



YOUNGSTOWN STATE UNIVERSITY
DEPARTMENT OF CHEMISTRY



Partial List of External Funding Attracted By Chemistry Department Faculty – 1994 - Present

YSU Chemistry Faculty in **Bold**

Agency	Partial Title	Faculty, Starting Year	Amount (\$)
Ohio Department of Development, Wright Project Proposal	Center for Excellence in Advanced Materials Analysis	T. R. Wagner , K.-M. Peters, D. Hudak, B. Hetzel, M. Zeller , A. D. Hunter, H. Marie, C. Hirtzel, (2009)	2,115,410
CTME - Center for Transportation and Materials Engineering	“Advanced Ceramic-Metallic Composites for Lightweight Vehicle Braking Systems“	Klaus-Markus Peters, Brian Hetzel, Matthias Zeller , Timothy R. Wagner , Darrell Wallace (2009)	50,000
Department of Defense, Army Research Laboratory:	“Center of Excellence in Industrial Metrology & 3D Imaging Research,”	A. D. Hunter , M. Zeller , Eric Parker, (2008)	\$1,313,250
American Diabetes Association Research Award 1-05-RA-07	Role of fibrates in diabetes and its complications, PI Balendiran	G. K. Balendiran (2005, transfer of funds to YSU in 2008))	Ca \$ 150,000 at YSU (total \$ 298,968)
Stanford Synchrotron Radiation Laboratory	X-ray data collection at Synchrotron facility Number 1B47	G. K. Balendiran (2005, transfer of funds to YSU in 2008))	ca. \$ 650,000 at YSU (71,640/visit, ca. 3 visits annually)
National Partnership for Advanced Computational Infrastructure (NPACI) and San Diego Supercomputer Center	Grant for Supercomputer Access, Proposal number MCB030021	G. K. Balendiran (2004, transfer of funds to YSU in 2008))	\$ 20,000 at YSU (10000/year)
Ohio Board of Regents	Improving Teacher Quality program “Strategies for Success with Standards-Based Learning in Science.”	Sherri Lovelace-Cameron , William Synder, Steve DiMuzio, and Les McSparrin (summer 2008)	42,466
NSF 0814289, CHE-Chemical Instrumentation	0814289 Cyber-Enabled Instrumentation Strategic Planning Workshop	Katherine Kantardjieff, Raymond J. Butcher, Alanah Fitch, Donald F. McMullen, Allen D. Hunter , Thomas B. Higgins, Bernard D. Santarsiero, Matthias Zeller (2008)	62,645
National Science Foundation, DUE - CCLI-Phase 1	“Incorporating a Meaningful Research Experience into the	Timothy R Wagner , Raymond E Beiersdorfer, Matthias	149,499

	General Chemistry Laboratory Curriculum Through Implementation of Equipment, for Materials Characterization,“	Zeller (2008)	
NSF 0639196 - Division of Chemistry - CRIF Program	“CRIF:MU/RUI: CAMRA-YSU - Cyber-Accessible Magnetic Resonance at YSU - Purchase of a 400 MHz NMR Spectrometer“	P. Norris, A. D. Hunter , D. Baker, T. B. Higgins, P. Szalay (2007)	475,000
Department of Defense (Direct Appropriation)	“Youngstown State University CyberEnabled Industrial Innovation Center -Materials Characterization & Product Innovation, YSU-CEIIC - MCPI“	A. D. Hunter, M. Zeller (2007)	911,050
American Chemical Society	Project SEED	Sherri Lovelace-Cameron (2007)	5,000
Ohio Board of Regents	Improving Teacher Quality program “Using Inquiry to Teach Physical and Life Science for Ohio Educators.”	Sherri Lovelace-Cameron , Jill Gifford (Biological Sciences) (2007)	77,470
NSF 0629174, Math & Physical Sciences Directorate - Division of Chemistry - Undergraduate Research Collaboratives Program (URC)	“Exploring New Models for Authentic Undergraduate Research with Two-Year College Students“	T. B. Higgins, T. Dowd, G. M. Ferrence, Y. Harris, R. House, A. D. Hunter (2006)	≈\$100,000 to YSU
Ohio Board of Regents	NortheastOhio Center of Excellence in Mathematics and Science Education – Phase 2	Sherri Lovelace-Cameron andcolleagues from Univ.of Akron, Kent StateUniv., Cleveland St.Univ. (2006)	750,000 123,933 to YSU
Ohio Board of Regents	“Using Inquiry to Teaching Physical Science for Ohio Educators.“	Sherri Lovelace-Cameron , Greg. W. Sturss (2006)	71,788
American Chemical Society Petroleum Research Fund Type B	“Stereospecific Intramolecular Carbenoid Insertions on Furanose Platforms as a route to Branched-Chain Sugars, C-Glycosids and Fused Heterocycles“	Peter Norris (2006)	50,000
NSF 0532250, Chemistry Divisions - Undergraduate	Ohio Consortium for Undergraduate Research: Research Experiences to	P. K. Dutta, R. T. Taylor, L. Mayer, A. D. Hunter , and W.	≈\$55,000 to YSU

Research Centers Program	Enhance Learning (REEL)	Donovan, (2006)	
Ohio Board of Regents	“Inquiry Minds –Teaching Physical Science by Inquiry.”	Lovelace-Cameron, S.; Zitto, R. (2005)	54,108
Ohio Board of Regents	Improving Teacher Quality Inquiry Matters: Teaching Physical Science through Inquiry	Stacey Lowrey Bretz, Sherri Lovelace-Cameron (2004)	87,936
NSF 0443790, Division of Chemistry & Division of Undergraduate Education, Special Programs #0443790;	“2005 Chemistry Education Research and Practice Gordon Conference.”	Stacey Lowrey Bretz (2004)	20,000
NSF 0404975, Division of Undergraduate Education; Course, Curriculum, Laboratory Improvement	“CHEMX: Assessing Cognitive Expectations for Learning Chemistry.”– Assessment of Student Achievement (ASA)	Stacey Lowrey Bretz (2004)	113,012
Fox Chase Cancer Institute	“X-Ray Diffraction Instrumentation,”	Allen Hunter (2004)	\$260,000 estimated replacement value
NSF 0330883, DBI, Collab. Research at Undergraduate Institutions	C-RUI: Proteomic Profiling of Dimorphism in <i>Penicillium Marneffeii</i>	Chester Cooper, Thomas Kim , Gary Walker	\$696,996
Ohio Supercomputer Center	“Organometallic NanoMaterials,”	Allen Hunter (2003)	200 Resource Units
Department of Energy – Energy-Related Laboratory Equipment Program, Surplus Equipment	“Organometallic NanoMaterials & Undergraduate Instruction,”	Allen Hunter (2003)	\$126,570 estimated value
National Institutes of Health Area Award	“Glycomimetics of <i>S. aureus</i> Aminosugars“	Peter Norris (2003)	132,000
Ohio Board of Regents	Inquiry Matters: Incorporating Inquiry into Teaching Physical Science	Stacey Lowrey Bretz, Sherri Lovelace-Cameron (2003)	117,398
National Science Foundation		Del Bene, Janet (2003)	90,000
American Chemical Society Petroleum Research Fund	“Determination of Carbon Isotope Effects for Three Mechanistically Diverse Enzymatic Decarboxylations“	Jeff Smiley (2003)	50,000
Youngstown State University Research Council	“PACER Center for Biotechnology“ Renewal of 1999 grant	Jeff Smiley (2003)	29,806
National Institutes of Health, Academic Research Enhancement Award Supplemental Award for Minority Student	“Development of Assays for 2-Amino-3-carboxymuconate Semialdehyde Decarboxylase“	Jeff Smiley (2003)	4,500

American Chemical Society	Project SEED	Sherri Lovelace-Cameron (2003)	2,625
NSF 0216705, Instrumentation for Materials Research, Division of Materials Research	“RUI-IMR: Upgrade of a Transmission Electron Microscope for Materials Characterization“	Timothy Wagner , Ray Beiersdorfer (2003)	120,237
NSF 0130968 - Chemistry Research Instrumentation and Facilities	“RUI - Purchase of Glove Box and Vacuum Line Systems for Materials Synthesis & Characterization,“	A. D. Hunter (PI), Larry S. Curtin , Sherri R. Lovelace-Cameron , Timothy Wagner (2002)	131,779
NSF 0116426, Research at Undergraduate Institutions Major Research Instrumentation proposal	“RUI-MRI: Acquisition of a Powder X-Ray Diffractometer System,“	T. R. Wagner (PI), R. E. Beiersdorfer, A. D. Hunter (2002)	170,310
National Science Foundation	Two-Year Extension for Special Creativity of 1999 grant “An Ab Initio Study of Vibrational Anharmonicity and Matrix Effects on Hydrogen-Bonded Complexes“	Janet Del Bene (2002)	195,000
NSF - RUI - AWARE - Australia program (INT-EAP)	“REU in Chemistry at YSU: AWARE (Australia) REU Supplement Request,“	A. D. Hunter and S. R. Lovelace-Cameron (2002)	48,746
Ohio Board of Regents	STEMS-UP: Successful Teaching of English, Mathematics, and Science--Urban Partnership	Lovelace-Cameron (2002)	YSU 50,000
Bruker-Nonius - Madison WI	“YSU-PUI Undergraduate Diffraction Consortium Web Accessible Diffractometer User Development Fund,“	Allen Hunter (2002)	9,600
American Chemical Society - Petroleum Research Fund - Summer Research Fellow Supplement	“Summer Research Fellow Supplement to Organometallic ElectroStars (for John Woolcock),“	Allen Hunter (2002)	8,000
Ohio Board of Regents Hayes Investment Fund	“Mass Spectrometry Consortium for Materials and Medical Research“	Jeff Smiley (2002)	98,640
NSF 0087210, Division of Undergraduate Education, CCLI	“WEB Accessible Single Crystal X-Ray Diffractometer for Undergraduate Instruction at a Consortium of Predominantly Undergraduate	A. D. Hunter (PI), L. M. Hoistad, A. J. Jircitano, T. R. Wagner , and E. P. Zovinka	200,000

	Institutions,“		
Ohio Board of Regents Action Fund, (OBoR CAP-491)	“WEB Accessible Single Crystal X-Ray Diffractometer for Undergraduate Instruction at a Consortium of Predominantly Undergraduate Institutions,“	A. D. Hunter (PI), L. M. Hoistad, A. J. Jircitano, T. R. Wagner , and E. P. Zovinka	75,000
U.S. Department of Education, Fund for the Improvement of Post-Secondary Education (FIPSE)	“An Innovative Approach to Professional Development for High School Chemistry Teachers: A New Kind of Masters' Degree.“	Bretz, S.L. (2001)	332,990
Ohio Board of Regents	“Collaborative Investigations for Learning Chemistry: Pre-Service Teachers and Learning through Inquiry.“	Bretz, S.L. (2001)	9,000
NSF 0111511, Research at Undergraduate Institutions research proposa	RUI - Organometallic NanoStars,	Allen Hunter (2001)	350,000
NSF National Science Digital Libraries, NSDL, - Collection (NSF 01-55)	“Reciprocal Net – A Distributed Molecular Database,“	J. C. Huffman (PI), G. Bernbom, J. C. Bollinger, W. S. Harwood, and G. D. Wiggins (A. D. Hunter , Advisory Board, YSU-PUI Integration Site, and Crystallographic Education Team Leader) (2001)	≈\$5,000+ for YSU
American Chemical Society Petroleum Research Fund, Type B	“Organometallic ElectroStars,“	Allen Hunter (2001)	30,000
NSF 0097682, Research Experiences for Undergraduates Program	“REU – Research Experience for Chemistry at Youngstown State University: A Bridge Between Four-Year Colleges and Ph.D. Research Universities,“	D. W. Mincey (PI), A. D. Hunter , John A. Jackson , Sherri R. Lovelace-Cameron , Timothy R. Wagner (2001)	180,000
NSF 0086313, International Division (Western Europe), Collaborative Projects	US-UK Cooperative Education and Research: Structural Investigations of Main Group Heterocyclic Rings and Cages,	Allen Hunter (2001)	13,200
National Institutes of Health, Academic	“Enzymatic Characterizations of Two	Jeff Smiley (2001)	120,580

Research Enhancement Award	Pyrimidine Decarboxylases“		
NSF Research Experiences for Undergraduates	Research Experiences for Undergraduates in Chemistry at Youngstown State University	Daryl Mincey (2001)	180,000
NSF 9980921, Division of Undergraduate Education: CCLI – EMD - POC	“X-Ray Diffraction Analysis Throughout the Curriculum: a Powerful Tool for Understanding Molecular Structure and Bonding,“	Allen Hunter (2000)	74,707
Council on Undergraduate Research / NSF-DMR Materials Research Linkages Project	“Charge Density Studies on Single-Site Transition Metal Olefin Polymerization Catalysts,“	Allen Hunter (2000)	800
Research Corporation Cottrell College Science Award	“Synthesis of C-Glycosides using the Dithiane Approach“	Peter Norris (2000)	50,000
NSF 9981040, DUE CCLI	Integration of Computer Technology into the General Chemistry Curriculum	Wagner, Timothy (07/01/2000 - 06/01/2001)	94,945
NSF 9873815, CHE East Asia and Pacific Program, Quantum Calculations	An Ab Initio Study of Vibrational Anharmonicity and Matrix Effects on Hydrogen-Bonded Complexes	Del Bene, Janet (02/01/1999)	442,000
NSF 9987080 -EHR	“CSEMS Technology Leaders Scholarship Program“	Jim Mike (PI), Bob Kramer, Scott Martin, and Bernadette Mullins (1999)	200,000
Ohio Board of Regents	“Ohio Science Teaching,“	Bill Rauckhorst (PI), and others, A. D. Hunter (1999)	4,000 for YSU
Ohio Board of Regents	“A Proposal to Establish a State-of-the-Art Ohio Mass Spectrometry Consortium,“	P. G. Hatcher (PI), A. D. Hunter , and others	88,900 to YSU
Youngstown State University Research Council	“PACER Center for Biotechnology“	Jeff Smiley (1999)	90,000
American Chemical Society Petroleum Research Fund	“Mechanistic Studies on Pyrrole-2-Carboxylate Decarboxylase, an Unusual Organic Acid-requiring Enzyme from Bacillus megaterium,“	Jeff Smiley (1999)	30,000
National Stable Isotope Resource at Los Alamos, NIH Supported Resource	“Modification of Protein Cysteiny Residues with [15N] 2-bromoethylamine,“ (RR02231).	Jeff Smiley (1999)	9,500
American Chemical	“Summer Science	Sherri Lovelace (1999)	500

Society – POBS	Academy ...		
Atmospheric Environmental Service	“Cyclodiene Pesticides ...	Renee Falconer (1999)	26,556
NSF 9505888, CHE Quantum Calculations	Matrix Isolation and Theoretical Study of the Mechanisms of Oxidation Processes	Bruce Ault and Janet E. Del Bene (1999)	316,000
National Science Foundation	“Vibrational Anharmonicity... ”	Janet Del Bene , (1999)	247,000
Camille and Henry Dreyfus Foundation, Special Grant Program	“Preparing the Future Professoriate: TA Training and Chemistry Pedagogy.”	Bretz, S.L. (1998)	17,500
National Science Foundation, Division of Undergraduate Education, Institution-Wide Reform Initiative	“Investigative Approaches in the Natural Sciences,”	J. D. Usis (PI), C. Singler, and A. D. Hunter (1998)	183,579
NSF 9851107, Division of Undergraduate Education Instruments for Laboratory Improvement-Instrumentation Program	“Integration of Quantitative Materials Characterization Throughout Chemistry & Physics Curricula, Purchase of Thermal Analysis, Viscometry, & Gel Permeation Chromatography Equipment,”	A. D. Hunter (PI), S. Brower, T. Kim, D. Mincey, T. Wagner (1998)	44,600
Research Corporation	“Synthesis and X-Ray ...	Tim Wagner (1998)	39,719
American Chemical Society	“Project SEED ...	Sherri Lovelace (1998)	8,750
Research Corporation	“Lysozyme As a Model ...	Mike Serra (1998)	35,000
American Chemical Society Petroleum Research Fund Type G	“Synthesis of C-Glycosides from Bis(sulfones)”	Peter Norris (1998)	25,000
Fulbright Scholarship	“Biotechnology in Cellulosic Biomass Conversion to Fuels and Chemicals”	Howard Mettee (1997)	43,000
Northside Medical Center	“Preoperative Evaluation ...	Mike Serra (1997)	2,900
Ohio Board of Regents	“Computer Aided Instruction ...	John Jackson (PI), Allen Hunter, Tom Kim, Daryl Mincey, Jeff Smiley (1997)	100,747
Atmospheric Environmental Service	“Cyclodiene Pesticides ...	Renee Falconer , (1997)	40,020
University of Kentucky	“Developing a Sustainable ...	Sherri Lovelace (1997)	28, 014
Research Corporation	“Examination of Mechanistic Details...”	Jeff Smiley (1997)	53,800
NSF 9751151, DUE Undergraduate	“I Brownfields Investigations as an	Daryl W Mincey (PI), Renee L Falconer ,	78,375

Instrumentation and Laboratory Improvement	Integrated Approach to Sampling, Sample Preparation, and Analysis,“	Timothy R Wagner, Scott C Martin	
Atmospheric Environmental Service	“Cyclodiene Pesticides ...	Renee Falconer, (1996)	18,055
National Science Foundation	“Instrumentation Grant	Lauren Schroeder, Jeff Dick, Scott Martin, Daryl Mincey (1996)	37,000
National Science Foundation	“Hydrogen Bonding ...	Janet Del Bene (1995)	316,000
Ohio Board of Regents	“Ohio Molecular Computation ...	Janet Del Bene (1995)	57,000
Atmospheric Environmental Service	“Residues of Cyclodiene ...	Renee Falconer (1995)	15,985
Ohio Board of Regents	“Ohio NMR Consortium“	M.D. Tsai (PI - Ohio State University), Allen Hunter (1995)	200,000
Ohio Board of Regents	“Ohio Crystallography Consortium“	Jim Gano (PI - University of Toledo), Allen Hunter - YSU representative, (1995)	35,000
NSF 9551683	“Integration of Automated GC-MS Into the Undergraduate Curriculum“	John Jackson (PI), Allen Hunter, Steve Schildcrout, Renee Falconer, Tim Wagner (1995)	35,450
Cambridge Isotope Laboratories	“Evaluation of ...	Jeff Smiley	1,000
NSF 9552347, Undergraduate Instrumentation and Laboratory Improvement	An Investigative Science Laboratory	Alan M Jacobs, Jeffrey C Dick, Daryl W Mincey, Scott C Martin (1995)	25,000
Ohio Board of Regents	“Acquisition of a Single Crystal X-Ray Diffractometer“	Tim Wagner (PI), Allen Hunter, John Jackson, Ray Beiersdorfer (1994)	60,000
NSF 9403889, Division of Materials Research: Research at Undergraduate Institutions Program	“Acquisition of a Single Crystal X-Ray Diffractometer“	T. R. Wagner, A. D. Hunter, J. A. Jackson, and R. E. Beiersdorfer (1993)	71,199
Ohio Department of Development	“Mahoning River Corridor ...	Gil Peterson, Scott Martin, Daryl Mincey, Lauren Schroeder (1992+)	372,000

Total External Funding Since 1994: \$ 13,661,970

Janet Del Bene before 1994:

Agency: National Institutes of Health, NIGMS
Title: MO Study of Hydrogen Bonding, H⁺, and Li⁺ Association
Year: 1985
Amount: \$225,000.

Agency: National Institutes of Health, NIGMS
Title: MO Study of Hydrogen Bonding, H⁺, and Li⁺ Association
Year: 1980
Amount: \$79,000.

Agency: Camille & Henry Dreyfus Foundation
Title: Teacher-Scholar Grant
Year: 1974
Amount: \$20,000.

Agency: American Chemical Society Petroleum Research Fund
Title: Type G "Starter" Grant
Year: 1971
Amount: \$7,500.