20/2023.
13. Li, Y., Pozharskiy, E., Sevdalis, S., Shang, X., and **Weber, D.J.** "Clostridium Difficile Binary Toxin Neutralizing Antibodies" U.S. Provisional Application Number: 63/698,989, UMB Docket No.: YL-204-067 (PR). Filed on 10/11/2024.

Peer-reviewed journal articles

1. Pollock, J.S., Shepard, A.J., **Weber, D.J.**, Olson, D.O., Pedersen, L.G., and Hiskey, R.G. Phospholipid binding properties of bovine prothrombin peptide residues 1-45 (1988) *J Biol Chem* 263, 14216-14223.
2. **Weber, D.J.**, Pollock, J.S., Pedersen, L.G., and Hiskey, R.G. The Determination of a calcium-dependent binding constant of the bovine prothrombin gla domain (Residues 1-45) to phospholipids (1988) *Biochem Biophys Res Comm* 155, 230-235.
3. **Weber, D.J.**, Serpersu, E.H., Shortle, D., and Mildvan, A.S. Diverse interactions between the individual mutations in a double mutant at the active site of staphylococcal nuclease (1990) *Biochemistry* 29, 8632-8642.

4. **Weber, D.J.**, Meeker, A.K., and Mildvan, A.S. Interactions of the acid and base catalysts on staphylococcal nuclease as studied in a double mutant (1991) *Biochemistry* 30, 6103-6114.
5. **Weber, D.J.**, Mullen, G.P., and Mildvan, A.S. Conformation of an enzyme-bound substrate of staphylococcal nuclease as determined by NMR (1991) *Biochemistry* 30, 7425-7437.
6. **Weber, D.J.**, Bhatnagar, S.K., Bullions, L.C., Bessman, M.J., and Mildvan, A.S. NMR and isotopic exchange studies of the site of bond cleavage in the mutT reaction (1992) *J Biol Chem* 267, 16939-16942.
7. **Weber, D.J.**, Gittis, A.G., Mullen, G.P., Abeygunawardana, C., Lattman, E.E., and Mildvan, A.S. NMR docking of a substrate into the X-ray structure of staphylococcal nuclease (1992) *Proteins* 13, 275-287. (Note: Two figures from this paper were selected for the cover of the journal for this issue).
8. Mildvan, A.S., **Weber, D.J.**, and Kuliopulos, A. Quantitative interpretations of double mutations of enzymes (1992) *Arch Biochem Biophys* 294, 327-340.
9. **Weber, D.J.**, Berkowitz, P., Panic, M.G., Huh, N.W., Pedersen, L.G., and Hiskey, R.G. Modifications of bovine prothrombin fragment 1 in the presence and absence of Ca(II) ions: loss of positive cooperativity in Ca(II) ion binding for the modified proteins (1992) *J Biol Chem* 267, 4564-4569.
10. Berkowitz, P., Huh, N.W., Bronstrom, K.E., Panek, M.G., **Weber, D.J.**, Tulinsky, A., Pedersen, L.G., and Hiskey, R.G. A metal ion-binding site in the kringle region of bovine prothrombin fragment 1 (1992) *J Biol Chem* 267, 4570-4576.
11. **Weber, D.J.** Abeygunawardana, C., Bessman, M.J., and Mildvan, A.S. Solution secondary structure of the mutT enzyme as determined by NMR (1993) *Biochemistry* 32, 13081-13088.
12. Abeygunawardana, C., **Weber, D.J.**, Frick, D.N., Bessman, M.J., and Mildvan A.S. Complete sequence-specific NMR assignments of backbone ¹H, ¹³C and ¹⁵N resonances for the mutT enzyme (1993) *Biochemistry* 32, 13071-13080.
13. Chuang, W.J., **Weber, D.J.**, Gittis, A.G., and Mildvan, A.S. Mutational test of the NMR docked structure versus the X-ray structure of the ternary staphylococcal nuclease (SN)-metal-3'5'-pdTp complex (1993) *Proteins* 17, 36-48.
14. **Weber, D.J.**, Serpersu, E.H., Gittis, A.G., Lattman, E.E., and Mildvan, A.S. NMR docking of the competitive inhibitor thymidine 3'5'-diphosphate into the X-ray structure of staphylococcal nuclease (1993) *Proteins* 17, 20-35.
15. Frick, D.N., **Weber, D.J.**, Bessman, M.J., and Mildvan, A.S. Dual divalent cation requirement of the mutT dGTPase. Kinetic and magnetic resonance studies of the metal and substrate complexes (1994) *J Biol Chem* 269, 1794-1803.
16. **Weber, D.J.**, Libson, A.M., Gittis, A.G., Lebowitz, M.S., and Mildvan, A.S. NMR docking of a substrate into the X-ray structure of the asp-21 to glu mutant of staphylococcal nuclease (1994) *Biochemistry* 33, 8017-8028.

17. Amburgey, J.C., Abildgaard, F., Starich, M.R., Shah, S., Hilt, D., and **Weber, D.J.** ^1H , ^{13}C and ^{15}N resonances assignments and solution secondary structure of rat apo-S100 β (1995) *J Biomol NMR* **6**, 171-179.
18. Abeygunawardana, C., **Weber, D.J.**, Gittis, A.G., Frick, D.N., Lin, J., Miller, A.-F., Bessman, M.J., and Mildvan, A.S. Solution structure of the mutT enzyme, a nucleoside triphosphate pyrophosphohydrolase (1995) *Biochemistry* **34**, 14997-15005. (PDB file: 1MUTT).
19. Frick, D.N., **Weber, D.J.**, Abeygunawardana, C., Gittis, A.G., Bessman, M.J., and Mildvan, A.S. NMR studies of the conformation and location of nucleotides bound to the *E. coli* mutT enzyme (1995) *Biochemistry* **34**, 5577-5586.
20. Drohat, A.C., Amburgey, J.C., Abildgaard, F., Starich, M.R., **Weber, D.J.** Solution structure of rat apo-S100B as determined by NMR spectroscopy (1996) *Biochemistry* **35**, 11577-11588. (PDB file: 1SYM).
21. Rogowski, R.S., Collins, J.H., O'Neill, T.J., Gustafson, T.A., Werkman, T.R., Rogawski, M.A., Tenenholz, T.C., **Weber, D.J.**, and Blaustein, M.P. Three new toxins from the scorpion, *Pandinus imperator*, selectively block certain voltage-gated K^+ channels (1996) *Mol Pharmacol* **50**, 1166-1177.
22. Landar, A., Hall, T.L., Cornwall, E.H., Correia, J.J., Drohat, A.C., **Weber, D.J.**, and Zimmer, D.B. The role of cysteine residues in S100B dimerization and regulation of target protein activity (1997) *BBA-Protein Struct M* **1343**, 117-129.
23. Drohat, A.C., Nenortas, E., Beckett, D., and **Weber, D.J.** Oligomerization state of S100B at nanomolar concentration as determined by large-zone analytical gel filtration chromatography (1997) *Protein Sci* **6**, 1577-1582.
24. Chaudhuri, D., Horrocks, W.D., Amburgey, J.C., and **Weber, D.J.** Lanthanide luminescence studies of the metal binding sites of the S100 β protein (1997) *Biochemistry* **36**, 9674-9680.
25. Tenenholz, T., Rogowski, Gustafson, T.A., Blaustein, M.P., and **Weber, D.J.** Solution structure for *Pandinus* toxin K- β (PiTX-K β), a selective blocker of A-type potassium channels (1997) *Biochemistry* **36**, 2763-2771. (PDB file – 2PTA).
26. Landar, A., Rustandi, R.R., **Weber, D.J.** and Zimmer, D.B. S100A1 utilizes different mechanisms for interacting with calcium-dependent and calcium-independent target proteins (1998) *Biochemistry* **37**, 17429-17438.
27. Drohat, A.C., Baldisseri, D.M., Rustandi, R.R., and **Weber, D.J.** Solution structure of Ca^{2+} -loaded rat S100B as determined by NMR spectroscopy (1998) *Biochemistry* **37**, 2729-2740. (PDB file: 1QLK).
28. Rustandi, R.R., Drohat, A.C., Baldisseri, D.M., Wilder, P.T., and **Weber, D.J.** Interactions of S100B with a peptide derived from p53 (1998) *Biochemistry* **37**, 1951-1960.
29. Wilder, P.T., Rustandi, R.R., Drohat, A.C., and **Weber, D.J.** S100B inhibits the protein kinase C-dependent phosphorylation of a peptide derived from p53 in Ca^{2+} -dependent manner (1998) *Protein Sci* **7**, 794-798.

30. Baldisseri, D.M., Rustandi, R.R., Zhang, Z., Tang, C., Bair, C.L., Landar, A., Landar, A., Zimmer, D.B. and **Weber, D.J.** ^1H , ^{13}C , and ^{15}N NMR sequence-specific resonance assignments for rat apo-S100A1($\alpha\alpha$) (1999) *J Biomol NMR* 14, 91-92.
31. Rustandi, R.R., Baldisseri, D.M., Drohat, A.C., and **Weber, D.J.** Structural changes in the C-terminus of Ca^{2+} -bound rat S100B($\beta\beta$) upon binding to a peptide derived from the C-terminal regulatory domain of p53 (1999) *Protein Sci* 8, 1743-1751.
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Protein database entries (Protein Database/PDB files)

1. MutT pyrophosphohydrolase enzyme (NMR, **1MUTT**).
2. Apo-S100B (NMR, **1SYM**).
3. Apo-S100B refined with dipolar couplings (NMR, **1BC4**).
4. Ca²⁺-S100B (NMR, **1QLK**).
5. Ca²⁺-S100B bound to a p53 peptide (NMR, **1DT7**).
6. Ca²⁺-S100B bound to the TRTK-inhibitory peptide (NMR, **1MWN**).
7. Apo-S100A1 (NMR, **1K2H**).
8. The apo-form of the metastasis protein Mts1 (S100A4) (NMR, **1M31**).
9. The olfactory marker protein, OMP (NMR, **1JYT**).
10. The K-channel blocking scorpion toxin TSTX-K α (NMR, **1HP2**).
11. The K-channel blocking scorpion toxin PTX-K α (NMR, **2PTA**).
12. The K-channel blocking scorpion toxin PTX-K β (NMR, **1C49**).
13. Zn²⁺,Ca²⁺-S100B (NMR, **1XYD**).
14. Ca²⁺-S100A1 (NMR, **1ZFS**).
15. The olfactory marker protein, OMP, refined with dipolar couplings (NMR, **1ZRI**).
16. IPI* (with L. Black; NMR, **2JUB**, RCSB100299).
17. Zn²⁺, Ca²⁺-S100B (X-ray; **3CR2**, RCSB047111; 1.88 Å).
18. Pentamidine bound to Ca²⁺-S100B (X-ray; **3CR4**, RCSB047112; 2.15 Å).
19. Pentamidine bound to Zn²⁺, Ca²⁺-S100B (X-ray; **3CR5**, RCSB047113; 1.85 Å).
20. RyR12 bound to Ca²⁺-S100A1 (NMR; **2K2F**, RCSB100590).
21. Ca²⁺-S100B refined with dipolar couplings (NMR; **2K7O**, RCSB100779).
22. Ca²⁺-S1004 (mts1) (X-ray; **2Q91**; 1.63 Å).
23. Ca²⁺-S100A1 bound to the TRTK-inhibitory peptide (NMR, **2KBM**, RCSB100918).
24. SBI523 bound to Ca²⁺-S100B (X-ray; **3GK4**, RCSB051960; 1.90 Å).
25. SBI279 bound to Ca²⁺-S100B (X-ray; **3GK2**, RCSB051958; 1.98 Å).
26. SBI132 bound to Ca²⁺-S100B (X-ray; **3GK1**, RCSB051957; 2.10 Å).
27. Ca²⁺-S100B (X-ray; **3IQO**, RCSB054744; 1.50 Å).
28. TRTK12-Ca²⁺-S100B (X-ray; **3IQQ**, RCSB054746; 2.01 Å).
29. Chorpromazine (SC0067)-bound Ca²⁺-S100B (X-ray; **3LK0**; 2.04 Å).
30. Thimersol(SC0332)-bound Ca²⁺-S100B (X-ray; **3LK1**; 1.79 Å).
31. Sanguinarine(SC0844)-bound Ca²⁺-S100B (X-ray; **3LLE**; 1.85 Å).
32. Human Ca²⁺-S100A5 (X-ray; **4DIR**, RCSB070380; 2.60 Å).
33. SBI4211-bound Ca²⁺-S100B (X-ray; **4FQO**, RCSB073234; 1.65 Å).
34. D63N mutant of bovine TRTK12-Ca²⁺-S100B (X-ray; **3RLZ** and RCSB065095; 2.01 Å).
35. Refined D63N mutant of TRTK12-Ca²⁺-S100B (X-ray; **3RM1**, RCSB065097; 1.24 Å).
36. TFP-S100A4 (X-ray, **3K00**; 2.30 Å).
37. Dispersin (NMR, **2JVU**).
38. SBI29 bound to Ca²⁺-S100B (X-ray; **5DKR**; 1.74 Å).
39. SBI4172 bound to Ca²⁺-S100B (X-ray; **4PDZ**; 1.73 Å).
40. SBI4214 bound to Ca²⁺-S100B (X-ray; **5DKQ**; 1.59 Å).
41. SBI4225 bound to Ca²⁺-S100B (X-ray; **5DKN**; 1.53 Å).
42. SBI4434 bound to Ca²⁺-S100B (X-ray; **4PE0**; 1.08 Å).
43. SC0025 bound to Ca²⁺-S100B (X-ray; **5ER4**; 1.81 Å).
44. SC124 bound to Ca²⁺-S100B (X-ray; **4PE1**; 1.58 Å).
45. SC1475 bound to Ca²⁺-S100B (X-ray; **4PE4**; 2.18 Å).
46. SC1982 bound to Ca²⁺-S100B (X-ray; **4PE7**; 1.65 Å).

47. SC1990 bound to Ca²⁺-S100B (X-ray; **5ER5**; 1.26 Å)
48. hnRNP A18 RNA Recognition Motif (X-ray; **5TBX**; 1.77 Å)
49. Ca²⁺-S100A1 (X-ray; **5K89**; 2.25 Å)
50. Ca²⁺-S100B bound to hdm4 peptide (X-ray; to be submitted)
51. Ca²⁺-Mn²⁺-S100B (X-ray; to be submitted)
52. Ca²⁺-Mn²⁺-S100B-Pnt (X-ray; to be submitted)
53. Ca²⁺-S100B bound to SC0931 (X-ray; to be submitted)
54. Ca²⁺-S100B bound to SBi4872 (X-ray; to be submitted)
55. Ca²⁺-S100B bound to SBi4873 (X-ray; to be submitted)
56. Ca²⁺-S100B bound to SBi5205 (X-ray; to be submitted)
57. Ca²⁺-S100B bound to SBi5311 (X-ray; to be submitted)
58. Ca²⁺-S100B bound to SPB05356 (X-ray; to be submitted)
59. Ca²⁺-S100B bound to SBi5345 (X-ray; to be submitted)
60. Ca²⁺-S100B bound to SBi5349 (X-ray; to be submitted)
61. Ca²⁺-S100B bound to SBi5356 (X-ray; to be submitted)
62. Ca²⁺-S100B bound to SBi5359 (X-ray; to be submitted)
63. Ca²⁺-S100B bound to SBi5361 (X-ray; to be submitted)
64. Ca²⁺-S100B bound to SBi5363 (X-ray; to be submitted)
65. Ca²⁺-S100B bound to SBi5369 (X-ray; to be submitted)
66. Ca²⁺-S100B bound to SBi5373 (X-ray; to be submitted)
67. Double Mutant L380R/F535K of Human Acetylcholinesterase (X-ray; **6O69**; 2.10 Å)
68. CDTb of the cDiff binary toxin, D623A+D734A (CryoEM; **8EKM**; 4.04 Å)
69. CDTb of the cDiff binary toxin, RBD1 is Ca²⁺ depleted, Class 1 (CryoEM; **8EKL**; 3.61 Å)
70. CDTb of the cDiff binary toxin, RBD1 is Ca²⁺ depleted, Class 2 (CryoEM; **8EKK**; 3.71 Å)
71. CDTb of cDiff binary toxin, symmetric conformation (CryoEM; **6UWT**; 3.10 Å)
72. CDTb of cDiff binary toxin, asymmetric conformation (CryoEM; **6UWR**; 2.80 Å)
73. CDTb of cDiff binary toxin, asymmetric conformation (X-ray; **6UWI**; 3.70 Å)
74. RBD2 of CDTb (X-ray; **6UWO**; 2.30 Å)
75. Ca²⁺,Mn²⁺-S100B (X-ray; **8FJ8**; 2.14 Å)

NMR Chemical Shift Database (BMRB files)

1. Apo-S100B (entries 4001, 4285)
2. Apo-S100A1 (entry 4285)
3. Ca²⁺-S100B-p53 (C-term; entries 4702, 4099)
4. PDTX (entry 4760)
5. TSTX-alpha (entry 4924)
6. Ca²⁺-S100B (entries 15923, 4105)
7. Zn²⁺,Ca²⁺-S100B (entry 5895)
8. Ca²⁺-S100A1-RYRP12 (entries 15296, 15704)
9. Endonuclease inhibitor IPI* (entry 15438)
10. Dispersion (entry 7179)
11. Ca²⁺-S100A1 (entry 6583)
12. Apo-S100A4 (entry 4892)
13. Ca²⁺-S100A1-TRTK12 (entry 16050)
14. Ca²⁺-S100B-TRTK12 (entries 5544, 17061)
15. ADP-ribosyltransferase toxin CDTa-D2 (residues 216-410; entry 25665)
16. ADP-ribosyltransferase toxin CDTa-D1 (residues 1-216; entry 26044)
17. DNA ligase 3 DNA binding domain (residues 257-477; entry 27209)
18. CaM bound to the Stra6 vitamin A transporter (entry 27782)
19. Receptor binding domain 2 of CDTb (entry 28050)
20. RNA recognition motif of hnA18 (residues 1-92; entry 28117)

21. Receptor binding domain 2 (RBD2) of CDTb (residues 757-876; entry 28131)
22. ^{Mg}CaM (entry 50836)
23. ^{Mg}CaM bound to the BP2 peptide from STRA6 (residues 600-626; entry 50837)
24. ^{Ca}CaM bound to the BP2 peptide from STRA6 (residues 600-626; entry 27782)
25. ^{Mg,Ca}CaM bound to the BP2 peptide from STRA6 (200 nM free calcium; entry 50849)
26. ^{Ca}CaM bound to the BP0 peptide from STRA6 (residues 218-237; entry 50850)
27. ^{Mg}CaM bound to the BP0 peptide from STRA6 (residues 218-237; entry 50851)
28. ^{Ca}CaM bound to the BP1 peptide from STRA6 (residues 554-571; entry 50892)
29. SET/TAF-1B/I2PP2A (residues 23-225; entry 50899)
30. A18 RNA binding domain plus/minus inhibitors (hnRNP A18; entry 28117)
31. A18 protein, full length (hnRNP A18; entry 51517)

Honored Presentations

1. **Weber, D.J.** The role of amino acid residues 1-45 in the binding of prothrombin to phospholipid membranes. *Western Maryland College, Department of Chemistry*. Host: Richard Smith and Donald Jones, February 1989 (Invited speaker).
2. **Weber, D.J.** A Structure/function study of the double mutant D21E + R87G of staphylococcal nuclease. *NIH/Department of Food and Drug Administration*. Host: Elizabeth Zapata, February 1989 (Invited speaker).
3. **Weber, D.J.** The structure of an enzyme-bound substrate of staphylococcal nuclease as determined by NMR. *Department of Nephrology, The Johns Hopkins School of Medicine*. Host: Raymond Pratt, October 1990 (Invited speaker).
4. **Weber, D.J.** Structural and mechanistic studies of staphylococcal nuclease by NMR and site-directed mutagenesis. *The Johns Hopkins School of Hygiene and Public Health Department of Biochemistry*, January 1992 (Invited speaker). Host: Dr. Roger McMacken.
5. **Weber, D.J.** Structural and mechanistic studies of staphylococcal nuclease by NMR and site-directed mutagenesis. *The City College of New York, Department of Biochemistry and Chemistry*, February 1992 (Invited speaker). Host: Dr. C.S. Russell.
6. **Weber, D.J.** Structural and mechanistic studies of staphylococcal nuclease by NMR and site-directed mutagenesis. *University of Maryland School of Medicine, Department of Biological Chemistry*, March 1992 (Invited speaker). Host: Dr. Guiseppe Inesi.
7. **Weber, D.J.** Structural and mechanistic studies of staphylococcal nuclease by NMR and site-directed mutagenesis. *National Cancer Institute, Division of Biophysics*, March 1992 (Invited speaker). Host: Dr. Andrew Byrd.
8. **Weber, D.J.** Structural and mechanistic studies of staphylococcal nuclease by NMR and site-directed mutagenesis. *Tufts University School of Medicine, Department of Biochemistry*, March 1992 (Invited speaker). Host: Dr. William Bachovchin.
9. **Weber, D.J.** Structural and mechanistic studies of staphylococcal nuclease by NMR and site directed mutagenesis. *Louisiana State University School of Medicine, Department of Biochemistry*, March 1992 (Invited speaker). Host: Dr. Robert Rhoads.

10. **Weber, D.J.** Structural and mechanistic studies of staphylococcal nuclease by NMR and site-directed mutagenesis. *Dartmouth College, Department of Chemistry*, April 1992 (Invited speaker). Host: Dr. Dean Wilcox.
11. **Weber, D.J.** Structural and mechanistic studies of staphylococcal nuclease by NMR and site-directed mutagenesis. *The Johns Hopkins School of Medicine Young Investigators' Day Awards*, April 1992 (oral and poster presentation).
12. **Weber, D.J.** Studies of the mutT enzyme by NMR. *The University of Maryland School of School of Pharmacy, Department of Biomedical Chemistry*, April 1993 (Invited speaker). Host: Dr. Ronald Guiles.
13. **Weber, D.J.** Structure/function studies of the mutT enzyme by NMR. *The University of Maryland at Baltimore County, Department of Chemistry and Biochemistry*, May 1994 (Invited speaker). Host: Dr. Michael Summers.
14. **Weber, D.J.** Studies of the enzyme mutT by NMR and site-directed mutagenesis. *Department of Biochemistry, The Center of Marine Biotechnology (COMB)*, November 30, 1994 (Invited speaker). Host: Frank Robb.
15. **Weber, D.J.** Studies of the enzyme's mutT and staphylococcal nuclease by NMR and site-directed mutagenesis. *Department of Biochemistry, Columbia University School of Medicine*, October 14, 1994 (Invited speaker). Host: Arthur Palmer, III.
16. **Weber, D.J.** The Three-dimensional solution structure of rat apo-S100 β determined by heteronuclear multidimensional NMR spectroscopy (1996) *Fourth European Symposium on Calcium Binding Proteins in Normal and Transformed Cells, University of Perugia, Perugia Italy*, May 4, 1996 (Invited speaker), Meeting Organizer: Professor Roserio Donato.
17. **Weber, D.J.** Studies of the structure and function of S100B($\beta\beta$) (1996) *Washington Area NMR Group Lecture*, February 29, 1996 (Invited speaker), Host: Dr. Bruce Coxon.
18. **Weber, D.J.** Structure/function studies of S100 proteins (1996) *University of Texas Southwest Medical Center*, October 13, 1996 (Invited speaker), Host: Dr. Philip Thomas.
19. **Weber, D.J.** Structure/function studies of the Ca(II)-binding protein S100B (1997) *Center for Advanced Research and Biotechnology (CARB)* (Invited speaker), Host: Dr. James Stivers.
20. **Weber, D.J.** A look at the interaction of S100B with target proteins using NMR spectroscopy (1998) *University of Alabama School of Medicine, Mobile, AL* (Invited speaker) Host: Dr. Danna Zimmer.
21. **Weber, D.J.** The Ca²⁺-dependent interaction of S100B with the tumor suppressor protein, p53 (1998) *XVIIIth International Conference on Magnetic Resonance in Biological Systems, Tokyo, Japan* (Invited speaker) Meeting Organizer: Dr. Masatsune Kainosho.
22. **Weber, D.J.** The Ca²⁺-dependent interactions of S100B with target proteins (1998) *The Johns Hopkins School of Medicine, Baltimore, MD* (Invited speaker) Host: Dr. Albert Mildvan.

23. **Weber, D.J.** The Ca^{2+} -dependent interaction of S100B with the tumor suppressor protein, p53 (1999) *The American Chemical Society Southeastern Regional Meeting*, Memphis, TN (Invited speaker) Session Organizer: Dr. Engin Serpersu.
24. **Weber, D.J.** The Ca-dependent interaction of S100B with the tumor suppressor protein, p53 (1999) *International Symposium on calcium-binding proteins and calcium function in health and disease*, Tokyo, Japan (Invited Speaker) Meeting Organizer: Dr. Katsuhiko Mikoshiba.
25. **Weber, D.J.** The Ca-dependent interaction of S100B with p53 (1999) *The University of Virginia* (Invited speaker) Host: Dr. Sepideh Khorasanizadeh.
26. **Weber, D.J.** The Ca^{2+} -dependent interaction of S100B with p53 (2000) *Albert Einstein College of Medicine* (Invited Speaker) Host: Dr. Anne Bresnick.
27. **Weber, D.J.** The interaction of S100B and the tumor suppressor protein, p53 (2000) *University of Maryland Research Retreat*, Baltimore, MD (Session organizer/speaker) Meeting Organizer: Dr. Howard Dickler.
28. **Weber, D.J.** The Ca^{2+} -dependent interaction of S100 proteins with their targets (2000) *XIXth International Conference on Magnetic Resonance in Biological Systems*, Florence, Italy (Invited speaker) Meeting Organizer: Dr. Ivano Bertini.
29. **Weber, D.J.** The Ca^{2+} -dependent interaction of S100B with the tumor suppressor protein, p53 (2001) *The National Institutes of Health* (Invited speaker). Host: Dr. Curt Harris.
30. **Weber, D.J.** The Ca^{2+} -dependent interaction of S100B with the tumor suppressor protein, p53 (2001) *The Mid-Atlantic Regional Meeting of the American Chemical Society* (Invited speaker). Organizer: Dr. Micheal Summers.
31. **Weber, D.J.** The Ca^{2+} -dependent interaction of S100B with the negative regulatory domain of p53 (2001) *Pennsylvania State University School of Medicine* (Invited speaker) Host: Dr. George Makhatadze.
32. **Weber, D.J.** The Ca^{2+} -dependent interaction of S100B with the tumor suppressor protein, p53 (2002). *McDaniel College Lecture Series* (Invited speaker) Host: Students of βββ Biology honor society.
33. **Weber, D.J.** The Ca^{2+} -dependent interaction of S100B with the tumor suppressor protein, p53 (2002). *Regional Meeting of The Lehigh Valley Chapter of the American Chemistry Society* (Invited speaker) Host: Dr. Marion Smith.
34. **Weber, D.J.** The link between transcription activation and intracellular Ca^{2+} levels (2003). *The National Institutes of Health* (Invited speaker) Host: Dr. Nico Tjandra.
35. **Weber, D.J.** The link between transcription activation and intracellular Ca^{2+} levels (2003). *Purdue University* (Invited speaker) Host: Dr. Carol Post.
36. **Weber, D.J.** The use of nuclear magnetic resonance spectroscopy in biomedical research (2003). Presentation to the *Maryland House Appropriations Committee* (Invited speaker) Host: Dr. Donald E. Wilson, M.D., M.A.C.P.

37. **Weber, D.J.** The use of nuclear magnetic resonance (NMR) spectroscopy for cancer research (2003). *The University of Maryland Medical System Board of Visitors Meeting* (Invited speaker) Host: Mr. Edmond F. Notebaert, President and CEO of UMMS.
38. **Weber, D.J.** The use of nuclear magnetic resonance (NMR) spectroscopy for cancer research (2003). *The University of Maryland School of Medicine Board of Visitors Meeting* (Invited speaker) Host: Dr. Donald E. Wilson, M.D., M.A.C.P.
39. **Weber, D.J.** The link between transcription activation and intracellular Ca^{2+} levels (2003). *The University of Arkansas* (Invited speaker) Host: Dr. Wesley Stites.
40. **Weber, D.J.** The calcium-dependent interaction between S100B and p53 down-regulates tumor suppression (2004). *NMR as a Tool in Biotechnology: NMR symposium at CARB* (Invited Speaker). Organizer: Dr. Nesi Sari.
41. **Weber, D.J.** The calcium-dependent interaction between S100B and p53 down-regulates tumor suppression (2004). *Texas A&M University, College Station, TX* (Invited Speaker). Host: Professor Danna Zimmer.
42. **Weber, D.J.** Restoration of tumor suppression in malignant melanoma (2004). *Mayo Clinic, Rochester, MN* (Invited Professor). Host: Professor L. James Maher, III.
43. **Weber, D.J.** The calcium-dependent interaction between S100B and p53 down-regulates tumor suppression (2004). *The International Nuclear Magnetic Resonance Society Annual Meeting: Symposia on NMR, Drug Design, and Bioinformatics, Calcutta, India* (Invited Speaker) Organizer: Professor Siddhartha Roy.
44. **Weber, D.J.** S100B is a calcium-switch that turns off the tumor suppressor protein, p53 (2005). *The University of Maryland at College Park, MD* (Invited Professor). Host: Professor Dorothy Beckett.
45. **Weber, D.J.** The calcium-switch that turns off the tumor suppressor protein, p53 (2005). *21st International Conference of Magnetic Resonance in Biological Systems, Hyderabad, India* (Invited Speaker). Organizer: Professor K.V.R. Chary.
46. **Weber, D.J.** S100B is a calcium-mediated switch that turns off the tumor suppressor protein in malignant melanoma (2006). *Magnetic resonance center (CERM), The University of Florence, Italy* (Invited speaker). Host: Professor Ivano Bertini.
47. **Weber, D.J.** S100B is a calcium-mediated switch that turns off the tumor suppressor protein in malignant melanoma (2006). *Translational Oncology Research Centre Queen Alexandra Hospital, Portsmouth, England* (Invited speaker). Host: Professor Ian Cree.
48. **Weber, D.J.** Restoration of the p53 tumor suppressor in malignant melanoma (2006). *Grand Rounds Lecture Hematology/Oncology University of Maryland Medical System (UMMS)* Invited speaker. Host: Professor Barry Meisenberg & Professor Kevin Cullen.
49. **Weber, D.J.** S100B is a calcium-mediated switch that turns off the tumor suppressor protein in malignant melanoma (2006). *Center of Marine Biotechnology (COMB)* Invited speaker. Host: Professor Shil Dassarma.

50. **Weber, D.J.** S100B contributes to the degradation of the p53 tumor suppressor protein (2006). *9th European Symposia on Calcium-binding Proteins in Normal and Transformed Cells*, Strousberg Germany (Invited speaker). Organizer: Professor Claus W. Heizmann.
51. **Weber, D.J.** The role of S100B in down-regulating tumor suppression in malignant melanoma (2007). *College of Veterinary Medicine Department of Veterinary Pathobiology, Texas A & M University* (Invited Speaker). Host: Dr. Danna Zimmer.
52. **Weber, D.J.** The American Cancer Society: The applicants viewpoint (2007). The ACS session at the *National Meeting of The American Society for Biochemistry & Molecular Biology (ASBMB)*, Washington D.C. Organizer: Dr. Christopher Widnell.
53. **Weber, D.J.** Inhibition of the calcium-binding protein S100B restores functional p53 tumor suppression in malignant melanoma (2007). Center for Vascular and Inflammatory Disease (CVID) seminar series (invited speaker); *University of Maryland School of Medicine*. Host: Professor Dudley Strickland.
54. **Weber, D.J.** The calcium-dependent interaction of S100B with the tumor suppressor protein, p53, inhibits normal tumor suppressor function in malignant melanoma (2007). Symposium 1: Calcium-activated Switches. *The 2007 Annual Meeting of the Biophysical Society* (Invited Speaker). Organizer: Professor Madeline A. Shea.
55. **Weber, D.J.,** Wright, N.W., Prosser, B., Zimmer, D.B., and Schneider, M.L. Interaction of S100A1 with RyR1 (2008) *Gordon Conference on Computational Aspects – Biomolecular NMR*. (Invited Attendee). Ciucco, Italy. Organizer: Rafael Brüschweiler (Chair).
56. **Weber, D.J.** Structure and function of S100 proteins (2008) *CARB NMR symposium* (Invited Plenary Speaker). Rockville, MD. Organizer: Professor Nese Sari.
57. **Weber, D.J.** The inhibition of S100B restores p53 in melanoma (2008) *PepCon 2008, Protein & Peptide Technology: From Concept to Market* (Invited Plenary Speaker). Shenzhen, China Organizer: Sally Song.
58. **Weber, D.J.** Interaction of S100A1 with the Ryanodine Receptor (RyR12) as studied by NMR Spectroscopy (2008) *Gordon Research Conference on computational aspects – Biomolecular NMR* (Invited Presentation). Ciocco, Barga, Italy. Organizer: Professor Rafael Brüschweiler.
59. **Weber, D.J.** Structure and function of S100 proteins (2008) Symposium celebrating the 100th year of the *Department of Biological Chemistry at the Johns Hopkins School of Medicine* (Invited Speaker). Baltimore, MD. Host: Professor Albert Mildvan.
60. **Weber, D.J.** Structure/function and inhibition of S100B (2009) *First translational technologies and resources symposium*. Keynote lecturer. Host: Dr. Nicholas Ambulos.
61. **Weber, D.J.** Structure/function and Inhibition of the tumor marker S100B (2009) *University of Maryland School of Medicine Council meeting*, Honorary speaker. Host: Dr. Albert Reece, Dean of the School of Medicine.
62. **Weber, D.J.** Structure, function, and inhibition of the S100 protein, S100B (2009) *Hood College*, invited speaker. Host: Professor Dana C. Lawrence.

63. **Weber, D.J.** Inhibiting S100B restores p53 in malignant melanoma (2010) *Johns Hopkins School of Medicine*, Keynote speaker at the LEM symposium. Host: Professor Craig Montell.
64. **Weber, D.J.** Functional binding and folding model for protein-protein interactions and implications for drug design (2011) *Keystone Symposium*, Big Sky MO. Hosts: Drs. David Wemmer, Dorothy Kern, and Michael Summers.
65. **Weber, D.J.** Structure, function and inhibition of S100 protein-protein interactions (2012) *Drexel University Department of Biochemistry Seminar Series*. Philadelphia, PA
66. **Weber, D.J.** The role of S100 proteins in calcium-signaling and cancer (2012) *University of North Carolina-Chapel Hill*, Chapel Hill, NC. Host: William Janzen
67. **Weber, D.J.** Restoration of p53 in malignant melanoma: a new strategy for rational drug design (2012) *University of Kansas Cancer Center*, Kansas City KA. Host: Raymond Perez
68. **Weber, D.J.** The role of dynamics for inhibiting protein-protein interactions (2012) *North Carolina State University*, Raleigh NC. Host: Dr. John Cavanagh
69. **Weber, D.J.** Structure, function, and drug design involving the S100B protein (2012) *Institute of Human Genomics (IGS) University of Maryland*, Baltimore, MD. Host: Dr. Claire Fraser.
70. **Weber, D.J.** Inhibiting protein-protein interactions in malignant melanoma (2013) *National Institutes of Health (NIH)*. Host: Dr. Nico Tjandra.
71. **Weber, D.J.** Inhibiting protein-protein interactions in malignant melanoma (2013) *IBBR & NIST NMR Day, Institute of Biotechnology and Bioscience Research (IBBR)* Rockville, MD. Host: Dr. John Marino.
72. **Weber, D.J.** Inhibiting protein-protein interactions in malignant melanoma (2013) *ACS Affiliates chapter at University of Maryland, College Park*. Host: Dr. DeShong and students.
73. **Weber, D.J.** Detecting residues involved specific protein-protein interactions via Nuclear Magnetic Resonance (NMR): A story of inhibiting S100B in melanoma (2014) *University of Pennsylvania Department of Chemistry*. Host: Graduate Student Lecture Series (A committee of graduate students organized and hosted this lecture).
74. **Weber, D.J.** Detecting residues involved specific protein-protein interactions via Nuclear Magnetic Resonance (NMR): A story of inhibiting S100B in melanoma (2014) *University of Wisconsin School of Medicine*. Host: Dr. Blake Hill.
75. **Weber, D.J.** Binding and Functional Folding (BFF) and the development of highly specific S100B inhibitors (2015). *University of Maryland, College Park*, MD. Host: Professor Lai-Xi Wang.
76. **Weber, D.J.** Structure, function, and inhibition of S100 proteins in disease (2015). *North Dakota State University*, ND. Host: Drs. Leclerc, Vetter, and Singh.
77. **Weber, D.J.** Structure, function and inhibition of S100 proteins (2015) *Stanford Research Institute*. Host: Dr. Nathan Collins.

78. **Weber, D.J.** Structure, function and inhibition of S100B in melanoma (2015) *International 19th International Symposium on Ca²⁺ and Ca²⁺ Binding Proteins in Health and Disease*. Host: Professor Walter Chazin; invited speaker and session chair.
79. **Weber, D.J.** The Center for Biomolecular Therapeutics: A new initiative at the University of Maryland School of Medicine (2015). *Johns Hopkins School of Medicine, Department of Pharmacology*, MD. Host: Dr. Philip Cole, Professor & Chair.
80. **Weber, D.J.** Structure-based drug design for restoring p53 in malignant melanoma. Schnaper Translational Seminar Series (2016) *University of Maryland School of Medicine*, Baltimore, MD. Host: Bret Hassel.
81. **Weber, D.J.** Session chair (2016) for the IBBR & NIST NMR Day, *Institute of Biotechnology and Bioscience Research (IBBR)* Rockville, MD. Host: Dr. John Marino.
82. **Weber, D.J.** The use of NMR for drug development (2016) *FASEB meeting of the Association of Biomolecular Resource Facilities (ABRF)*. Fort Lauderdale, FL. Session Chair & Invited Speaker.
83. **Weber, D.J.** Structure, function, and inhibition of S100 proteins in disease (2016) *University of Maryland School of Medicine, Department of Biochemistry & Molecular Biology*, Department Seminar. Host: Dr. Richard Eckert.
84. **Weber, D.J.** Targeting S100B specifically in malignant melanoma (2016) *Elizabeth City State University*, NC. Host: Dr. Banerjee.
85. Chen, Y., Clarke, O., Costabile, B., Kim J., Wilder, P.T., **Weber, D.J.**, Hendrickson, W., and Mancia, F. The molecular mechanisms underlying cellular uptake of vitamin A (2017) *Associazione Italiana Cristallografia (AIC) international school*. Invited speaker: Mancia, F. <http://www.cristallografia.org/aicschool2017/eng/detail.asp?idn=2954>.
86. **Weber, D.J.** Targeting protein-protein interactions (PPIs) in melanoma and the role of binding and functional folding (2017) *Mid-Atlantic Meeting of Crystallography (MAMC)*. Invited speaker. June 6, 2017, Baltimore, MD.
87. Weber, D.J. Structure, function, and inhibition of the binary toxin from *C. difficile* (2018). *Department retreat for Biochemistry & Molecular Biology*. Invited Speaker. Host: Dr. Alex Drohat.
88. **Weber, D.J.** The role of calcium in biomolecular complexes, large and small (2018). *Washington Area NMR Group (WANG)*. Invited speaker. Host: Daron Freedberg.
89. Wilder, P.T., Varney, K.M., Pozharskiy, E., Godoy-Ruiz, R., Clarke, O., Costabile, B., Chen, Y., Mancia, F. and **Weber, D.J.** Transport of vitamin A via STRA6 is Ca²⁺ dependent (2018). *20th International Symposium on Calcium Binding Proteins and Calcium Function in Health and Disease (CaBP20)*. Invited presentation, Minato-ku, Tokyo, Japan.
90. Wilder, P.T., Varney, K.M., Pozharskiy, E., Godoy-Ruiz, R., Clarke, O., Costabile, B., Chen, Y., Mancia, F., and **Weber D.J.** Structural studies of the calcium-dependent transport of vitamin A via STRA6 (2018). *XXVIII International Conference on Magnetic Resonance in Biological Systems*. Invited presentation, University College Dublin, Ireland.

91. **Weber, D.J.** The role of calcium in biomolecular complexes, large and small (2019), *Merck Analytical Research & Development Seminar Series*, Invited speaker. Host: Leo Joyce and Richard Rustandi.
92. **Weber, D.J.** Structure, function, and inhibition of proteins large and small (2019). *Research Matters Conference, Johns Hopkins School of Medicine*. Invited speaker and session organizer. Host: James Berger.
93. **Weber, D.J.** The Institute of Bioscience and Biotechnology Research (IBBR, 2023), an expansion for the Center for Biomanufacturing and Biomeasurement Innovation (CBBI). Invited by Chancellor of the University System of Maryland, Dr. Jay Perman, as part of a *USM leadership retreat to visit the IBBR*. Host: David J. Weber, PhD and John Marino (NIST), PhD.

Other presentations

1. Pollock, J.S., Shepard, A.J., **Weber, D.J.**, Olson, D.O., Pedersen, L.G., and Hiskey, R.G. Calcium and phospholipid binding properties of bovine prothrombin gla domain peptides. *Seventeenth Steenbock Symposium*, June 1987.
2. Serpersu, E.H., **Weber, D.J.**, Shortle, D., and Mildvan, A.S. The study of the double mutant (D21E + R87G) of staphylococcal nuclease and the structure determination of a competitive inhibitor in the ternary enzyme-metal-nucleotide complex. *ASBMB/ASCB Joint Meeting*, January 1989 (poster presentation of Serpersu, E.H., Shortle, D., and Mildvan, A.S., *J. Cell Biol.* 107, 830 (1988).
3. **Weber, D.J.**, Serpersu, E.H., Meeker, A.K., Shortle, D., and Mildvan, A.S. Studies of the double mutants D21E + R87G and E43S + R87G of staphylococcal nuclease. *Gordon Conference #90-S-KUA-4 entitled Enzymes, Coenzymes, and Metabolic Pathways*, July 1990.
4. **Weber, D.J.**, Kuliopulos, A., Mildvan, A.S. Diverse interactions between the acid and base catalysts on enzymes as detected by double mutations. *The 12th Enzyme Mechanism Conference*, January 1991.
5. **Weber, D.J.**, Gittis, A., Mullen, G.P., Abeygunawardana, C., Lattman, E.E., and Mildvan, A.S. Conformation and location of the enzyme-bound substrate dTdA on staphylococcal nuclease. *Gordon Conference #91-S-KUA-4 entitled Enzymes, Coenzymes, and Metabolic Pathways*, July 1991.
6. **Weber, D.J.**, Gittis, A., Mullen, G.P., Abeygunawardana, C., Lattman, E.E., and Mildvan, A.S. Conformation and location of the enzyme-bound substrate dTdA on staphylococcal nuclease. *Experimental NMR Conference*, April 1992.
7. **Weber, D.J.**, Bhatnagar, S.K., Bullions, L.C., Bessman, M.J., and Mildvan, A.S., NMR and isotopic exchange studies of the site of bond cleavage in the mutT reaction. *Gordon Conference #92-S-KUA-4 entitled Enzymes, Coenzymes, and Metabolic Pathways*, June 1992.
8. Abeygunawardana, C., **Weber, D.J.**, Frick, D.N., Bessman, M.J., and Mildvan, A.S. Complete sequence-specific NMR assignments of backbone ¹H, ¹³C, and ¹⁵N resonances of the mutT enzyme. *Experimental NMR Conference*, March 1993.

9. **Weber, D.J.**, Libson, A.M., Gittis, A.G., Lebowitz, M.S., and Mildvan, A.S. NMR docking of a substrate into the X-ray structure of the asp-21 to glu mutant of staphylococcal nuclease. *Gordon Conference #94-S-KUA-4 entitled Enzymes, Coenzymes, and Metabolic Pathways*, July 1994.
10. Abeygunawardana, A., **Weber, D.J.**, Gittis, A.G., Frick, D.N., Miller, A.F., Bessman, M.J., and Mildvan, A.S. Heteronuclear NMR studies of the structure of the mutT enzyme and its interactions with substrate analogs (1995) *14th Enzyme Mechanism Conference*, Scottsdale, AZ.
11. Abeygunawardana, A., **Weber, D.J.**, Gittis, A.G., Frick, D.N., Miller, A.F., Bessman, M.J., and Mildvan, A.S. Heteronuclear NMR studies of the structure of the mutT enzyme and its interactions with substrate analogs (1995) *Keystone Symp Frontiers of NMR in Molecular Biology-IV*, Keystone CO.
12. Drohat, A.C., Amburgey, J.C., **Weber, D.J.** Effects of Ca(II) on Heteronuclear ¹H-¹⁵N NMR correlations in reduced S100β (1995) *Seventeenth Annual Graduate Research Day, UMAB-UMBC*, p. 31.
13. Amburgey, J.C., Drohat, A.C., Abildgaard, F., Starich, M.R., Shah, S., Hilt, D.C., **Weber, D.J.** ¹H, ¹³C and ¹⁵N Resonance assignments and secondary structure of S100β by NMR spectroscopy (1995) *First Symp of the Joint Biochemistry Program: Molecular Recognition in Biochemistry, University of Maryland at Baltimore County*, p. 9.
14. Hall, G., Wilder, P.T., and **Weber, D.J.** Production of mutant S100β for fluorescence spectroscopy studies (1995) *University of Maryland School of Medicine, Abst. #95.25, Student Res. Forum*, (1995) UMAB, p. 22.
15. **Weber, D.J.** Studies of the structure and function of S100β (1996) *Dept. of Biochemistry and Molecular Biology University of Maryland School of Medicine*, April 29, 1996 (Seminar speaker), Host: Professor Martin Schneider.
16. **Weber, D.J.** Studies of the structure and function of S100B(ββ) (1996) *Colloquium on Science, University of Maryland School of Medicine*, June 26, 1996 (Invited speaker), Host: Dr. Jordan Warnick.
17. Hall, G., Wilder, P.T., and **Weber, D.J.** Production of mutant S100β for fluorescence spectroscopy studies (1996) *University of Maryland School of Medicine, Abst. #96.65, Student Res. Forum*, UMAB, p. 31.
18. Tenenholz, T., Rogowski, R.S., Amburgey, J.C., Collins, J.C., Gustafson, T.A., Blaustein, M.P., and **Weber, D.J.** Solution structure determination of a toxin from Pandinus Imperator (PiTX-K α) using NMR spectroscopy (1996) *Celebration of the Opening of the UMAB NMR Facility*, October 7, 1996.
19. Drohat, A.C., Amburgey, J.C., Abildgaard, F., Starich, M.R., **Weber, D.J.** Three-dimensional solution structure of apo-S100β determined by multidimensional NMR spectroscopy (1996) *Celebration of the Opening of the UMAB NMR Center*, October 7, 1996.
20. Tenenholz, T., Klenk, K., Rogowski, R.S., Collins, J.J., Gustafson, T.A., Blaustein, M.P., and **Weber, D.J.** NMR solution structure determination of a toxin from Pandinus imperator (PiTX-Kβ) using NMR Spectroscopy (1997) *Nineteenth Annual Graduate Research Day, UMAB-UMBC*, p. 47. (Honorable mention in the Biochemistry section).

21. Drohat, A.C., Nenortas, E., Beckett, D., and **Weber, D.J.** S100B Oligomerization state at nanomolar concentration (1997). *Nineteenth Annual Graduate Research Day, UMAB-UMBC*, p. 46. (Winning poster in the Biochemistry section).
22. Drohat, A.C., Nenortas, E., Beckett, D., and **Weber, D.J.** S100B Oligomerization state at nanomolar concentration (1997). *The Tenth International Symposium on Calcium-Binding Proteins and Calcium Function in Health and Disease* (poster presentation), sponsored by The Nobel Committee for Chemistry and The Eric K. Fernström Foundation; June 17-21, 1997, in Lund, Sweden, p. 60.
23. Klenk, K., Tennenholz, T., Rogowski, R.S., Collins, J.J., Gustafson, T.A., Blaustein, M.P. and **Weber, D.J.** Solution structure determination of a toxin from pandinus imperator (PiTX-Ka) using NMR spectroscopy (1997) *University of Maryland Membrane Training Program. Second Annual Retreat*, Harpers Ferry, WVA. October 9-10, 1997.
24. Zimmer, D.B., Landar, A.L., Rustandi, R.R., and **Weber, D.J.** S100A1 interaction with calcium-dependent and calcium-independent target proteins (1998) *Fifth European Symposium on Calcium Binding Proteins in Normal and Transformed Cells*, Muenster, Germany.
25. Inman, K.G., Rustandi, R.R., Baldisseri, D.M., Miller, K.E., **Weber, D.J.** Backbone dynamics of the calcium-binding protein S100B($\beta\beta$) by heteronuclear NMR relaxation. *NMR Technologies: Development and Applications for Drug Design and Characterization* (1998) Cambridge Healthtech Institute (Cambridge, MA).
26. Garbuglia, M., Verzini, M., Rustandi, R.R., **Weber, D.J.**, Gerke, V., and Donato, R. The C-terminal extension is essential for S100A1 to interact with GFAP, tubulin, the S100A1 and S100B-inhibitory peptide, TRTK-12, and a peptide derived from p53, and for S100A1 to inhibit GFAP polymerization (1998) *Fifth European Symposium on Calcium Binding Proteins in Normal and Transformed Cells*, Muenster, Germany.
27. Markowitz, J., Chen, I.-J., Mackerell, A.D., **Weber, D.J.** Computer search for potential inhibitors of the S100-p53 interaction (1999) *Research Forum for Medical Students, University of Maryland School of Medicine*, Baltimore, MD (oral presentation).
28. **Weber, D.J.** Interaction of S100 proteins with p53 (1999) *Student Research Forum, University of Maryland School of Medicine*, Baltimore, MD (invited speaker) Host: Dr. Jordon Warnick.
29. Inman, K.G., Baldisseri, D.M., Miller, K.E., and **Weber, D.J.** Backbone dynamics of the calcium-signaling protein apo-S100B as determined by ^{15}N NMR relaxation. *Twenty-second Annual Graduate Research Day, UMB-UMBC* (Winning poster in the Biochemistry II section).
30. Klenk, K., Tennenholz, T., Blaustein, M.P., **Weber, D.J.** Sequence-specific assignments and secondary structure determination of a toxin from Tityus serrulatus (TsTX-K α) using NMR spectroscopy (TsTX-K β). *Twenty-second Annual Graduate Research Day, UMB-UMBC*, (Winning poster in the Biochemistry I section).
31. Inman, K.G., Baldisseri, D.M., Miller, K.E., and **Weber, D.J.** Backbone dynamics of the calcium-signalling protein, S100B($\beta\beta$) as determined by ^{15}N NMR relaxation (2000) *Book of Abstracts for the XIXth International Conference on Magnetic Resonance in Biological Systems*, pp. 153.

32. **Weber, D.J.**, Rustandi, R.R., Inman, K.G., and Baldisseri, D.M. The Ca^{2+} -dependent interaction of S100 proteins with their targets (2000) *Book of Abstracts for the XIXth International Conference on Magnetic Resonance in Biological Systems*, pp. 104.
33. **Weber, D.J.**, Rustandi, R.R., Carrier, F. The interaction of S100B with the tumor suppressor protein p53 (2000) *European Calcium Society Meeting*, Paris, France.
34. Vallely, K.M., Rustandi, R.R., Varlamova, O., Klein, M.G., Almo, S.C., Bresnick, A.R., and **Weber, D.J.** Chemical shift assignments and secondary structure of human apo-Mts1 (S100A4) (2001) *Twenty-third University of Maryland Graduate Research Conference*, pp. 61. (Winning poster in Biochemistry C section).
35. Ellis, K.C., Hayhurst, M., Gilly, W.F., Blaustein, M.P., and **Weber, D.J.** Interactions of a toxin from the scorpion *Tityus serrulatus* with a cloned K^+ channel from squid (SqKv1A) (2001) *Twenty-third University of Maryland Graduate Research Conference*, pp. 61.
36. Fialcowitz, E.J., **Weber, D.J.**, Black L.W. Nuclear magnetic resonance studies of the small subunit of T4 phage terminase enzyme (2001) *Twenty-third University of Maryland Graduate Research Conference*, pp. 60.
37. Markowitz, J., Chen, I-J., MacKerell, A.D., and **Weber, D.J.** Investigations of potential inhibitors of the S100B($\beta\beta$)-p53 interaction (2001) *Twenty-third University of Maryland Graduate Research Conference*, pp. 44.
38. Inman, K.G., Lee, A.L., Wand, A.J., and **Weber, D.J.** Sidechain dynamics of the Ca^{2+} -signaling protein, S100B($\beta\beta$), as determined by 2H-NMR relaxation (2001) *Twenty-third University of Maryland Graduate Research Conference*, pp. 26. (Winning poster in Biochemistry B section).
39. Markowitz, J., Chen, I-J., Carrier, F., MacKerell, A.D., **Weber, D.J.** Design of S100B Inhibitors (2003) *The Eighteenth Annual National M.D./Ph.D. Student Conference*, pp. 58 (oral presentation).
40. **Weber, D.J.** The calcium-dependent interaction of S100B with the tumor suppressor protein, p53 (2003) Grand rounds, *University of Maryland Medical System* (invited lecture).
41. Wright N.T., Ellis K.C., Vallely K.M., Gitti R., **Weber D.J.** Assignment and Secondary Structure of Calcium-bound S100A1 (2004) *Biophysical Society Meeting*, Baltimore, MD
42. Charpentier, T.H. Wilder, P.T., Varney, K.M., Toth, E.A., **Weber, D.J.** Crystal structure of pentamidine bound to Ca^{2+} -S100B. *A Look Ahead IX: Futures in Biomedical Research*, University of Maryland, Baltimore County, November 15, 2005.
43. Wright N.T., Varney K.M., **Weber D.J.** The Three-Dimensional Solution structure of Ca-S100A1 (2005) *Graduate student research symposium, UMB*, Baltimore MD.
44. Wright N.T., Varney K.M., **Weber D.J.** The Three-Dimensional Solution structure of Ca-S100A1 (2005) *46th Exp NMR Conf*, Providence RI.

45. **Weber, D.J.** The restoration of the p53 tumor suppressor in malignant melanoma using inhibitors of the calcium-binding protein, S100B (2006) *University of Maryland School of Medicine Department of Biochemistry & Molecular Biology* (Departmental Seminar).
46. Charpentier, T.H. Wilder, P.T., Varney, K.M., Toth, E.A., **Weber, D.J.** Crystal Structure of Pentamidine Bound to Ca²⁺-S100B. *28th Annual Graduate Research Conference, University of Maryland, Baltimore County*, April 28, 2006.
47. Charpentier, T.H. Wilder, P.T., Varney, K.M., Toth, E.A., **Weber, D.J.** Preliminary Crystal Data of Small compounds Bound to Ca²⁺-S100B. *A Look Ahead X: Futures in Biomedical Research, University of Maryland, Baltimore County*, November 1, 2006.
48. Wright N.T., Prosser B.L., Varney K.M., Schneider M.F., **Weber D.J.** Structure-Function studies on S100A1, a putative regulator of E-C coupling (2007) *Graduate student research symposium, UMB, Baltimore MD*.
49. Charpentier, T.H., Wilder, P.T., Varney, K.M., Toth, E.A., and **Weber, D.J.** The 3D structures of Ca²⁺-S100B in Zn²⁺- and pentamidine-bound complexes as determined by X-ray crystallography. *2007 Chemistry-Biology Interface Training Summit, Bethesda, MD. June 21 – June 22, 2007*.
50. Charpentier, T.H., Wilder, P.T., Varney, K.M., Toth, E.A. and **Weber, D.J.** The 3D structures of Ca²⁺-S100B in Zn²⁺- and pentamidine-bound complexes as determined by X-ray crystallography. *A Look Ahead XI: Futures in Biomedical Research, University of Maryland, Baltimore County, November 14, 2007*.
51. Ling, J., Wilder, P.T., Vitolo, M., Carrier, F., and **Weber, D.J.** The calcium-binding protein S100B inhibits p53-dependent apoptosis in malignant melanoma. *14th Congress of Ca²⁺-Binding Proteins and Ca²⁺ Function in Health and Disease, La Palma (Canary Islands, Spain), October 2007*.
52. Liriano, M. and **Weber, D.J.** Structure activity relationships of small molecules interfering with the S100B and p53 interaction. *Meyerhoff 20th Anniversary Symposium, (Baltimore, Maryland), March 2008*.
53. Liriano, M. and **Weber, D.J.** Structure activity relationships of small molecules interfering with the S100B and p53 interaction. *Graduate Research Symposium at the University of Maryland, School of Medicine (Baltimore, Maryland), March 2008*.
54. Song, H., Kotlikoff, M.I., Lingrel, J.B., Mohler, P.J., **Weber, D.J.**, and Blaustein, M.P. Linkage of $\alpha 2$ Na⁺/Ca²⁺ exchanger expression (2008) *P-ATPase meeting, Aarhus, Denmark*.
55. Wright N.T., Prosser B.L., Varney K.M., Schneider, M.F., **Weber, D.J.** The Structure of S100A1 bound to the CaM binding site on RyR1 (2008) *Graduate student research symposium, UMB, Baltimore MD*.
56. Zhong, S., Wilder, P.T., Charpentier, T.H., Liriano, M., **Weber, D.J.**, and MacKerell, A.D. Identification of inhibitors for blocking the S100B-p53 interaction using virtual database screening. *Annual meeting of the American Chemical Society (New Orleans, LA), April 2008*.
57. **Weber, D.J.** Structure/function and Inhibition of the tumor marker S100B (2009) *Greenebaum Cancer Center MSB Retreat. Host: Dr. Alan Tomkinson*.

58. Liriano, M. and **Weber, D.J.** Protein dynamics of the calcium-binding protein S100A5 in the presence and absence of target (2009) *MD/PhD Annual Conference* in Keystone, Colorado.
59. Cavalier, M.C., McKnight, L.E., Raman, E.P., Bezawada, P., Kudrimoti, S., Wilder, P.T., Hartman, K.G., Toth, E.A., Coop, A., MacKerell Jr., A.D., and **Weber, D.J.** Structure/Function Characterization of SBI4225, a Novel Inhibitor of the Calcium-Binding Protein S100B (2013) *UMB Dept of Biochemistry Scientific Retreat*, Baltimore, MD.
60. Cavalier M.C., Wilder, P.T., Pierce A., McKnight, L.E., Bezawada, P., Charpentier, T., Hartman, K.G., Toth, E.A., Coop, A., MacKerell Jr., A.D., and **Weber, D.J.** Structure/Function Characterization of Inhibitors of the Calcium-Binding Protein S100B (2013). *UMB Fourth Annual Cancer Biology Research Retreat*, Baltimore, MD.
61. Melville, Z. and **Weber, D.J.** S100B Manganese Coordination. *UMB Dept. of Biochemistry Scientific Retreat* (2013), Baltimore, MD.
62. Cavalier, M.C., Wilder, P.T., Pierce, A., Raman, E.P., Varney, K., Lapidus, R., Sausville, E., Zimmer, D.B., Coop, A., MacKerell Jr., A.D., and **Weber, D.J.** (2014) Covalent inhibitors of S100B (SBIxS) in malignant melanoma. *UMB Fifth Annual Cancer Biology Research Retreat*, Baltimore, MD (poster presentation).
63. Cavalier, M.C., Wilder, P.T., Pierce, A., Raman, E.P., Varney, K., Lapidus, R., Sausville, E., Zimmer, D.B., Coop, A., MacKerell Jr., A.D., and **Weber, D.J.** Covalent inhibitors of S100B (SBIxS) in malignant melanoma (2014). *UMB Department of Biochemistry & Molecular Biology Scientific Retreat*, Baltimore, MD (poster presentation).
64. **Weber, D.J.** Center for Biomolecular Therapeutics (Update). Oral presentation to the *University of Maryland Executive Committee Meeting of the School of Medicine Council* (2014), Baltimore, MD. Host: E. Albert Reece, MD, PhD, MBA and V.P. for Medical Affairs & Dean, University of Maryland School of Medicine.
65. Melville, Z., and Weber, **D.J.** (2014) Characterizing a New Metal Binding Site in S100B. Poster presented at the *UMB Dept. of Biochemistry Scientific Retreat*, Baltimore, MD.
66. Alasady, M.J., Wilder, P.T., and **Weber, D.J.** (2015) Identification and characterization of S100B targets in melanoma. *4th Annual Biochemistry Retreat*. Baltimore, MD. January 2015.
67. Cavalier, M., Wilder, P., Charpentier, T., and **Weber, D.** (2015). X-ray crystallographic study of small molecules within the persistent binding sites of S100B. *UMB 6th Annual Cancer Biology Research Retreat*, Baltimore, MD (poster presentation).
68. Cavalier, M.C., **Weber, D.J.** (2015) Targeting Melanoma with Small Molecules: Inhibitors of the Calcium-Binding Protein S100B. *UMB Department of Biochemistry Scientific Retreat*, Baltimore, MD (poster presentation).
69. Spittel, A.X., Sevdalis, S.E., Yu, W., MacKerell, A.D., Varney, K.M., **Weber, D.J.** (2023). Targeting Receptor Binding Domain 1 (RBD1) From *Clostridioides difficile* Binary Toxin (CDT) With Drug-Like Compounds. *UMB Student Research Forum*, Baltimore, MD, 2023 (poster).