## **CURRICULUM VITAE**

## DAVID ALLEN HUNT, Ph.D.

Department of Chemistry The College of New Jersey 2000 Pennington Road Ewing, NJ 08628 Telephone: (609) 771-3174 E-mail: <u>hunt@tcnj.edu</u> Web: www.tcnj.edu/~hunt/www/

## SCIENTIFIC/PROFESSIONAL AREAS OF EXPERTISE

- Organic synthesis
- Heterocyclic chemistry
- Medicinal/agrochemistry
- lead discovery/development
- Organometallic chemistry
- Peptide, steroid synthesis/modification
- Combinatorial chemistry/automated
- synthesis techniques
- Structural analysis and elucidation
- (1D, 2D NMR; mass spectrometry; ir)
- Chemical education
- Develop/manage partnerships and collaborations

• Process chemistry route design/

- developmentBioorganic/biochemistry
- Bioconjugation (hapten design and modification)
- Chemoinformatics
- Computational chemistry
- Liposome precursor synthesis
- Design/defense strategies for intellectual property
- Chromatography
- (prep/analytical/chiral HPLC; GC; LPLC)

## POSITIONS

## 2005-present: The College of New Jersey, Ewing, NJ.

From 2008-present: Professor and Chair, Department of Chemistry. From 2005-2008: Professor, Department of Chemistry. One of five faculty members responsible for organic chemistry curriculum pertaining to sophomore organic chemistry for both chemistry and non-chemistry majors; develop and conduct upper-level lab-based courses in heterocyclic chemistry, medicinal chemistry, and other advanced organic chemistry topics. Conduct research with undergraduate students and serve on Departmental, School of Science, and College Faculty Senate committees.

## 2001-2005: Albany Molecular Research, Inc., Albany, NY.

From 2004-2005: Director, cGMP Chemistry Services and Analytical Chemistry; member of the Corporate Executive Management Committee. Led a department of *ca.* 100 scientists and technicians supporting all aspects of cGMP manufacturing and development projects with a budget of ca. \$20M. Responsible for managing all analytical services and bid writing pertaining to said services within the company supporting combinatorial chemistry, medicinal chemistry, chemical development, and cGMP chemistry including chromatography/chiral separations, spectroscopy/mass spectrometry, in-process testing, analytical methods development, stability testing, and quality control/API release.

## **POSITIONS** (continued)

From 2003-2004: Assistant Director, Corporate Project Management/Chemistry. Developed, led, and maintained a project management group at Albany Molecular Research and the affiliated subsidiary (Organichem) providing training, supervision and ongoing communication to all members of the project teams. Oversaw and managed AMRI internal process research projects from inception to completion. Explored and developed opportunities for new projects. Oversaw and managed the timely completion of Chemical Development and production projects at Albany Molecular and its subsidiary Organichem, as well as ensured the smooth transfer of technology among development disciplines. Assisted in the preparation of external grant proposals including researching, writing, and coordinating scheduling to meet submission deadlines.

From 2002-2003: Assistant Director, Chemistry. From 2001-2002: Section Head, Chemistry. Led a section of *ca*. 55 chemists (40+ Ph.D.s) and managed scientific efforts and resources for multiple projects for multiple customers to attain objectives in a timely manner with regard to the design, evaluation, and reduction to practice of novel chemical synthesis routes for compounds in early phase development. Supervised process research/process development projects from bench to kilo lab on early phase pharmaceutical development candidates. Medicinal chemistry efforts focused on the design of novel pharmaceutical agents in the area of oncology, CNS, and anti-inflammation. Additional efforts in support of the medicinal chemistry effort focused on structure-activity correlations, the planning of synthesis, and patent strategies. Assisted in the evaluation and procurement of new technology from other companies and research institutes. Participated in university campus recruiting efforts.

**2000-2001:** Department of Chemistry, East Carolina University, Greenville, NC, Visiting Assistant Professor. Taught introductory undergraduate chemistry courses.

**1999-2001:** Catalytica/DSM Pharmaceuticals, Greenville, NC. Senior Group Leader, Chemical Development Department. Led a team of chemists responsible for evaluating and designing chemical synthesis routes for manufacture of API's/intermediates in early phase development under cGMP guidelines. Conduct contract process research/process development from bench to pilot plant on early phase pharmaceutical candidates.

**1998-1999:** Department of Chemistry and Chemical Biology, Stevens Institute of Technology, Hoboken, NJ, Adjunct Professor. Taught graduate course (CHEM 780R) - Topics in Biochemistry: Principles of Biologically Active Compound Design.

**1997-1999: Department of Chemistry, The College of New Jersey,** Ewing, NJ, Adjunct Professor. Designed and taught upper division course entitled "Organic Chemistry of Biologically Active Compounds" (CHE 480). Course consisted of both a lecture and laboratory. Also taught freshman chemistry and organic chemistry.

1989-1999: American Cyanamid Company, Agricultural Research Division, Princeton, NJ.

From 1998-1999: Senior Group Leader. From 1991-1997: Group Leader, Insect Control Exploratory Synthesis and Route Scouting Groups, Chemical Discovery Section. Multiple project management and direction of a group of 11 chemists (B.S., M.S., Ph.D.) with regard to the biorational design of insecticides, structure-activity correlations, the planning of synthesis

### **POSITIONS** (continued)

[traditional, automated (parallel and combinatorial) methods] and patent strategies, evaluating and responding to patent examiner arguments, route scouting and initial process development studies, and direction in the selection of development candidates. Work in the group has resulted in one commercial product and multiple compounds placed in the development pipeline (currently with BASF). Assisted in the evaluation and procurement of new technology from other companies and research institutes. Coordinated and managed foreign academic and industrial institution project collaborations in Europe and Asia (Germany, China, Japan, India). Served on several Research Division and Cyanamid corporate R&D committees, including chair of the corporate Organic Synthesis Subcommittee (with the Medical Research Division) and the site wide safety committee representing chemistry. Participated in university campus recruiting efforts.

From 1989-1991: Senior Research Chemist, Fungicide Exploratory Synthesis Group. Conducted biorational design and exploratory synthesis of fungicides (SBI's and novel modes of action), herbicides and preparation of field trial samples. Development of novel classes of fungicides and herbicides. Worked with computational chemistry group in designing novel compounds.

**1989-1990:** American College Testing Program (ACT), Iowa City, IA, Physical Sciences (Chemistry) Test Question Writer. Developed physical science test units for use in the national ACT college examination.

**1988-1989:** Solvay America, Salsbury Laboratories, Charles City, IA. Technical Manager, Chemical R/D Custom Synthesis. Design and development of synthesis routes and subsequent scale-up for intermediates for pharmaceuticals, agrochemicals, fragrances, and photographic chemicals, including technology transfer to pilot plant and manufacturing. Major duties included: accountability for a group of research chemists (analytical and process development), technicians, and chemical engineers in a team environment, coordinating with analytical chemistry, engineering, and chemical marketing departments in order to define processes, process economics, and customer needs. Initiate contacts concerning joint university-industry cooperation. Responsible for providing chemical process documentation to the FDA in support of contract and generic drug manufacture. Responsible for general laboratory management, including safety programs, capital equipment acquisitions, and departmental budget administration. Designed, implemented, and instructed in-house technical education short courses for NMR and IR spectroscopy, mass spectrometry, personal computers, and organic chemistry refresher.

**1984-1988: PPG Industries,** Biochemicals Synthesis, Barberton Technical Center, Barberton, OH. Senior Research Chemist. Biorational design and synthesis of novel compounds for screening in the development of herbicides and PGR's *via* molecular modeling (Molecular Design system). Acted as an in-house consultant for various research groups and corporate licensing departments on various projects; site coordinator for collaboration on biological chemistry projects with Scripps Institute, LaJolla, CA. Drafted research proposals for project funding.

**1981-1984:** Becton Dickinson Research Center, Research Triangle Park, NC. From 1983-1984: Senior Scientist. From 1981-1983: Senior Research Chemist, organic synthesis and bioorganic chemistry. Design and synthesis of compounds for use in immunoassay and other immunological studies, as well as drug conjugate preparation (i.e., hapten modification and

## **POSITIONS** (continued)

conjugation), peptide synthesis, protein linker chemistry, lipid chemistry, and synthetic surfactant chemistry as applied toward liposome preparations. Drafted project and major instrumentation proposals. Supervised use of high field NMR, Molecular Design (MDL) data system, and center mass spectrometry work. Research Center safety committee member and Chair of chemical safety. Developed and instructed in-house short courses on NMR spectroscopy and mass spectrometry.

**1980-1981: Department of Chemistry, Marshall University,** Huntington, West Virginia, Graduate Faculty. Lectured advanced organic synthesis classes (graduate-advanced undergraduate).

**1979-1981:** Union Carbide Corporate Technical Center, South Charleston, WV, Senior Chemist.

From 1980-1981: Agricultural Products - Exploratory Process Chemistry. Work involved the design of economical synthetic routes to potential insecticides resulting in the development of two novel processes.

From 1979-1980: Molecular Structure and Composition Skills Center. Determined structure of organic compounds and reaction mechanisms *via* mass spectrometry, NMR, and IR analysis. Liaison between the Skills Center and various research center groups participating in several projects.

## 1975-1979: Department of Chemistry, Duke University, Durham, North Carolina.

From 1978-1979: Instructor. Lectured advanced organic recitation sections.

From 1975-1977: Graduate Teaching Assistant. Course organization and instruction for junior/senior-level organic synthesis lab course and advanced sophomore organic chemistry. Among the top rated teaching assistants for two consecutive years.

**1974-1975:** Department of Chemistry, Marshall University, Huntington, WV, Graduate teaching assistant. Responsible for sophomore-level organic chemistry lab course.

## **EDUCATION**

- **1979** Research Associate, Duke University
- 1979 Duke University, Durham, North Carolina Ph.D., Organic Chemistry Research Advisors: Profs. William E. Parham and Charles K. Bradsher Dissertation Title: "A Study of the Reaction of Functionalized Aryllithium Reagents with Internal and External Electrophiles. A Pathway to the Synthesis of Heterocyclic and Carbocyclic Systems"

# **EDUCATION** (continued)

- 1975 Marshall University, Huntington, West Virginia
   M.S., Organic Chemistry
   Research Advisor: Prof. James E. Douglass
   Thesis Title: "Reactions of Quinoline-1-Oxide with Substituted Ylidinemalononitriles
   and Ethylidinecyanoacetates: Feasibility of 2,1-Annelations"
- 1973 Marshall University, Huntington, West Virginia
   B.S. in Chemistry (Honors in Chemistry); Minors: Physics, Mathematics
   Research Advisor: Prof. Melvyn W. Mosher
   Undergraduate Research Thesis: "Mechanism and Kinetics of the Reaction of Halogens with Iodoalkanes"

## DISTINCTIONS, HONORS, AND PROFESSIONAL SOCIETIES

West Virginia Board of Regents Scholarship (1970); Ashland Oil Fellow (1973); Ohio Valley Section, American Chemical Society, Outstanding Senior Chemistry Major (1974); FMC Graduate Fellow (1975); Duke University Department of Chemistry Fellowship (1977); Union Carbide - Vice President's Research Citation (1981); Distinguished Graduate Student Alumnus, College of Science, Marshall University (1994).

Who's Who Among Students in American Colleges and Universities (1975); Who's Who in the South and Southwest,  $19^{th}$  Edition (1984); Who's Who in the Midwest,  $21^{st} - 22^{nd}$  Editions (1987-1989); Who's Who of Emerging Leaders in America,  $2^{nd}$  Edition (1988); Who's Who in the East,  $24^{th}$  Edition (1992); American Men and Women of Science,  $19^{th} - 27^{th}$  Editions (1995-2010); Who's Who in Science and Engineering  $2^{nd} - 5^{th}$  Editions (1995-2001); Who's Who in America (2010)

*Honoraries:* Chi Beta Phi (1973); Omicron Delta Kappa (1974); Phi Lambda Upsilon (1976); Sigma Xi (1980)

American Chemical Society: Organic, Medicinal, Agrochemical, and Education Divisions; International Society of Heterocyclic Chemistry; American Association for the Advancement of Science; New York Academy of Sciences; Council on Undergraduate Research.

## **TCNJ SERVICE**

Teaching Record:

Classes

Spring, 2014	CHE 332 CHE 393 CHE 493	Organic Chemistry II; Course enrollment: 46 Independent Study; Enrollment: 3 Independent Study; Enrollment: 3
Fall, 2013	CHE 331: CHE 393 CHE 493	Organic Chemistry I; Course enrollment: 48 Independent Study; Enrollment: 3 Independent Study; Enrollment: 3

# **TCNJ SERVICE (continued)**

Summer 2013	CHE 332	Organic Chemistry II; Course enrollment:	24
Spring, 2013	CHE 316	Sophomore Seminar; Course Enrollment:	13
	CHE 332	Organic Chemistry II; Course Enrollment:	48
	CHE 493	Independent Study; Enrollment:	4
Fall, 2012	CHE 331:	Organic Chemistry I; Course enrollment:	21
	CHE 393	Independent Study; Enrollment:	3
	CHE 493	Independent Study; Enrollment:	1
Summer 2012	CHE 332	Organic Chemistry II; Course enrollment:	18
Spring, 2012	CHE 470	Introduction to Medicinal Chemistry w/Lab	;
	Course enrol	lment:	24
	CHE 493:	Independent Study; Enrollment:	3
Fall, 2011	CHE 331:	Organic Chemistry I; Course enrollment:	49
	CHE 393	Independent Study; Enrollment:	1
	CHE 493	Independent Study; Enrollment:	2
Spring, 2011	CHE 317	Junior Seminar: Course Enrollment:	14
	CHE 393	Independent Study; Enrollment:	2
	CHE 493	Independent Study; Enrollment:	1
Fall, 2010:	CHE 331:	Organic Chemistry I; Course enrollment:	48
	CHE 393:	Independent Study; Enrollment:	2
	CHE 493:	Independent Study; Enrollment:	1
Spring, 2010	CHE 332: CHE 470 Course enrol CHE 493	Organic Chemistry II; Course enrollment: Heterocyclic Chemistry w/Lab; lment: Independent Study; Enrollment:	24 16 4
Fall, 2009:	CHE 201:	General Chemistry I; Course enrollment:	48
	CHE 393:	Independent Study; Enrollment:	4
Spring, 2009	CHE 470	Introduction to Medicinal Chemistry w/Lab	;
	Course enrol	lment:	24
	CHE 493:	Independent Study; Enrollment:	2
Fall, 2008:	CHE 331:	Organic Chemistry I; Course enrollment:	48
	CHE 393:	Independent Study; Enrollment:	2
	CHE 493:	Independent Study; Enrollment:	1
Summer, 2008	CHE 331:	Organic Chemistry I; Course enrollment:	25
Spring, 2008:	CHE 332:	Organic Chemistry II; Course enrollment:	49
	CHE 493:	Independent Study; Enrollment:	5

# **TCNJ SERVICE (continued)**

Fall, 2007:	HON 321:Honors Organic Chemistry I;Course enrollment:CHE 318:Senior Seminar; Enrollment:CHE 393:Independent Study; Enrollment:CHE 493:Independent Study; Enrollment:	20 20 2 3
Summer, 2007	CHE 331: Organic Chemistry I; Course enrollment:	24
Spring, 2007:	CHE 480:Heterocyclic Chemistry w/Lab;Course enrollment:CHE 493:Independent Study; Enrollment:	18 4
Fall, 2006:	<ul> <li>CHE 331: Organic Chemistry I for Majors;</li> <li>Course enrollment:</li> <li>CHE 316: Sophomore Seminar; Enrollment:</li> <li>CHE 493: Independent Study; Enrollment:</li> </ul>	40 19 4
Spring, 2006:	<ul> <li>CHE 332: Organic Chemistry II for Majors;</li> <li>Course enrollment:</li> <li>CHE 480: Introduction to Medicinal Chemistry</li> <li>w/Lab; Course enrollment:</li> <li>CHE 493: Independent Study; Enrollment:</li> </ul>	23 13 4
Fall, 2005:	CHE 321: Organic Chemistry I for Non-Majors; Course enrollment: CHE 393: Independent Study; Enrollment:	39 3
Student Research Projects (academic year)	Jessica Bocanegra: Michael Reactions with Knovenagel Adducts (Fall, 2013; Catherine Campos: Studies Directed Towards the Synthesis of Benzo-fused O and Thiapanones (Spring 2006; Fall, 2006; Spring, 2007) Emily Cherney: Tandem Cyclization of Amino Acid Amides (Fall, 2005) Studies Toward a Novel Synthesis of Dihydroquinolines ( Solvent Effects on the Preparation of 1,2,3,4-Tetrahydrol ones (Fall, 2006) Reaction of Dimethyl Sulfoxide with Isatoic Anhydrid Unexpected Rearrangement Products (Spring, 2007) Keith Chomsky: Lithium-Halogen Exchange Behavior in Bromo-Substitute Lactams (Spring, 2007; Fall, 2007; Spring, 2008)	Oxepinones Spring, 2006) benzodiazapin-5- des. Isolation of

#### **TCNJ SERVICE** (continued)

Adam Clarke: Synthesis of Novel 1-Phenyl-2-Nitroindenes (Spring, 2006; Fall, 2006) A Novel Synthesis of 2-Aminotetralins (Fall, 2005)

Kate Davis: A New Route to Styryl Vinyl Ethers (Fall, 2008; Spring, 2009)

Sara Davis (2008 Phi Kappa Phi Research Grant Recipient): Toward a Convergent Synthesis of ( $\pm$ )-Isopestacin (Fall, 2007; Spring, 2008; Fall, 2008)

Ryan DeAngelis: New Intramolecular Cyclization Strategies Built Around Novel Parhamtype Substrates (Fall, 2012; Spring, 2013) Investigations into an Unexpected Aromatization Reaction of 1,2-Cyclohexanedione Ethers (Fall, 2013; Spring, 2014)

#### John Farrokh:

Studies Directed Towards the Synthesis of Benzo-fused Oxepinones and Thiapanones Fall, 2011; Spring, 2012) Toward a Novel Synthesis of the Benzopyrazole Ring System *via* Condensation of Thermolabile Aryllithium Reagents and Diazodicarboxylate Esters (Fall, 2012; Spring, 2013)

Brittany Frazier: A Novel Synthesis of 2-Nitro-3-Arylindanones (Fall, 2009; Spring, 2010)

Alex Fuchs: A Novel Synthesis of 2-Nitro-3-Arylindanones (Fall, 2009; Spring, 2010)

Amber Gietter: A Novel Synthesis of 2-Nitro-3-Arylindanones (Fall, 2009; Spring, 2010)

Tyler Higgins (*2012 Phi Kappa Phi Research Grant Recipient*): Addition of 1,2-Cyclohexanedione to a Variety of Michael Acceptors (Fall, 2012; Spring, 2013) Functionalization of Resveratrol (Fall, 2013; Spring, 2014)

Jenna Klubnick: Toward a Total Synthesis of  $(\pm)$ -Clavulazine (Fall, 2007; Spring, 2008)

Taylor Maney: Heck Reactions with Highly Functionalized Bromoarenes (Fall, 2013) Functionalization of Resveratrol (Spring, 2014)

### **TCNJ SERVICE** (continued)

Jim Melnyk:

Lithium-Halogen Exchange Behavior in Bromo-Substituted 1,4-Diaryl  $\beta$ -Lactams (Spring, 2007; Fall, 2007; Spring, 2008)

Christina Papanagapoulous: Tandem Cyclization of Amino Acid Amides (Fall, 2005; Fall, 2006) Cyclization Reactions of Amino Acid Amides (Spring, 2006)

Mike Rosana: Expedient Preparation of 2-(5,6-Dihydro-4H-1,3-oxazin-2-yl)anilines (Fall, 2007; Spring, 2008)

Marissa Rubenstein: Cyclization Strategies Built Around β-Nitro-substituted Systems as Michael Acceptors (Fall, 2012; Spring, 2013; Fall, 2013; Spring, 2014)

Chad Simpkins: 1,2-Cyclohexanedione: A Building Block for the Preparation of Fused-Ring Furan Systems (Fall, 2010; Spring, 2011; Fall, 2011; Spring, 2012)

Amy Solinski: Condensation/Aromatization Reactions with 1,2-Cyclohexanedione (Fall, 2013; Spring, 2014)

Erica Tabakin: Preparation of Some 4,6-Dihalo-3-arylisobenzofuran-1(*3H*)-ones (Fall, 2008; Spring, 2009)

Sarah Thornton: Reaction of Functionalized Aryllithium Reagents with Isatoic Anhydrides (Fall, 2010; Spring, 2011; Fall, 2011; Spring, 2012)

Kelsey VanGelder: Toward a Convergent Synthesis of  $(\pm)$ -Isopestacin (Fall, 2009; Spring, 2010; Fall, 2010; Spring 2011)

Summer Research Experience for Undergraduates (REU) at TCNJ – 2006:

Student Research	Joanne Bertar	nozzi (	2006 Brist	ol-Myers	Squibb Gra	nt Recipient):	
Projects	Preparation	of	Novel	Ring	Systems	Utilizing	Parham
	Cycliacylatio	n/Cvcl	ialkvlatior	h Chemist	rv		

Tim Craven: Toward a Novel Synthesis of the Benzopyrazole Ring System *via* Condensation of Thermolabile Aryllithium Reagents and Diazodicarboxylate Esters

## **TCNJ SERVICE (continued)**

Maryll Geherty: Lithium-Halogen Exchange Behavior in Bromo-Substituted 1,4-Diaryl  $\beta$ -Lactams

Christina Papanagopoulos: Reaction of Functionalized Aryllithium Reagents with Trialkyl- and Triarylboranes

*Summer REU at TCNJ* – 2007:

Student ResearchKeith Chomsky (2007 Bristol-Myers Squibb Grant Recipient):ProjectsLithium-Halogen Exchange Behavior in Bromo-Substituted 1,4-Diaryl β-<br/>Lactams

Kate Davis: A New Route to Styryl Vinyl Ethers

Mike Rosana (2007 National Starch Grant Recipient): Expedient Preparation of 2-(5,6-Dihydro-4H-1,3-oxazin-2-yl)anilines

Erica Tabakin (2007 Merck/AAAS Research Undergraduate Research Fellow): Development of Small Molecule Proteasome Inhibitors

Summer Mentored Undergraduate Summer Experience (MUSE) at TCNJ – 2008:

Student Research	Kate Davis (2008 National Starch Grant Recipient):
Projects	A New Route to Styryl Vinyl Ethers

Joe Macor (2008 National Starch Grant Recipient): Tandem Cyclization of Amino Acid Amides

Erica Tabakin (2008 Merck/AAAS Research Undergraduate Research Fellow): Development of Small Molecule Proteasome Inhibitors

Summer MUSE at TCNJ – 2009:

Student Research	Kelsey VanGelder (2009 Merck/AAAS Research Undergraduate Research
Projects	Fellow): Toward a Convergent Synthesis of (+)-Isopestacin

Lyndsay Wood (2009 Merck/AAAS Research Undergraduate Research Fellow): Development of Small Molecule Proteasome Inhibitors

Summer MUSE at TCNJ – 2011:

Student Research	Chad Simpkins: 1,2-Cyclohexanedione: A Building Block
Projects	for the Preparation of Fused-Ring Furan Systems

#### **TCNJ SERVICE** (continued)

John Farrokh (2011 NASA Research Grant Recipient): Studies Directed Towards the Synthesis of Benzo-fused Oxepinones and Thiapanones

Summer MUSE at TCNJ – 2012:

Student Research	John Farrokh:
Projects	Studies Directed Towards the Synthesis of Benzo-fused Oxepinones and
	Thiapanones

Tyler Higgins: Addition of 1,2-Cyclohexanedione to a Variety of Michael Acceptors

Summer MUSE at TCNJ – 2013:

Student ResearchRyan DeAngelis:ProjectsNew Intramolecular Cyclization Strategies Built Around Novel Parham-<br/>type Substrates

Tyler Higgins: Preparation of Resveratrol Derivatives as Potential CNS Agents

Marissa Rubenstein: Cyclization Strategies Built Around β-Nitro-substituted Systems as Michael Acceptors

Departmental Committees and Service:

2005-2006 Curriculum and Scheduling IT/Budget (Chair) 2006-2007 Curriculum and Scheduling IT/Budget (Chair) Public Relations and Development (Chair)

2007-2008 Curriculum and Scheduling IT/Budget Public Relations and Development (Chair) 2008-Present (*Ex-Officio*) Academic Affairs Operational Affairs Student Affairs Student Affairs 2008-present Department Chair Chair – Departmental Promotion and Reappointment Committee (2008 – present)

## **TCNJ SERVICE** (continued)

Other Service

Faculty Advisor – Gamma Sigma Epsilon Chemistry Honorary (2005-2011)
Faculty Advisor – Student Chemist Association/American Chemical Society Student Affiliates (2005-2008)
Departmental Open House Host (2005-present); Scholars Weekend (2007-present)
Chemistry Department representative – School of Science Dedication Ceremonies (Fall, 2005)
Chemistry Department representative – Accepted Student Day (2006-present)
Sole Author - Initial Departmental Safety Manual and Departmental Brochure – Fall, 2006

Service to the School of Science:

School of Science (SoS) Colloquium Committee (Chair) - Hosted SoS Colloquia: Professor Simon Levin, Moffett Professor of Biology and Director, Center for BioComplexity, Princeton University: *Evolutionary Perspectives on Ecological and Economic Games* (March 29, 2006); Professor Jeff Osborn, Professor of Biology and Dean of the School of Science, TCNJ: *Pollen: More Than Something to Sneeze At* (February 21, 2007) Biology Department - Genetics faculty search committee member-2008

Service to the College:

TCNJ MCAT Short Course Instructor for Organic Chemistry - 2006-present Support to School of Engineering for accreditation - Spring, 2006; Fall, 2006; Fall, 2011 - Fall, 2012 Honors and Scholars Committee - Vice Chair (Faculty Senate Appointments Committee) - Fall, 2006-Spring, 2007 Provost's Committee on Mentoring of Scholarship - 2006-2007 Selection Committee-Who's Who Among Students in American Colleges and Universities - Fall, 2007 Faculty-Student Collaboration Committee (MUSE - Mentored Undergraduate Summer Experience) – Charter Member: 2007-2010; Ad hoc MUSE Proposal Evaluation Committee – 2011 SOSA (Support of Scholarly Activities) Committee - 2007-2010; Ad hoc SOSA Proposal Evaluation Committee – 2011, 2012 Goldwater Scholarship Selection Committee - 2008, 2009 Faculty Senate - 2008-2011 NSF PERSIST scholar mentor - 2008-present Medical Careers Advisory Committee - 2009-present Committee on Faculty Affairs - 2010-present (Chair, 2012-2013) Public Health Major Development Group - 2012-present

## **PROFESSIONAL SERVICE**

Editorial Boards - International Journal of Organic Chemistry; Advances in Chemical Sciences

Primary reviewer:

Journal of Organic Chemistry; Tetrahedron; Tetrahedron Letters; Organic Preparations and Procedures International; Organic Process Research and Development; European Journal of Medicinal Chemistry; Letters in Drug Design & Discovery; Drug Discovery Today; Journal of

# **PROFESSIONAL SERVICE (continued)**

Agricultural and Food Chemistry; Pesticide Science, Advances in Chemical Sciences

Webinar presenter – "Chemistry for the non-chemist: a two-part webinar series" hosted by SOCMA (Society of Chemical Manufacturers and Affiliates) – June 21, 2012; July 13, 2012.

Reviewer – Medicinal Chemistry, 1<sup>st</sup> Edition, Stevens (Pearson), 2012

Digital Reviewer – Organic Chemistry, 3<sup>rd</sup> Edition, Smith (McGraw Hill), 2012

Test Bank Author - Organic Chemistry, 11<sup>th</sup> Edition, Solomons and Fryhle (John Wiley), 2012 Organic Chemistry, 5<sup>th</sup> Edition, Jones and Fleming (W.W. Norton), 2013

Program Reviewer - Department of Chemistry, State University of New York, Geneseo, 2011

Chemistry Study Panel: North Carolina Biotechnology Center, 2009

Content Reviewer - Organic Chemistry, 9th Edition, Solomons and Fryhle (John Wiley), 2008

Consultant:

FMC Corporation Agricultural Products Group, Discovery Chemistry Department, 2005

Royal Botanic Gardens, Kew, United Kingdom – Consulted on private sector practices/perspectives regarding demand and access to global genetic resources, 1998-1999

Co-organizer, Mode of Action Session, 2nd Pan Pacific Conference on Pesticide Science, Honolulu, Hawaii, 1999

Co-editor with D.R. Baker, J.G. Fenyes, and G.S. Basarab, *Synthesis and Chemistry of Agrochemicals V*, American Chemical Society: Washington, D.C., 1997

American Chemical Society Agrochemicals Division, organic synthesis representative, Program Planning Committee and National Special Symposia Subcommittee, 1994-2000

1976-1979; 1984-1987; 1990-1999: High school and elementary school lecturer (NC; OH; PA; NJ). Member of ACS Volunteer in Public Outreach program. Demonstrations in NJ performed under the auspices of Sigma Xi.

1992-1998: Explorer Post 989 Science Co-Advisor (Princeton, NJ). Work with high school students in performing hands-on science experiments as a supplement to formal science course work.

1976-1998: Science Liaison with various elementary schools (since 1991 - sponsored by Sigma Xi and American Cyanamid Company). Used chemical demonstrations and hands-on experimentation as learning aids.

# **CONTINUING STUDIES**

Mass Spectrometry Short Course, Finnigan Institute (1980) ACS Short Courses: Homogeneous Catalysis (1981), Pharmacology for Chemists (1993) Technical Writing (1981) Herbicide Mode of Action Short Course, Purdue University (1985) Bioorganic Chemistry, Princeton University (1989) Organometallic Chemistry, Princeton University (1991) Florida School of Molecular Orbital Theory, University of Florida (1992) Leadership Development Program, Center for Creative Leadership, Greensboro, NC (1994) Heterocyclic Chemistry (Pawda/Pearson), Wyeth, Princeton, NJ (1998) Practical Process Research and Scale-Up (Neil Anderson), Albany, NY (2001)

# GRANTS

- Marshall University School of Medicine (co-P.I.'s: James Weinstein, M.D., Professor of Neurosurgery/Neuroscience; Dr. Richard D. Egleton, Professor of Pharmacology; Dr. Edgar Gonzalez, Pharm.D.) – Development of Drugs and Novel Transport Methods Enabling Penetration of the Blood-Brain Barrier for the Treatment of Alzheimer's Disease (2010) - \$50,000; (2011) - \$75,000; (2012) - \$205,000, (2013) - \$2,500
- Phi Kappa Phi Student-Faculty Research Grant/Award (Tyler Higgins: *Functionalized* 1,2-Cyclohexandiones as Michael Acceptors and Donors 2012) \$250
- Waters Corporation Academic Grant (2012) \$12,000
- American Chemical Society Organic Chemistry Division National Travel Grant (2012)
   \$600
- George and Rolfa Rogers Neurodegenerative Diseases Program of Marshall University (2011) \$20,000
- NSF MRI CHE-1125993, Co-P.I.: Acquisition of a 400 MHz NMR Spectrometer for Undergraduate Research and Training (2011) \$261,086.
- NASA (New Jersey Space Grant Consortium) Summer Research Award (2011) \$5,000
- NSF MRI CHE-0922931 Co-P.I.: Acquisition of a Single Crystal X-ray Diffractometer for Undergraduate Research and Training (2009) \$242,200
- Phi Kappa Phi Student-Faculty Research Grant/Award (Sara Davis: *A Convergent Synthesis of* (<u>+</u>)-*Isopestacin* 2008) \$500
- Merck/AAAS Undergraduate Science Research Co-P.I. (2007-2009): Project: "Development of Small Molecule Proteasome Inhibitors" – Co-P.I.'s: *Sudhir Nayak* (*Biology*), *David A. Hunt (Chemistry*) - \$60,000
- TCNJ SOSA Grant Award: release time for academic year (2006-2007; 2007-2008; 2008-2009).
- National Starch Summer Research Grant (2007) \$5,000; 2 students (2008) \$10,000.
- Bristol-Myers Squibb Undergraduate Research Award in Organic Chemistry (Summers, 2006; 2007) \$10,000
- TCNJ SURP Grant for 3 research students (2006) \$6,000; 1 student (2007) \$2,500
- TCNJ MUSE Grant for 2 research students each year (2008; 2012; 2013) \$15,000

# FOREIGN LANGUAGES

Reading knowledge of German, French.

## MILITARY EXPERIENCE

U.S. Army Reserves, 1971-1977. Honorable Discharge (SGT; E-5). Radio teletype/ cryptography teaching cadre. Secret security clearance.

**PUBLICATIONS -** (*BOLDFACE* indicates TCNJ undergraduate authorship)

- 1. Geherty, M.; Melnyk, J.; Chomsky, K.; Hunt, D.A. "Halogen-metal exchange reactions of bromoaryl-substituted β-lactams, *Tetrahedron Lett.*, **2013**, *54*, 4934-4936.
- 2. **Simpkins, C.**; Hunt, D.A. "The Michael addition of 1,2-cyclohexanedione to β-nitrostyrenes (I). The synthesis of 3-aryl-5,6-dihydrobenzofuran-7(4H)-ones," *Tetrahedron Lett.* **2013**, *54*, 3373-3375.
- 3. Weinstein, J.D.; Gonzalez, E.R.; Egleton, R.D.; Hunt, D.A. "The 10-patient screening protocol: a paradigm shift for evaluating pharmacotherapy for Alzheimer's disease," *The Consultant Pharmacist* **2013**, *28*, 443-454.
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- Bradley, L.M.; Pandya, B.; Javadi, G.J.; Hunt, D.A. "Approaches to syntheses of tetrahydroisoquinoline and benzazepine systems," Abstracts of the 220<sup>th</sup> National Meeting of the American Chemical Society, Washington, D.C.; August, 2000; No. CHED 197.
- 29. Kuhn, D.G.; Furch, J.A.; Hunt, D.A.; Asselin, M.; Baffic, S.P.; Diehl, R.E.; Miller, T.P.; Palmer, Y.L.; Treacy, M.F.; Trotto, S.H. "Cycloalkyl-substituted amidrazones: a novel class of insect control agents" Abstracts of the 211<sup>th</sup> National Meeting of the American Chemical Society, New Orleans, LA; March, 1996; No. AGRO 006.
- 30. Furch, J.A.; Kuhn, D.G.; Hunt, D.A.; Asselin, M.; Baffic, S.P.; Diehl, R.E.; Palmer, Y.L.; Trotto, S.H. "Amidrazones: a new class of coleopteran insecticides" Abstracts of the 211<sup>th</sup> National Meeting of the American Chemical Society, New Orleans, LA; March, 1996; No. AGRO 005.
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- Hunt, D.A. "2-Arylpyrroles: a new class of insecticide structure, activity, and mode of action," The XIIIth International Plant Protection Congress, The Hague, Netherlands; July, 1995; Abstract No. O-0419.
- Hu, Y.; Barnes, K.D.; Hunt, D.A. "Electrophilic fluorination of a highly functionalized pyrrole," 8<sup>th</sup> IUPAC International Congress of Pesticide Chemistry, Washington, D.C.; July, 1994; Poster No. 820.
- 34. Carter, G.T.; Hunt, D.A. "Insecticidal pyrroles: discovery and development," Society of Industrial Microbiology, Toronto, Canada; August, 1993.
- 35. Treacy, M.; Miller, T.; Black, B.; Gard, I.; Hunt, D.A. "Uncoupling activity and pesticidal properties of pyrroles," Design of Bioenergetic Toxins Symposium, University of Bath, Bath, United Kingdom; April, 1993.
- 36. Karp, G.M.; Arthen, F.J.; Birk, J.H.; Condon, M.E.; Marc, P.A.; Hunt, D.A.; Lavanish, J.M.; Schwindeman, J.A. "Synthesis and herbicidal activity of aryloxyindolin-2(3H)-ones," Abstracts of the 205<sup>th</sup> National Meeting of the American Chemical Society, Denver, CO; March, 1993; No. AGRO 15.
- 37. Hunt D.A.; Quante, J.M.; Tyson, R.L; Dasher, L.W. "Corticosteroidal π-allylpalladium complexes. A novel entry to  $6-\alpha$ , $\beta$ -carboxymethylcortisol," Abstracts of the 17<sup>th</sup> Central Regional Meeting of the American Chemical Society, University of Akron, Akron, OH; June, 1985; Abstract No. 150.
- 38. Hunt, D.A.; Rutherford, S.D.; Mosher, M.W. "Structure of 'hexaphenylmethane' formed from triphenylmethyl free radicals," Presented at the Spring Meeting of the Student Affiliate Chapters of the Pittsburgh Section of the American Chemical Society, Washington and Jefferson College, Washington, PA; April, 1973, and at the 24<sup>th</sup> Annual Ohio Meeting of the Student Affiliates of the American Chemical Society, Ohio University, Athens, OH; April, 1973.
- 39. Adkins, L.S.; Childers, D.; Hunt, D.A.; Hutchinson, M.J.; Mosher, M.W. "Halogen exchange reactions," Presented at the Annual Meeting of the West Virginia Academy of Sciences, Bethany College, Bethany, WV; April, 1972.
- 40. Hutchinson, M.J.; Hunt, D.A.; Mosher, M.W. "Mechanism and kinetics of the reaction of halogens with iodoalkanes," Abstracts of the 162<sup>nd</sup> National Meeting of the American Chemical Society, Washington, D.C.; September, 1971; No. ORGN 24.

## **INVITED LECTURES**

1. "Organic chemistry as applied to drug discovery. A sampling of projects in the Hunt Lab," TCNJ Faculty Senate Colloquium for the Recognition of Faculty Research and Creative Activity, Ewing, NJ, November 2, 2011.

## **INVITED LECTURES (continued)**

- 2. "Change," TCNJ 2010 Commencement, Student Invited Faculty Speaker, Ewing, NJ, May 14, 2010.
- 3. "Drug discovery and organic synthesis in the 21st century, or why I'm glad I have a prescription plan," TCNJ School of Science Colloquium, Ewing, NJ; April 16, 2010.
- 4. "New methods for the synthesis of heterocyclic and carbocyclic ring systems *via* functionalized aryllithium reagents," Temple University Department of Chemistry Seminar Series, Philadelphia, PA; April 23, 2009.
- 5. "Design and synthesis of potential central nervous system agonists," New Faculty Seminar Series, TCNJ, Ewing, NJ; March, 2006.
- 6. "Chemistry, bioactivity, and structure-activity relationships of aryl amidrazones" FMC Discovery Chemistry Lecture Series, Princeton, NJ; November, 2005.
- 7. "Synthesis and utility of acidic pyrroles and their corresponding proacid forms," Department of Chemistry, East Carolina University, Greenville, NC; October, 2000.
- 8. "Topics in organic synthesis from an industrial perspective," Departmental Seminar Series, Department of Chemistry, College of New Jersey, Ewing, NJ; November, 1995.
- 9. "2-Arylpyrroles: a new class of insecticide structure, activity, and mode of action," The XIIIth International Plant Protection Congress, The Hague, Netherlands; July, 1995.
- 10. "Synthesis of 2-arylpyrroles: novel uncouplers of oxidative phosphorylation," The Sixth Symposium on the Latest Trends in Organic Synthesis, Virginia Polytechnic Institute and State University, Blacksburg, VA; October, 1994.
- 11. "2-Arylpyrroles: novel uncouplers of oxidative phosphorylation," The Chinese Academy of Sciences, Shanghai Institute of Organic Chemistry, Shanghai, Peoples Republic of China; September, 1993
- 12. "2-Arylpyrroles: novel uncouplers of oxidative phosphorylation," The Royal Society of Chemistry, 4<sup>th</sup> International Symposium, Advances in the Chemistry of Insect Control, Queens' College, Cambridge University, Cambridge, United Kingdom; July, 1993.
- 13. "Corticosteroidal  $\pi$ -allylpalladium complexes. A novel entry to  $6-\alpha,\beta$ -carboxymethylcortisol," University of Akron, Akron, OH; June, 1985.