

## CURRICULUM VITAE

**NAME:** Jack DeRuiter

[https://scholar.google.com/citations?hl=en&user=4pYlmDcAAAAJ&view\\_op=list\\_works&sortby=pubdate](https://scholar.google.com/citations?hl=en&user=4pYlmDcAAAAJ&view_op=list_works&sortby=pubdate):

**ADDRESS:** School: Home:  
3306C Walker Building 391 Lake Hill Drive  
Harrison College of Pharmacy Alexander City, Alabama 35010  
Auburn University, Alabama  
Phone: 334-844-8323

**EDUCATION:** Ph.D. (1982) Medicinal Chemistry  
Medical College of Virginia  
Virginia Commonwealth University  
Richmond, Virginia  
Dissertation: Synthesis of Potential Alpha-Antagonists  
for Use as Probes of Receptor Topography (Dr. J. Stubbins)

M.S. (1978) Medicinal Chemistry  
University of Michigan  
Ann Arbor, Michigan  
Synthesis of 1,4-Dimethyl-2-quinolones as Potential  
Antiviral Agents (Dr. M. Nasr)

B.A. (1976) Chemistry and Biology  
Hope College  
Holland, Michigan

### APPOINTMENTS:

- Alumni Professor, Auburn University. September, 2021
- Hill Crest Professor, Auburn University, October 2019-2021
- Professor, Auburn University, September, 1993-Present
- Tenure, Auburn University, September, 1988-Present
- Associate Professor, Medicinal Chemistry, Auburn University, 1988-1993
- Graduate Faculty, Auburn University, 1986 (Reappointed 2010)
- Assistant Professor, Medicinal Chemistry, Auburn University, 1983-1988
- Postdoctoral Fellow, State University of New York at Buffalo, 1981-1983
- Graduate Teaching Assistant, Medical College of Virginia, VCU, 1978-1981
- Graduate Teaching Fellow, Organic Chemistry, University of Michigan, 1976-1978
- Laboratory Assistant: NSF Summer Workshop in Chemistry, Hope College, 1974-1975

## **HONORS AND AWARDS:**

- AU Alumni Professorship, 2021
- Curriculum Group – Integration Award
- Hill Crest Fellowship, Fall, 2019
- HSOP Curriculum Integration Award, 2021
- Curriculum Star Award, HSOP, Fall 2017.
- Faculty Research Excellence Award, Harrison School of Pharmacy, Auburn University, 2012-2014 and 2017
- Student Government Association, Instructor of the Year, Pharmacy. Multiple years including 1985, 1997, 2006 and 2012.
- Carmichael Award, Outstanding paper, Journal of the Alabama Academy of Science, 1993.
- Sigma Xi, The Scientific Research Society of North America, Auburn University Chapter, Elected to Full Membership in March, 1986. Certificate of Recognition in 1990 as a Graduate Student Research Director.
- American Chemical Society Certificate of Recognition as 1990 Membership Chairman for the Auburn Local Section.
- Phi Lambda Sigma, Honorary Pharmacy Leadership Society, Auburn University, May, 1987.
- Honor Society of Phi Kappa Phi, Medical College of Virginia, March, 1981.
- Rho Chi Pharmacy Honor Society, Medical College of Virginia, April, 1981.

### Awards Received by Graduate Students

- Robert A. Davis, Carolyn Taylor Carr Sigma Xi Award, Auburn University, 1993.
- Robert A. Davis, Alabama Academy of Science Graduate Student Research Grant recipient and Student Research Award Competition winner, 1992.
- Robert A. Davis, Texaco Foundation Scholarship, NMR Concepts short course of two dimensional NMR, 1992.
- Shridhar V. Andurkar, Sigma Xi Meritorious Research Award, 1992.
- Shridhar V. Andurkar, Alabama Academy of Science Graduate Student Research Competition Award Winner, 1991.
- Charles A. Mayfield, Most Outstanding Graduate Student, Auburn University, 1990.
- Charles A. Mayfield, Carolyn Taylor Carr Sigma Xi Award, Auburn University, 1990.
- Charles A. Mayfield, Alabama Academy of Science Student Research Award, 1988.
- Charles A. Mayfield, Southeastern Pharmacology Society Research Award, 1987.

## **INSTRUCTIONAL EXPERIENCE/ INSTRUCTIONAL MATERIALS DEVELOPED:**

### Auburn University, Professional (Pharmacy/Pharm D) 1980s:

- Medicinal Chemistry I (PY 420): Central Nervous System Drugs
- Medicinal Chemistry II (PY 421): Cardiovascular Agents
- Medicinal Chemistry III (PY 422): Chemotherapeutic Agents
- Modern Methods of Drug Analysis (PY 316)
- Mechanisms of Drug Action "Cytotoxic Agents" (PY 495A)
- Special Problems: Undergraduate Research (PY 495)

### Auburn University, Professional (Pharmacy/Pharm D) 1990s:

- Principles of Antimicrobial Drug Therapy (PYDI 401)
- Principles of Drug Action I
- Principles of Drug Action II (PY451)
- Pharmacotherapy II: Endocrine Drugs (PYDI 412)
- Pharmacotherapy III: Infectious Disease I
- Pharmacotherapy VI: Infectious Disease II (Coordinator)

### Auburn University, Professional (Pharmacy/Pharm D) 2000s-2017:

1. Drugs and Disease I (PYDI 9000): Designer and Coordinator (to 2016):
  - Drug Chemistry: 17 Chapters, with Objective/Assessments and Application Problems
  - Drug Targets: 9 Chapters, with Objective/Assessments and Application Problems
  - Drug Absorption: 2 Chapters, with Objective/Assessments and Application Problems
  - Drug Distribution: 1 Chapters, with Objective/Assessments and Application Problems
  - Drug Metabolism: 4 Chapters, with Objective/Assessments and Application Problems
  - Drug Elimination: 1 Chapter, with Objective/Assessments and Application Problems
  - Drug Design: An Overview of Drug Design Strategies to Improve target Efficacy and ADME Profiles: 1 Chapter with Over 25 Examples
2. Drugs and Disease II (PYDI 9100): Instructor (to 2016):
  - Dopaminergic Drugs and Disease: Parkinsonism and Psychosis: 2 Chapters with Objective/Assessments and Application Problem and Cases
  - Serotonergic Neurotransmission and Serotonergic Drugs used for GI disease, Depression, Migraine and Emesis: 4 Chapters with Objective/Assessments, Application Problems and Cases
3. Drugs and Disease III (PYDI 9200): Instructor (to 2017):
  - Asthma Drug Therapies: 1 Chapter with Guidelines Application Problems and Cases
  - Antihistamines: Allergy and Related Disease States: Focus on Adverse Effects: 1 Chapter with Guidelines, Application Problems and Cases
  - Basic Endocrinology: 8 Chapters and Case workbook (14 cases)
  - Thyroid Function, Disease and Drug Therapies: 4 Chapters with case workbook
4. Drugs and Disease IV (PYDI 9300): Instructor (to 2017)
  - Infectious Disease/Antimicrobial Drug Therapy: 17 Chapters with Case book (45 cases)

Auburn University, Professional (Pharmacy/Pharm D) 2017-Present:

1. Integrated Learning Experience I (2017-Present):
  - Diabetes Unit: Content Development: Content (Med Chem and ADME)
  - Way of thinking: Drug Science in patient Care Process: 3 hrs (2019-2021)
  - Introduction of Pharmacy Pharmacokinetics and Pharmacodynamics, 2022 2 hrs
2. Integrated Learning Experience II (2017-Present):
  - Introduction to ADME: Teaching and Content 3 hours
  - Asthma/COPD Unit: Teaching and content (Medications) 3 hrs
  - Hypothyroid Unit: Teaching: Teaching and content (Foundation): 6 hrs
  - Depression Unit: Content development, integrated case-based approach to foundation
  - Smoking Cessation Unit: Content development
3. Integrated Learning Experience III (2017-Present):
  - Biopharmaceutics Unit: Teaching and content development and Coordinator (2019): 6 hrs
4. Integrated Learning Experience IV (2017-Present):
  - Principles of Infectious Disease Unit: Teaching and Content (1 week): 15 hrs
  - Antimicrobial Drugs (Orals) Unit: Teaching and Content (1 week): 15 hrs
5. Integrated Learning Experience V (2018-Present):
  - Foundation Unit: Principles of Neurotransmission: Teaching and Content: 2 hrs
  - Sleep Disorders Unit: Content (Med Chem)
  - Schizophrenia Unit: Content (Med Chem and Pharmacology) and Teach: 1 hr
  - ADHD Unit: Teaching and Content (Drug Chemistry): 1 hr
  - Parkinson's Unit: Teaching and Content (Integrated Learning Module): 3 hr
  - Hepatitis Unit: Teaching and Content (Drugs): 3 hr
  - Hyperthyroid Unit: Teaching and Content (Foundation): 6 hrs
6. Integrated Learning Experience VI (2018-Present):
  - Acid-Base Unit: Teaching and Content: 2 hr
7. Integrated Learning Experience VII (2018-Present):
  - Dermatology Unit: Content development
  - Antimicrobial Drugs (Oral and IV) Unit: Teaching and Content: 6 hrs
  - Bacterial Infections Unit: Sepsis, SSTIs, UTIs, Meningitis, Pneumonia Content
  - Allergic Rhinitis Unit: Teaching and Content: 1,5 hr
  - Upper Respiratory Tract Infections Unit: Teaching and Content: 3 hr
  - Viral STIs/Herpes Unit: Teaching and Content: 1.5 hr
8. Integrated Learning Experience VIII (2018-Present):
  - Rheumatoid Arthritis Unit: Teaching and Content: 3 hrs
  - Gout Unit: Teaching and Content: 1.5 hr
  - Migraine/Headache Unit: Teaching and Content: 3 hrs

9. Integrated Learning Experience IX (2018-Present):
  - Critical Care Unit: Infectious Disease/Antimicrobial overview (Endocarditis): 3 hrs
  - Biologic drugs – Monoclonal antibodies: 3 hrs
  
10. Integrated Learning Experience XI (2020-Present):
  - Migraine: Teaching and Content: 1 hr
  - Motion Sickness: Content
  - Cellulitis: Teaching and Content: 2.5 hrs
  - ADHD: Teaching and Content: 0.75 hr
  - Bone and Joint infections/Surgical Prophylaxis: 1 hr
  - Rheumatoid Arthritis overview and infection: 2.5 hrs
  
11. Integrated Learning Experience XII (2020-Present):
  - ADME and Drug Interaction Overview: Teaching and Content: 3 hrs
  - Beta-lactam Hypersensitivity: Teaching and Content: 2 hrs
  - “Way of Thinking”: Antimicrobials and diabetic Foot infection”: 3 hrs
  
12. Longitudinal VI:
  - “Way of Thinking”: Antimicrobials and diabetic Foot infection”: 3 hrs
  - “Way of Thinking”: Diabetes and co-morbid diseases: 3 hrs

Auburn University, Graduate Courses (1983-Present):

- Advanced Medicinal Chemistry I (PYPS 7230): Primary Instructor
- Advanced Medicinal Chemistry II (PYPS 7240): Primary Instructor
- Chemistry of Synthetic Drugs (PY 620 - Survey of Med. Chem.)
- Chemistry of Synthetic Drugs (PY 621 - Enzyme Inhibitors)
- Chemistry of Synthetic Drugs (PY 622 - CNS Agents)
- Heterocyclic Medicinal Chemistry (PY 660)
- Metabolism and Disposition of Xenobiotics (PY 650): Chemical Structure/Toxicity
- Neuropharmacology of Drugs of Abuse (PY 539, MEB): MDMA Lectures
- Special Problems: Graduate Research (PY 695)
- Directed Readings (PY 681 - Synthetic Strategy/Drug Chemistry)
- Seminar (PY 680)
- Research and Thesis (PY 699)
- Research and Dissertation (PY 799)
- Toxicology Course: 2004 (Lecturer)
- Basic Pharmaceutical Sciences I – Drug Targets (2018): Course Designer and Coordinator
- Basic Pharmaceutical Sciences II – ADME (2019): Course Designer and Coordinator
- Drug Development Elective: “Hit to Lead” and “Biologic/Gene Therapy”, 2019-Present

State University of New York at Buffalo (1981 to 1983): Organic Medicinal Chemistry

Medical College of Virginia/VCU (1978 to 1981): Organic Medicinal Chemistry (Recitation), Nursing Anesthesia Program, Instructor and Quantitative Analytical Lab (Assistant)

University of Michigan (1976- 1978): Organic Chemistry, Teaching Fellow and Laboratory Instructor

Hope College (1973 -1975): Instructor, NSF Summer Implementation Project for High School Chemistry Teachers

### **OTHER CONTRIBUTIONS TO TEACHING:**

- Undergraduate Research: More than 85 undergraduate students from Pharmacy and other academic programs have enrolled in research experience courses under my direction since 1984. The projects performed by many of the undergraduate students resulted in publications and a variety of presentations at scientific meetings.

### **COMMITTEE SERVICE:**

#### Department of Drug Discovery and Development:

- Faculty Search Committee/Pharmaceutics, 1998 (Member)
- Committee to Develop PY 402, Biotechnology, Member, 1996-1997
- Committee to Develop Work Statements for the Department's Strategic Plan related to undergraduate instruction, Member, 1995 and 1997.
- Committee to Develop Departmental Criteria and Procedures for Graduate Faculty Appointment, 1994 (Chair). Reformed in 1995 (Chair).
- Committee to Reevaluate Requirements for the Doctoral Degree, 1992 (Chair)
- Faculty Search Committee/Pharmaceutics, 1988 (Member)
- Medicinal Chemistry Division Faculty Search Committee, 1987 (Member)
- Library Acquisitions, 1987-1989 (Chair)
- Seminar Coordinator, 1986
- Nominating Committee, Burlington Northern Foundation Faculty Achievement Award, 1986 and 1987 (Member)
- Facilities Committee, 1983 to 1988 (Member)
- Endowed Professor Search Committee, 1985 - 1988 (Member)
- Faculty Search Committee, Member, 2016-2017
- Department of Drug Discovery Advisory Committee, Member, 2016-2017
- Department of Drug Discovery Graduate Program Committee, Chair, 2017-Present
- Department of Drug Discovery Education Workgroup, Chair, 2019-Present
- Department of Drug Discovery Faculty Development, Retention and Recruitment Committee, 2022-Present
- Department of Drug Discovery Faculty Search Committee, 2022-Present (Chair)

#### Harrison College of Pharmacy:

- Pharmacy Care Systems Faculty Search Committee, 2002 (Member)
- Pharmaceutical Care Center Advisory Board, 1998-2000 (Member)
- Pharmacotherapy/Disease State Module Development Team, 1998 (Member)

- Committee to Develop PYD 401: Antimicrobial Drugs, 1996-1997 (Co-Chair).
- Admissions and Academic Requirements Committee, 1996-1998 (Co-Chair)
- Infectious Disease State Module Development Team, 1996-1997 (Member)
- Faculty Search Committee, Pharmacy Care Systems, 1996 (Member)
- Strategic Planning Committee, Priority and Goals, 1995-96 (Member)
- Continuing Education Committee, 1995-96 (Member)
- Committee to Develop an Integrated Instructional Module for AED, 1995 (Member)
- Promotion and Tenure Committee, Clinical Dept, 1994 (Member)
- Self-Study for Reaccreditation, Curriculum, 1992 (Member)
- School Grant-in-Aid Committee, 1990 -1994 (Alternate)
- Ethics Committee, School of Pharmacy, 1988- 1995, Chair, Consultant, 1995-96
- Search Committee, Dean School of Pharmacy, 1987 (Member)
- Student-Faculty Relations Committee, 1986 - 1988 (Member)
- Professional and Academic Standards, 1983-1984 (Member)
- Curriculum Committee, 1985 to 1986, 1989-1994, 1998 (Member)
- Self- Study for Accreditation, Doctor Pharmacy Program, 1985 (Member)
- Strategic Planning Committee, 2004-2008 (Member);
- Chair Curriculum ACPE Standards subcommittee (2008)
- Satellite Pharmacy Program Development, USA Campus, 2006-2007 (Member).
- Professional Education Steering Committee (PEC Steering), 2005-2008 (Member)
- Professional Education Subcommittee II, 2005-2008 (Chair thru Summer, 2007)
- Drug and Disease Course Coordinator, 2007-Present (Chair)
- Associate Dean for Education Search Committee, 2007-8 (Member)
- Associate Dean for Research and Graduate Program Search Committee, 2007-8 (Member)
- Search Committee, Pharmacy Care Systems Faculty, June 2008 (Member)
- OTLA Committee, June 2011 (Member)
- Associate Dean for Curriculum and Assessment Search Committee, 2012 (Member)
- HSOP Graduate Programs Committee, Member 2017-Present
- ILE 1-12 Team Member, 2017-Present
- Professional Education Committee, 2020-Present (Member)
- Gilliland Endowed Professor Renewal Review Committee, 2021 (Chair)
- Pharmacokinetics Progression Team Workgroup, PEC, 2021-Present (Chair)
- Associate Dean for Academic Programs Search Committee, 2022 (Member)
- HCOP Interim Dean Search Committee, April 2022 (Member)
- Department of Drug Discovery and Development Search Committee, March 2022 (Chair)

#### Auburn University:

- Faculty Dismissal Committee, Fall 2002 (Member)
- Grievance Committee, Auburn University, August 2002 and 2003 (member).
- Auburn University Senate, 1998-2004 (Member)
- Promotion and Tenure Committee, 1998-2015 (Three term member)
- Advisory Committee for a Drug-Free Campus and Workplace, 1998-2001 (Member)
- Grievance Committee, Chair, Summer, 1998
- Facilities and Instructional Technology Review Committee, 1997-1999 (Member)
- United Way Campaign, School of Pharmacy representative, 1996.

- Graduate Council Committee on Graduate Faculty Appointment, 1995 (Member)
- Molecular Biology Graduate Programs Committee, 1994 (Member)
- Graduate Council's Committee on Doctoral Dissertations, 1993 (Chair).
- Committee to Review Academic Honesty Codes and Policies, 1993 (Member)
- Distinguished Graduate Faculty Lectureship Committee, 1993 & 1995 (Member)
- Committee on Graduate Faculty: Appointments, 1993 (Member)
- Outstanding Graduate Students of Auburn Selection Committee, Graduate School, 1993 (Member) and 1994 (Member)
- Initial Steering Committee: Biochemistry and Cell and Molecular Biology Emphasis, Graduate School, 1993 (Member), 1994 (Chair)
- Organization Committee for the Biochemistry and Cell and Molecular Biology Emphasis, Graduate School, 1993 (Chair)
- Graduate Faculty Appeals Committee, Fall, 1992 (Member)
- Graduate Council, AU Graduate School, 1992 - 1995 (Member)
- Policy Committee of the Graduate Council, 1994 - Present (Member)
- Undergraduate Education Program Principal Study Committee, 1991 - 1992 (Member) and SACS Admissions Sub-committee, (Chair)
- Faculty Hearing Committee, 1990 - 1993 (Chairman)
- Committee on Graduate Faculty Membership, 1990 (Member)
- Subcommittee on Criteria For Graduate Faculty Membership, 1990 (Member)
- Graduate School's Committee: International Students, 1990 (Member)
- Library Committee, 1986 to 1989 (Member)
- Committee for Evaluation of Laboratory Ventilation Systems, 1985-1988, (Member)
- Auburn University Program Review, Chemistry Review Team, 1989 (Chair).
- Decanal Review Committee (Dean Evans), 2004-2005 (Member)
- Senate Steering Committee: Post-Tenure Review, Fall, 2005-Present (Member)
- Grievance Hearing Committee, Summer-Fall, 2005 (Chair)
- Promotion and Tenure Appeals Committee, Spring, 2005 (Member)
- Competitive Research Committee, 2007-2008 (Member)
- Ombudsperson Search Committee, 2008-2009 (Member)
- Promotion and Tenure Committee, Auburn University, 2010-2013 (Member)
- Core Curriculum and General Education Committee, 2021-Present (Member)



## GRADUATE STUDENT COMMITTEES:

### Committee Chair:

- Deborah Ann Carter, M.S., 1987. Medicinal Chemistry, Synthesis, Reaction Studies and Pharmacological Evaluation of 4-Isopropylidene-methyl-pyrazolin-ones, June, 1987. Currently employed as a Research Scientist at Southern Research Institute, Birmingham, AL.
- Blake Emerson Swearingen, M.S., Medicinal Chemistry, Synthesis and In Vitro Aldose Reductase Inhibitory Activity of Compounds Possessing the N-Acylglycine Pharmacophore, December, 1987. Currently employed as a Research Scientist at Glaxo Research Laboratories, Inc., Research Triangle Park, NC.
- Vinay Gajanan Wandrekar, M.S., Medicinal Chemistry, Synthesis and In Vitro Aldose Reductase Inhibitory Activity of Substituted N-Benzoylamino Acids, August, 1989. Currently a PhD student in medicinal chemistry at the University of Idaho, Moscow, ID, completed in Summer 1995.
- Zenan Li, M.S. Medicinal Chemistry, Investigation of Reactions to Synthesize Substituted Pyrrolo[1,2-a]quinolines Quinone Bis-Carbamates: Potential Bioreductive Alkylating Agents, December, 1990. Currently employed as a Research Scientist at Wyeth-Ayerst Pharmaceutical Company, Princeton, NJ.
- Charles Allen Mayfield, Ph.D., Medicinal Chemistry, Design", Synthesis and Biochemical and Pharmacological Studies of Aldose Reductase Inhibitors: Potential Therapeutic Agents for the Treatment of Diabetic Pathologies, June, 1991. Currently on Anatomical Pathology/Clinical Pathology Associate, Vivid Pathology, Pensacola, FL
- Kamal Hani Bouhadir, M.S., Medicinal Chemistry, Synthesis, Liquid Chromatographic Analysis and In Vitro Aldose Reductase Inhibitory Activity of N-(Phenylsulfonyl)-N-phenylglycines, June, 1991. Currently a PhD student in the Department of Chemistry, Auburn University, AL.
- Shridhar Vasant Andurkar, M.S., Medicinal Chemistry, Synthesis and Analgesic Activity of 1-Hydroxy-phenyl)ethyl]-(propananilido)-perhydroazepine, co-chair with T.N. Riley, December, 1991. PhD in March, 1996. Post-doctoral fellow at the University of Houston, Department of Chemistry. Currently a Department Head at Midwestern College of Pharmacy
- Venkatram Ram R. Atigadda, M.S., Medicinal Chemistry, Synthetic Studies of Heterofused 3,3a,4,7-Tetrahydrocycloprop[1,2-d]isoquinodione and Mechanistic Studies of the Condensation of Anhydrides with C-C and C-N Multiple Bonds, Co-chair with F.T. Smith, March, 1992. PhD in April, 1996. Currently a Research Associate at the University of Alabama at Birmingham, Department of Chemistry.
- Robert Alan Davis, Ph.D., Medicinal Chemistry, Study of the Catalytic Properties and Inhibition of Aldose Reductase: An Enzyme Implicated in Diabetic Pathologies", December, 1993. Post-doctoral fellow at the Wadsworth Center of the New York State Department of

Health, Albany, NY, 1993-1994. 1994-Present Asst Research Professor at the University of South Carolina School of Pharmacy.

- Weiyang Lin, M.S., Medicinal Chemistry, Synthesis and in vitro aldose reductase inhibitory activity of 1(2H)-isoquinolones as rigid analogues of N-benzoylamino acids, August, 1995. Currently a PhD student in Medicinal Chemistry, University of Kansas.
- Tamer Abd El-Azim Awad, PhD, Medicinal Chemistry, Mass Spectral and Chromatographic Studies on a Series Of Regioisomers and Isobaric Derivatives Related to Methylenedioxy-methamphetamines, 2001.
- Ahmad Almaki, PhD, Medicinal Chemistry, Synthesis, Analytical Profiles and Receptor Pharmacology of Methoxylated Derivatives and Regioisomers of the NBOMe series of Hallucinogenic Drugs (Co-Chair with C. R Clark), completed 2019
- Mohammed Almaghrabi, PhD, Medicinal Chemistry, in progress (Co-Chair with C. R Clark)

Committee Member:

- John Crow, M.S., Medicinal Chemistry, 1985 (Chair A. Brubaker).
- Laura Garcia-Roura, M.S., Medicinal Chemistry, 1987, (Chair: Clark).
- Hui-Fang Fan, M.S., Pharmaceutics, completed 1987 (Chair: Parsons).
- Donna Elder, M.S., Medicinal Chemistry, completed 1988 (Chair: Brubaker).
- Chih-Chih Liu, MS, Pharmaceutics, completed 1990 (Chair: Ravis).
- Leida Barrios, M.S., Medicinal Chemistry, 1992 (Chair: Clark).
- Carl McMilliam, Ph.D., Medicinal Chemistry, 1993 (Chair: Clark).
- V. Supprimanian, PhD, Veterinary Medicine (co-chair with V. Vodyanoy). 1993.
- Alok Gupta, M.S., Pharmaceutics, completed in 1994. Chair: Parsons.
- Jeffrey M. Barksdale, Ph.D., Medicinal Chemistry, completed in 1997 (Chair: Clark).
- Weiwen Jiang, M.S., Pharmacology/Toxicology, Completed Oct., 1994 (Chair: Bronson).
- Guei Jen Shieh, Ph.D., Pharmacology/Toxicology, 1995 (Chair: Walters).
- Shengrong Li, Ph.D., Chemistry, completed in March, 1996. (Chair: E. Parish).
- Rakesh Nagilla, MS., Pharmacology/Toxicology, Completed October, 1997 (Chair: Bronson)
- Laura Alberg, PhD, Medicinal Chemistry (Chair: Clark), completed November, 2002
- Angela Chatman, MS, Medicinal Chemistry (Chair: Clark). Completed
- Tara Colley, PhD, Medicinal Chemistry (Chair: F. Smith). Withdrew
- Joseph Tinkleman, PhD, Medicinal Chemistry, 2009 (Chair: F. T. Smith).
- Ashley, Thigpen, MS, Medicinal Chemistry, 2006 (Chair: C. R. Clark)
- Sherif Hammad, Medicinal Chemistry (Chair: F. Smith), PhD in progress 2008
- Karim Hafiz Abdel-Hay, Medicinal Chemistry (Chair: C. R. Clark), PhD in progress
- Abdullah Al-Hossaini, Medicinal Chemistry (Chair: C. R. Clark), MS graduated Fall 2009
- Mark Popwell, Medicinal Chemistry (Chair: F. Smith), withdrew in 2009
- Ning Yu, Medicinal Chemistry (Chair: C. R. Clark), graduated in 2012
- Younis F. Abiedalla, Medicinal Chemistry (Chair: C. R. Clark), MS, 2012 and PhD 2018.
- Ranjith Munigunti, Medicinal Chemistry (Chair: A. Calderon's), PhD, completed 2013.
- Johayra S. Williams, Medicinal Chemistry (Chair: A. Calderon), PhD completed, 2014.

- Richard Davis, Pharmacology (Chair: Peter Panizzi), PhD, Writtens/Orals 2014.
- Ahmad Almalki, Medicinal Chemistry, MS, Completed in 2015. Enrolled in PhD Program
- Andrew Brannen, Pharmacology (Chair: Peter Panizzi), PhD, complete, 2017.
- Amsha Saud M Alsegiyani (Chair R. Clark), MS complete 2016
- Thankhoe A. Rants'o (Chair A. Calderon), MS complete, Summer 2017.
- Mohammed Ali Majrashi (Chair M. Dhanasekaran), PhD Complete Fall 2019.
- Mansour Alturki (Chair A. Calderon), MS 2016, PhD Currently (Chair: FT Smith).
- Mohammed Almaghrabi (Chair M. Dhanasekaran), complete 2018, PhD in 2021
- Fnu Ibtisam (Chair A. Kisselev), MS complete, Summer 2017, PhD in progress
- Logan Neel (Chair F. T. Smith), PhD. Completed, 2022
- Fajar Setyo Wibowo (Chair R. Amin), PhD in progress
- Sindhu Ramesh (Chair T. Moore), PhD, in progress
- Ian Steinke (Chair R. Amin), PhD, in progress
- Kabre Heck (Chair A. Calderon), PhD, in progress
- Kelli McDonald (Chair A. Calderon), PhD, in progress
- Zarna Raichura (Chair A. Calderon), MS, in progress
- Vipasha Dwivedi (Member), PhD, in progress.

#### Outside Dissertation Reader

- S. B. Das, Chemistry, Spring, 2000
- J. Douglas Northcott, Chemistry, Summer, 2000
- Xing Wang, PhD, Chemistry, 2001 (Chair: P. Livant)
- Meiling Hung, Chemistry, Spring 2004
- Elaine L. Bailey, Chemistry, Summer 2004
- Yuanping Jie, Chemistry (Livant), Spring, 2006
- Xianghong Wu, Chemistry (A. Gorden), Summer 2008
- Weikuan Li, Chemistry (S. Schneller), Summer 2008
- Guoxia Zhao, Chemistry (S. Schneller), December, 2008
- Rodney Vallier, Chemistry (Dr. Blumenthal), March, 2009
- Xiaoxun Li, Department of Chemistry and Biochemistry (Dr. P. Livant), June 2009
- Chun Chen, Department of Chemistry (S. Schneller), Fall 2010
- Yuancheng Li Department of Chemistry, (A. Gorden), Spring 2012
- David S. Makhanu, Department of Chemistry, (P. Livant) Spring 2012
- Kavitha Reddy Pulsani, Department of Chemistry, (P. Livant) Spring 2017
- Amarjyoti Das Mahapatra, Indian Institute of Technology Gandhinagar, Spring 2021

#### **UNDERGRADUATE HSOP ACADEMIC MENTORING PROGRAM**

- Kevin Jones, 2006-2007 Academic Year
- Joshua Hayes, Spring, 2008
- Gabriel Newman, 2015-16
- Jamie Tillman: 2016-2017.
- Austen Moore, 2019

### **JOURNAL REVIEWER:**

- Medicinal Chemistry Research (1995-Present): Reviewed in 2008:
- Science (1992-present)
- Journal of Medicinal Chemistry (1987-present): 2 in 2008
- European Journal of Medicinal Chemistry (1992-Present)
- Biochemical Pharmacology (1989-present)
- Journal of Enzyme Inhibition (1993-Present)
- Bioorganic and Medicinal Chemistry Letters (1993-Present)
- Journal of Chromatographic Science (1988-present)
- Pakistan Journal of Scientific and Industrial Research (1986)
- Organic Preparations and Procedures International (1994)
- American Chemical Society, Book Publications (1990-present)
- The Annals of Pharmacotherapy (MSW) (2004-Present)
- Pharmacy Practice News (2006): Reviewer for LM Prescott
- Metabolism Clinical and Experimental (2009)
- Advances in Molecular Mechanisms and Pharmacology of Diabetic Complications: Aldose reductase and protein glycation inhibitors by Ioannis Nicolaou (Book Chapter, 2009)
- *Clinical Pharmacology & Biopharmaceutics*, 2012
- *Drug Discovery Today*, 2014 to present

### **GRANT REVIEWER:**

- The Petroleum Research Fund, American Chemical Society, 1990
- American Heart Association, Alabama Affiliate, Secondary Reviewer, 1988, 1996

**PROFESSIONAL SEMINARS, INVITED LECTURES AND PRESENTATIONS:**

1. "Synthesis of Substituted 1,4-Dimethyl-oxoquinolines as Potential Chemotherapeutic Agents," Medical College of Virginia/VCU, September, 1978.
2. "Synthesis of Potential Alpha-Antagonists for Use as Probes of Receptor Topography," State University of New York at Buffalo, February, 1983.
3. "Synthetic Approaches to Novel Bio-reductive Alkylating Agents," Auburn University, May, 1983.
4. "Design and Synthesis of Alpha-1 Receptor Probes," Auburn University, October, 1983.
5. "Synthesis of Reactive Sulfonylhydrazones as Potential Antitumor Agents," Auburn University Section of the American Chemical Society, November, 1983.
6. "Treatment of Selected Dermatological Conditions: Fungal Infections," Continuing Education Program, Birmingham, Alabama, March, 1984.
7. "Therapeutic Approaches for the Prevention of Diabetic Complications," Auburn Dietetic Association, April, 1985.
8. "Diabetes and Diabetic Complications," Medical Adjustments Aspects of Disability (CED 624), Auburn University, Oct. 1985.
9. "Approaches for the Design of Inhibitors of Aldose Reductase," Lilly Research Laboratories, Indianapolis, Indiana, February 3, 1986.
10. "Aldose Reductase and Diabetic Complications," Thirteenth Annual MALTO Medicinal Chemistry-Pharmacognosy meeting, New Orleans, LA, May, 1986.
11. "Investigation of the Relationship between Structure and Inhibitory Activity with Novel Inhibitors of Aldose Reductase," Duquesne University, School of Pharmacy, Pittsburg, PA, September, 1986.
12. "Synthetic Approaches to Deazaanthramycins Possessing a Reactive Spirooctadienone Moiety," Department of Pharmaceutical Sciences, School of Pharmacy, Duquesne University, Pittsburg, PA, September, 1986.
13. "Design of N-Arylglycines as Probes of the Inhibitor Binding Site of Aldose Reductase," School of Pharmacy, University of Nebraska Medical Center, Omaha, Nebraska, November, 1986.
14. "Investigation of the Relationship Between Structure and Aldose Reductase Inhibitory Activity with N-Arylsulfonylglycines," Mayfield, C.A. and DeRuiter, J., Graduate Student Forum, Auburn University, April, 1987.

15. "Synthesis and In Vitro Aldose Reductase Inhibitory Activity of Compounds Possessing the N-Acylglycine Pharmacophore," Anaquest, Murray Hill, New Jersey, September, 1987.
16. "Synthesis and Aldose Reductase Inhibitory Activity of Compounds Containing an N-Benzoylglycine or N-Phenylsulfonylglycine Moiety," International Workshop on Aldose Reductase Inhibitors, Honolulu, Hawaii, December, 1987.
17. "Inhibition of Aldose Reductase-Mediated Reduction of Glyceraldehyde," Biochemistry Seminar Program, Department of Chemistry, Auburn University, January 1988.
18. "Biochemical and Pharmacological Effects of Novel Aldose Reductase Inhibitors," Medical College of Virginia, Virginia Commonwealth University, Department of Medicinal Chemistry, Richmond, Virginia February, 1988.
19. "Aldose Reductase Inhibitor Design: Steric and Electronic Probes of the Inhibitor Binding Site," National Eye Institute, National Institutes of Health, Bethesda, Maryland, February, 1988.
20. "Drug Design and Development," Alabama Junior Academy of Science, Auburn University, March, 1988.
21. "Pathologies of Diabetes: Prevention and Treatment", Auburn Pharmacy Alumni Association Continuing Education Series, Auburn University, September, 1988.
22. "Graduate Opportunities in Pharmaceutical Research", Troy State University, Alabama, October, 1988.
23. "Alteration of Myocardial Biochemistry during Ischemia," Southern Heart and Lung Institute; East Alabama Medical Center, Auburn, AL, Dec. 1988.
24. "New Drugs," Health Care Resort CE Program, co-presented with K.D. Campagna, Gulf Shores, Alabama, July, 1989.
25. "Biotechnology and Pharmacy", Auburn Pharmacy Alumni Association Continuing Education Series, Auburn University, September, 1989.
26. "Advances in Medical Chemistry", Alabama Pharmacy Preceptor Institute, Auburn University Conference Center, September, 1989.
27. "Stereoisomerism in Pharmaceuticals: New Directions in Drug Discovery and Development", Technomic Seminar, Elizabeth, New Jersey, June, 1990.
28. "New Drugs", Health Care Resort CE Program, Gulf Shores, Alabama, July, 1990.
29. "A Short Course in Advanced Drug Chemistry", North Louisiana Criminalistics Laboratory Program, co-presented with C.R. Clark and F.T. Noggle, Jr., Shreveport, LA, August, 1990.

30. "New Drug Update", Auburn Pharmacy Alumni Association Continuing Education Series, Auburn University, September, 1990.
31. "Advances in Medicinal Chemistry", Alabama Pharmacy Preceptor Institute, Auburn University Conference Center, September, 1990.
32. "Structure-Inhibition Analyses of N-Benzoyl and N-(Phenylsulfonyl)amino Acid Aldose Reductase Inhibitors", Department of Chemistry, Auburn University, January, 1991.
33. "Pharmacology: Understanding the Drugs Your Patients Take", Training Seminar, Birmingham, AL, March, 1991.
34. "The Complications of Chronic Diabetes: Pathogenesis and Therapeutic Approaches", Clinical Research and Practice Conference, Auburn, AL, May 1991.
35. "New Drugs", Health Care Resort CE Program, Gulf Shores, Alabama, July, 1991.
36. "Colony Stimulating Factors: Development and Therapeutic Utility", Auburn Pharmacy Alumni Association Continuing Education Series, Auburn University, October 1991.
37. "Aldose reductase and the pathologies of chronic diabetes", Chicago College of Pharmacy, December, 1991.
38. "Chemical Mechanisms of Toxicity", Department of Chemical Engineering, Auburn University, Auburn, AL, February, 1992.
39. "New Drugs", Health Care Resort CE Program, Gulf Shores, AL, July, 1992.
40. "The Chemistry of Drugs of Abuse", American Chemical Society, Wilson Dam Section, Florence, AL, September, 1992.
41. "New Drug Update", Auburn Pharmacy Alumni Association Continuing Education Series, Auburn University, October, 1992.
42. "The Analysis of Clandestine Street Drugs: Methods and Challenges", Department of Forensic Sciences, University of Alabama at Birmingham, February, 1993.
43. "Toxicity of Laboratory Chemicals", Department of Chemical Engineering, Auburn University, Auburn, AL, April, 1993.
44. "New Drugs", Health Care Resort CE Program, Gulf Shores, AL, July, 1993.
45. "New Drug Update", Auburn Pharmacy Alumni Association Continuing Education Series, Auburn University, November, 1993.
46. "New Drugs", Health Care Resort CE Program, Gulf Shores, AL, August, 1994.

47. "New Drug Update", Auburn Pharmacy Alumni Association Continuing Education Series, Auburn University, November, 1994.
48. "Rational design of multisite-directed aldose reductase inhibitors derived from N-phenyl-sulfonyl- and N-benzoylamino acids", R. A. Davis, J. DeRuiter and C. A. Mayfield, Medical University of South Carolina, Seminar Series, Charleston, SC, Feb., 1995
49. "New Drugs", Health Care Resort CE Program, Gulf Shores, AL, August, 1995.
50. "New Drugs", Health Care Resort CE Program, FortWalton Beach, FL, July, 1996.
51. "New Drugs", Health Care Resort CE Program, Pensacola, FL, July, 1997.
52. "New Drugs", Health Care Resort CE Program, Gulf Shores, AL, July, 1998.
53. "New Drugs", Health Care Resort CE Program, Gulf Shores, AL, July, 1999.
54. "New Drugs", Health Care Resort CE Program, Orange Beach, AL, July, 2000.
55. "Drugs of Abuse: An Overview", Health Care Resort CE Program, Gulf Shores, AL, August, 2001.
56. "New Drugs", Health Care Resort CE Program, Gulf Shores, AL, August, 2001.
57. "Drugs of Abuse: An Overview", Health Care Resort CE Program, Guntersville, AL, August, 2001.
58. "Drugs of Abuse: Part I Overview", Auburn University School of Pharmacy Professional Seminar Series, August, 2001
59. "Drugs of Abuse: Part II Overview", Auburn University School of Pharmacy Professional Seminar Series, September, 7, 2001
60. Anthrax and Bioterrorism: Patient Issues, Communication class, Auburn University School of Pharmacy, December, 2001.
61. "New Drug Update", Health Care Resort CE Program, Gulf Shores, AL, August, 2002.
62. "The Pre-Pharmacy and Basic Pharmaceutical Science Curricula: 'Do we really need to know this stuff'". Auburn University Pre-Pharmacy Society, Auburn, AL, October, 2002.
63. "New Drug Update", Health Care Resort CE Program, Huntsville, AL, July, 2003.
64. "New Drug Update", Health Care Resort CE Program, Panama City, FL, AL, July, 2004.
65. "New Drug Update", Health Care Resort CE Program, Panama City, FL, July, 2005.
66. "New Drug Update", Health Care Resort CE Program, Huntsville, AL, August, 2005.



67. Thyroid Disease and its Impact on Health, Spring 2006 Health Care Web Cast, March 19, 2006, Harrison School of Pharmacy, Auburn, AL.
68. New Drug Update", Health Care Resort CE Program, Panama City, FL, July, 2006.
69. New Drug Update", Health Care Resort CE Program, Auburn, AL, August, 2006.
70. Inquiry-Based Learning, Auburn University Faculty College, August 2006, HSOP, Auburn, AL.
71. New Drug Update", Health Care Resort CE Program, Auburn, AL, July, 2007.
72. AUHSOP Honor Code Policies, Auburn University Faculty College, August 2007, HSOP, Auburn, AL.
73. MRSA and the Antimicrobial Crisis, Alabama Medicaid Conference, January, 2008, Montgomery, AL.
74. Thyroid Disease and its Impact on Health, Alabama Medicaid Conference, April 29, 2008, Dothan, AL.
75. Test Writing Workshop, Auburn University Harrison School of Pharmacy, Department of Clinical Practice, June 20, 2008.
76. Thyroid Disease and its Impact on Health, Alabama Medicaid Conference, July 29, 2008, Birmingham, AL.
77. New Drug Update", Health Care Resort CE Program, Auburn, AL, July 13, 2008.
78. New Drug Update", Health Care Resort CE Program, Pensacola, FL, August 10, 2008.
79. AUHSOP Curriculum Design and the DAD Sequence, Auburn University Faculty College, October 2008, HSOP, Auburn, AL.
80. Direct to consumer advertising (DTCA) of Prescription Drugs, AUHSOP Fall 2008 CE Program, Auburn University HSOP (videoconference), November 9, 2008, Auburn, AL.
81. Direct to consumer advertising (DTCA) of Prescription Drugs, AUHSOP Professional Seminar Series, January 23, 2009, Auburn, AL.
82. "Curricular Mapping", AUHSOP Colloquium, February 13, 2009, Auburn University.
83. Direct to consumer advertising (DTCA) of Prescription Drugs, Alabama Medicaid, April 14, 2009, Montgomery, Auburn, AL.
84. New Drug Update", Health Care Resort CE Program, Auburn, AL, June 14, 2009.

85. Direct to consumer advertising (DTCA) of Prescription Drugs, Alabama Medicaid, July 14, 2009, Birmingham, Auburn, AL.
86. New Drug Update, Consultant Update and Therapeutics Conference, Auburn University Harrison School of Pharmacy, July 25, 2010.
87. Pharmacogenomics and Implications for Pharmacy Practice, Consultant Update and Therapeutics Conference, Auburn University Harrison School of Pharmacy, July 25, 2010.
88. New Drug Update, Consultant Update and Therapeutics Conference, Auburn University Harrison School of Pharmacy, July 24, 2011.
89. Pharmacogenomics and Personalized Medicine. Health Information Designs Annual Client Meeting, Opelika, AL November 2011 (ACPE accredited).
90. Pharmacogenomics and Personalized Medicine. Health Information Designs Annual Client Meeting, Tampa, FL, May, 2012 (ACPE accredited).
91. Novel Illicit Drugs. Health Information Designs Annual Client Meeting, Chicago, IL, May 14-16, 2013.
92. New Drugs of Abuse, 138<sup>th</sup> Annual Alabama Association of Pharmacy Meeting, Sandestin, FL, June 2019.
93. New Drugs of Abuse, HSOP Annual Rho Chi Meeting, Auburn University, November, 2019.
94. Novel Gene-Based Therapies, American Drug Utilization Review Society, 2020 Symposium, Scottsdale, AZ, Feb 2020
95. New Drug Review, Harrison College of Pharmacy, Auburn, AL, December 2022

**RESEARCH PRESENTATIONS AND ABSTRACTS: (Presenter Underlined)**

1. "Novel Inhibitors of Rat Lens Aldose Reductase," Whitmer, W.L.; Brubaker, A.N.; DeRuiter, J.; Millen, J.; Riley, T.N., Eleventh Annual MALTO Meeting, Medicinal Chemistry and Pharmacognosy Meeting, Oxford, Mississippi, May 1984.
2. "Novel Inhibitors of Rat Lens Aldose Reductase," DeRuiter, J.; Brubaker, A.N.; Riley, T.N.; Millen, J., 36th Southeastern Regional Meeting of the American Chemical Society, Raleigh, North Carolina, October, 1984.
3. "Development of Novel Aldose Reductase Inhibitors," DeRuiter, J.; Brubaker, A.N., American Diabetes Association, Alabama Affiliate, Annual Scientific Symposium, Gulf Shores, Alabama, November, 1984.
4. "Synthesis and Evaluation of Novel Inhibitors of Aldose Reductase: Potential Agents for the Prevention of Diabetic Complications," DeRuiter, J.; Brubaker, A.N., 62nd Annual Alabama Academy of Science, Huntsville, Alabama, March, 1985. Abstract: Journal of the Alabama Academy of Science, 1985, 56(3), 149.
5. "Synthesis and In Vitro Evaluation of 2H-Benzopyran-2-ones Derivatives as Inhibitors of Aldose Reductase," Brubaker, A.N.; DeRuiter, J., Joint Southwestern/Southeastern Regional Meeting of the American Chemical Society, Memphis, Tennessee, October, 1985.
6. "Liquid Chromatographic Determination of the Enantiomeric Composition of Methamphetamine Prepared From Ephedrine and Pseudoephedrine," Clark, C.R.; Noggle, F.T.; DeRuiter, J., Tenth International Symposium on Column Liquid Chromatography, San Francisco, California, May, 1986.
7. "In Vitro Aldose Reductase Inhibitory Activity of Substituted 2-oxoquinoline-1-acetic Acids," DeRuiter, J.; Brubaker, A.N.; Whitmer, W.L., 63rd Annual Alabama Academy of Science Meeting, Montgomery, Alabama, April, 1986. Abstract: Journal of the Alabama Academy of Science, 1986, 57, 123.
8. "Synthesis and Reactions of 4-Isopropylidene- and 4-Arylidene-3-methyl-2-pyrazolin-5-ones," DeRuiter, J.; Carter, D.A.; Arledge, W.S.; Sullivan, P., 63rd Annual Alabama Academy of Science Meeting, Montgomery, Alabama, April, 1986. Abstract: Journal of the Alabama Academy of Science, 1986, 57, 136.
9. "Synthesis and In Vitro Aldose Reductase Inhibitory Activity of Substituted-N-Benzoyl-glycines," Smith, A.B.; DeRuiter, J.; Brubaker, A.N., Thirteenth Annual MALTO Medicinal Chemistry-Pharmacognosy Meeting, New Orleans, LA, May, 1986, Abstract 19, page 29.
10. "Synthesis and Evaluation of N-Phenylsulfonylglycine Derivatives as Inhibitors of Aldose Reductase," Garner, M.A.; DeRuiter, J.; Brubaker, A.N.; Mayfield, C.A., Thirteenth Annual MALTO Medicinal Chemistry-Pharmacognosy Meeting, New Orleans, LA, May, 1986, Abstract 20, page 30.

11. "Synthesis of 4-(aroylamino)phenylsulfonylglycines as potential inhibitors of Rat Lens Aldose Reductase," Mayfield, C.A.; DeRuiter, J., Thirteenth Annual MALTO Medicinal Chemistry-Pharmacognosy Meeting, New Orleans, LA, May, 1986, Abstract 17, page 27.
12. "Synthesis of In Vitro Aldose Reductase Inhibitory Activity of Substituted-N-Phenyl-N-Acylglycines," Swearingen, B.E.; DeRuiter, J., Thirteenth Annual MALTO Medicinal Chemistry-Pharmacognosy Meeting, New Orleans, LA, May, 1986, Abstract 21, page 31.
13. "Synthesis and Rat Lens Aldose Reductase Inhibitory Activity of Ring Modified Analogues of the 2-Oxoquinoline-1-Acetic Acids," Kirkland, A.L., DeRuiter, J.; Swearingen, B.E., Thirteenth Annual MALTO Medicinal Chemistry- Pharmacognosy Meeting, New Orleans, LA, May, 1986, Abstract 18, page 28.
14. "Synthesis and Evaluation of 4-Benzylidene-3-Methyl-2-Pyrazolin-5-ones as Potential Anticonvulsants," Carter, D.A.; DeRuiter, J., Thirteenth Annual MALTO Medicinal Chemistry-Pharmacognosy Meeting, New Orleans, LA, May, 1986, Abstract 4, page 14.
15. "Liquid Chromatographic Determination of the Enantiomeric Composition of Methamphetamine and Amphetamine Prepared from Ephedrines and Norephedrines," Clark, C.R.; Noggle, F.T.; DeRuiter, J., FACSS Meeting, St. Louis, MO, September, 1986.
16. "Tricyclic, Bicyclic and RingOpened Analogues of the 2-Oxoquinoline-1-acetic Acid Aldose Reductase Inhibitors," DeRuiter, J.; Swearingen, B.E.; Kirkland, A.L., 38th Southeast Regional Meeting, Symposium on Enzyme Inhibition, American Chemical Society, Louisville, Kentucky, November, 1986, Abstract 69 in "Abstracts of the 38th Annual SERM of the ACS".
17. "Synthesis and In Vitro Aldose Reductase Inhibitory Activity of N-Benzenesulfonyl-glycine Derivatives," DeRuiter, J.; Mayfield, C.A.; Brubaker, A.N.; Garner, M.A., 38th Southeast Regional Meeting, Symposium on Enzyme Inhibition American Chemical Society, Louisville, Kentucky, November, 1986, Abstract 70 in "Abstracts of the 38th Annual SERM of the ACS".
18. "Synthesis and Pharmacological Properties of 1-Methyl-2-pyrazolin-5-ones," DeRuiter, J.; Carter, D.A.; Born, C.K.; Davidson, P.P., 64th Annual Alabama Academy of Science Meeting, University of North Alabama, Florence, Alabama, March, 1987. Abstract: Journal of the Alabama Academy of Science, 1987, 58, 93.
19. "A Study of Steric Specificity with the N-Arylsulfonylglycine Aldose Reductase Inhibitors," Mayfield, C.A.; DeRuiter, J., 64th Annual Alabama Academy of Science Meeting, Univ. North Alabama, Florence, AL, March. Abstract: Jrnl of the Alabama Acad.of Science, 1987, 58, 74.
20. "Design of N-arylglycines as Probes of the Inhibitor Binding Site of Aldose Reductase," Swearingen, B.E.; DeRuiter, J., 64th Annual Alabama Academy of Science Meeting, University of North Alabama, Florence, Alabama, March, 1987. Abstract: Journal of the Alabama Academy of Science, 1987, 58, 127.

21. "Aldose Reductase Inhibition by N-Arylsulfonylglycine Derivatives," Mayfield, C.A. and DeRuiter, J., 14th Annual MALTO Medicinal Chemistry-Pharmacognosy Meeting, Monroe, Louisiana, May, 1987, Abstract 5, page 15.
22. "Synthesis and Aldose Reductase Inhibiting Activity of Compounds Possessing the N-acylglycine Pharmacophore," Swearingen, B.E. and DeRuiter, J., 14th Annual MALTO Medicinal Chemistry-Pharmacognosy Meeting, Monroe, LA, May, 1987, Abstract 4, page 14.
23. "Synthesis and Anticonvulsant Activity of Several N-Substituted Malonamides and Cyanoacetamides," McMillian, C.L., DeRuiter, J., Clark, C.R., 14th Annual MALTO Medicinal Chemistry-Pharmacognosy Meeting, Monroe, LA, May, 1987, Abstract 14, page 24.
24. "Liquid Chromatographic Analysis of N-Alkyl Derivatives of 3,4-Methylenedioxy-amphetamines in Pharmaceutical Samples," Clark, C.R.; Noggle, F.T. and DeRuiter, J., 11th Intern'l Symposium on Column Liquid Chromatography, Amsterdam, Netherlands, June, 1987.
25. "Calcium Antagonism in Isolated Rat Uterine by Methylmethacrylate," Born, C.K.; Hamrick, M.E.; Davidson, P.P.; Ravis, W.R. and DeRuiter, J., Southeastern Regional Chapter of the Society of Toxicology, Auburn University, September, 1987, Abstract 8.
26. "Synthesis, Acute Toxicity and Liquid Chromatographic Analysis of N-Alkyl Derivatives of 3,4-Methylenedioxyamphetamine," DeRuiter, J.; Clark, C.R.; Noggle, F.T. and Coker, S.T., Southeastern Regional Chapter of the Society of Toxicology, Auburn University, September, 1987, Abstract 13.
27. "Liquid Chromatographic Methods for the Stereochemical Analysis of Amphetamines in Street Drug Samples," Clark, C.R.; DeRuiter, J.; and Noggle, F.T., Southeastern Regional Chapter of the Society of Toxicology, Auburn University, September, 1987, Abstract II.
28. "Calcium Channel Blockade in Smooth Muscle by Methylmethacrylate," Born, C.K.; Hamrick, M.E.; Davidson, P.P.; Ravis, W.R. and DeRuiter, J., 8th Annual Meeting of the Southeastern Pharmacology Society, Jackson, Mississippi, November, 1987, Abstract P 13, page 24.
29. "Anticonvulsant Activity and GABA-Transaminase Inhibitory Activity of Substituted N-Arylcyanacetamides and N-Arylmalonamides," DeRuiter, J.; McMillian, C.L.; Mayfield, C.A. and Clark, C.R., 8th Annual Meeting of the Southeastern Pharmacology Society, Jackson, Mississippi, November, 1987, Abstract P 15, page 25.
30. "Pharmacological Activity of N-Arylsulfonylglycine Aldose Reductase Inhibitors," Mayfield, C.A.; Born, C.K.; Vande Waa, E.A. and DeRuiter, J., 8th Annual Meeting of the Southeastern Pharmacology Society, Jackson, Mississippi, November, 1987, Abstract P-16, page 25.

31. "Synthesis and Aldose Reductase Inhibitory Activity of Compounds containing an N-Benzoylglycine or N-Phenylsulfonylglycine Moiety," DeRuiter, J., International Workshop on Aldose Reductase "Inhibitors", Honolulu, Hawaii, Dec. 1987, Abstract C4.7.
32. "Synthesis of 2- and 3-Substituted Quinazolin-4-ones and Imidazoquinazolinones", DeRuiter, J. and Riley, T.N., 65th Annual Meeting of the Alabama Academy of Science, Auburn, Alabama, March, 1988. Abstract: Journal of the Alabama Academy of Science, 1988, 59, 134.
33. "Aldose Reductase and Chronic Diabetic Pathologies", DeRuiter, J., 65th Annual Meeting of the Alabama Academy of Sciences, Auburn, Alabama, March, 1988. Abstract: Journal of the Alabama Academy of Science, 1988, 59, 195.
34. "Synthetic Approaches to N-Phenylpyrrolo-Dicarboxylic Acids and Pyrrolo-[1,2a]quinolines", DeRuiter, J., 65th Annual Meeting of the Alabama Academy of Sciences, Auburn, AL, March, 1988. Abstract: Jrnal of the Alabama Academy of Science, 1988, 59, 133.
35. "Biochemical and Pharmacological Studies with N-Arylsulfonylglycine Aldose Reductase Inhibitors", Mayfield, C.A. and DeRuiter, J., 65th Annual Meeting of the Alabama Academy of Sciences, Auburn, Alabama, March, 1988. Abstract: Journal of the Alabama Academy of Science, 1988, 59, 191.
36. "Synthesis of Substituted N-Arylsulfonylamino Acids as Potential Enzyme Inhibitors", Mayfield, C.A. and DeRuiter, J., 65th Annual Meeting of the Alabama Academy of Sciences, Auburn, AL, March, 1988. Abstract: Alabama Academy of Science, 1988, 59, 136.
37. "Liquid Chromatographic Analysis of N-Substituted 3, 4-Methylenedioxyamphet-amine Derivatives," Clark, C.R.; Noggle, F.T.; Valaer, A.K., McMillian, C.L.; DeRuiter, J., International Symposium on the Forensic Aspects of Controlled Substances, DEA and FBI, Quantico, Virginia, March, 1988, Abstract 10, page 26.
38. "Liquid Chromatographic Analysis of Amphetamines and Related Compounds in Forensic Samples," Noggle, F.T.; Clark, C.R.; DeRuiter, J., Intern'l Symposium on the Forensic Aspects of Controlled Substance, DEA, Quantico, Virginia, March, 1988, Abstract 7, page 23.
39. "Analysis of 3,4-Methylenedioxyphenalkylamines in Forensic Samples," Clark, C.R.; Noggle, F.T.; DeRuiter, J., Eastern Analytical Symposium, October, 1988.
40. "Aldose Reductase Inhibitory Activity of Substituted N-Benzoylglycines," Wandrekar, V.; Swearingen, B.E. and DeRuiter, J., 15th MALTO Medicinal Chemistry Pharmacognosy Meeting, Auburn, Alabama, June, 1988, Abstract 13, page 14.
41. "A Study of Aldose Reductase Inhibition by N-Arylsulfonylamino Acids," Mayfield, C.A. and DeRuiter, J., 15th MALTO Medicinal Chemistry-Pharmacognosy Meeting, Auburn, Alabama, June, 1988, Abstract 12, page 13.

42. "Inhibition of Aldose Reductase by N-Arylsulfonylglycines", Mayfield, C.A. and DeRuiter, J., 40th Southeast Regional Meeting of the American Chemical Society, Atlanta, Georgia, November, 1988, Abstract 445.
43. "Prodrugs in Therapy", DeRuiter, J., 9th Annual Meeting of the Southeastern Pharmacology Society, Auburn, Alabama, Nov., 1988.
44. "Investigation of Substituted N-Benzoylamino Acids as Inhibitors of Lens Aldose Reductase," Wandrekar, V.; DeRuiter, J.; Mayfield, C.A. 9th Annual Meeting of the Southeastern Pharmacology Society, Auburn, Alabama, Nov., 1988.
45. "Design, Synthesis and Multiple Inhibition Analysis of Potential Multisite-directed Inhibitors of Aldose Reductase," Mayfield, C.A. and DeRuiter, J., 66th Annual Meeting of the Alabama Academy of Science, Birmingham, Alabama, March, 1989.
46. "Inhibitor Kinetics of N-Benzoylamino Acids versus Aldose Reductase Obtained from Rat, Bovine and Porcine Lens," Wandrekar, V. and DeRuiter, J., 66th Annual Meeting of the Alabama Academy of Science, Birmingham, Alabama, March, 1989.
47. "Synthetic Approaches to 9-Substituted Pyrrolo[1,2-a]quinolines", Li, Zenan and DeRuiter, J., 16th MALTO Medicinal Chemistry-Pharmacognosy Meeting, Monroe, LA, May, 1989, Abstract 7, page 15.
48. "Synthesis of the S- and R-Enantiomers of the 1-Substituted 4-(Propanilido)-perhydroazepine Analgesics", Andurkar, S.; Riley, T.N. and DeRuiter, J., 16th MALTO Medicinal Chemistry-Pharmacognosy Meeting, Monroe, LA, May 1989, Abstract 11, page 19.
49. "Competition and Multiple Inhibition Studies with Kinetically Distinct Aldose Reductase Inhibitors", Mayfield, C. A. and DeRuiter, J., 16th MALTO Medicinal Chemistry-Pharmacognosy Meeting, Monroe, LA, May 1989, Abstract 4, page 12.
50. "Substituted N-Benzoylamino Acids as Inhibitors of Aldose Reductase Obtained from Rat, Bovine and Porcine Lens", Wandrekar, V.; Mayfield, C.A.; Davis, R.A.; and DeRuiter, J., 16th MALTO Medicinal Chemistry-Pharmacognosy Meeting, Monroe, LA, May 1989.
51. "Liquid Chromatographic and Mass Spectral Analysis of N-substituted Analogues of 2- and 4-Methoxyamphetamines", Noggle, F.T.; Clark, C.R.; DeRuiter, J., Southern Association of Forensic Scientists Meeting, Raleigh, North Carolina, May, 1989.
52. "Synthesis and Identification of 4-Methylaminorex," Noggle, F.T.; Clark, C.R.; DeRuiter, J., Southern Association of Forensic Scientists Meeting, Raleigh, North Carolina, May, 1989.
53. "Liquid Chromatographic Analysis of Amphetamines and Related Compounds in Forensic Samples", Noggle F. T.; Clark, C.R. and DeRuiter, J., FACSS XVI, Chicago, IL, Oct, 1989.
54. "Liquid Chromatographic Analysis of 3,4-Methylenedioxyphenalkylamines: Designer Drugs Related to MDA", Clark, C.R.; Noggle, F.T. and DeRuiter, J., FACSS XVI, Chicago, IL, October 1989.

55. "Chromatographic Methods for the Analysis of Anabolic Steroids in Pharmaceutical Formulations and Forensic Samples", DeRuiter, J.; Noggle, F.T. and Clark, C.R., FACSS XVI, Chicago, IL, October 1989.
56. "Multiple Site Inhibitor Binding to Aldose Reductase," Mayfield, C.A.; DeRuiter, J. American Chemical Society National Meeting, Miami, Florida, September, 1989, Abstract MEDI-041, "Abstracts of Papers: 198th ACS National Meeting."
57. "Diastereomeric Derivatization and Liquid Chromatographic Analysis of N-(Phenylsulfonyl)-2-phenylglycine Aldose Reductase Inhibitors", DeRuiter, J.; Bouhadir, K.; Mayfield, C. A. and Clark, C. R., Eleventh Annual Atlanta Chromatography Symposium, September, 1989.
58. "Liquid Chromatographic Analysis of Designer Drugs Related to 3,4-Methylenedioxyamphetamine," Clark, C. R.; Noggle, F.T.; DeRuiter, J., International Symposium on Chromatography, Mexico City, Mexico, October, 1989.
59. "Investigation of the Rotameric Nature of N-Benzoyl-methylglycines and N-Benzene-sulfonyl-methylglycine Aldose Reductase Inhibitory", Davis, R. A.; Mayfield, C. A.; DeRuiter, J., 67th Annual Meeting of the Alabama Academy of Science, Mobile, Alabama, March, 1990. Abstract: Journal of the Alabama Academy of Science, 1990 61, 150.
60. "Investigation of the Synthesis of 1-Substituted 4-(Propananilido)perhydroazepine Analgesics," Andurkar, S. A.; Riley, T. N.; DeRuiter, J., 67th Annual Meeting of the Alabama Academy of Science, Mobile, Alabama, March 1990. Abstract: Journal of the Alabama Academy of Science, 1990, 61, 151.
61. "Diastereomeric Derivatization and Liquid Chromatographic Analysis of N-(Phenylsulfonyl)-2-phenylglycines," Bouhadir, K.; Mayfield, C. A.; Clark, C. R.; DeRuiter, J., 67th Annual Meeting of the Alabama Academy of Science, Mobile, Alabama, March, 1990. Abstract: Journal of the Alabama Academy of Science, 1990, 61, 145.
62. "Determination of the Enantiomeric Composition of Amphetamine Analogues, DeRuiter, J.; Noggle, F. T.; Clark, C. R., 67th Annual Meeting of the Alabama Academy of Science, Mobile, AL, March, 1990. Abstract: Jnl of the Alabama Academy of Science, 1990, 61, 152.
63. "Synthesis of Hetero-Fused Isoquinolines", Atigadda, V.R.; Smith, F.T.; DeRuiter, J., 67th Annual Meeting of the Alabama Academy of Science, Mobile, Alabama, March, 1990. Abstract: Journal of the Alabama Academy of Science, 1990, 61, 146.
64. "Synthesis and Reactivity of Hetero-Fused Isoquinolines", Smith, F. T.; Reddy, A. V.; DeRuiter, J., 199th National Meeting, American Chemical Society, Boston, MA, April, 1990.
65. "Liquid Chromatographic Determination of the Enantiomeric Composition of Drugs of Abuse," Clark, C. R.; Noggle, F. T.; DeRuiter, J., 199th National Meeting of the American Chemical Society, Boston, Massachusetts, April, 1990.



66. "Characterization of Several Homologues of 3,4-Methylenedioxyamphetamine via Thermospray LC/MS and Tandem MS", Korfmacher, W. A.; Hansen, E. B.; Getek, T. A.; Clark, C. R.; DeRuiter, J.; Noggle, F. T., American Society of Mass Spectrometry, Tucson, Arizona, June, 1990.
67. "The in vitro Intestinal Absorption Study in Rats for New Aldose Reductase Inhibitors, N-Arylsulfonylglycines," Liu, Chin-Chih; Ravis, W.R.; DeRuiter, J., Tenth Annual Meeting of the Graduate Research Association of Students in Pharmaceutics, Chapel Hill, North Carolina, May, 1990.
68. "Chromatographic Methods for the Analysis of Anabolic Steroids in Pharmaceutical Formulations and Forensic Samples", Noggle, F.T.; Clark, C.R.; DeRuiter, J.; 199th National Meeting of the American Chemical Society, Boston, Massachusetts, April, 1990.
69. "Liquid Chromatographic Methods for the Analysis of Drugs of Abuse," Clark, C.R.; Noggle, F.T.; DeRuiter, J.; FACSS, Cleveland, OH, 1990.
70. "Molecular Modeling Analysis of the Cofactor Nicotinamide Adenine Dinucleotide Phosphate, Reduced (NADPH)," Davis, A.; Elder, T.; Mayfield, C.A.; Aull, J.L.; DeRuiter, J., 22nd National Medicinal Chemistry Symposium, Austin, Texas, July, 1990.
71. "Relative Structure-Inhibition Analyses of the N-Benzoyl- and N-(Phenylsulfonyl)-amino Acid Aldose Reductase Inhibitors," DeRuiter, J.; Davis, A.R.; Wandrekar, V.G.; Mayfield, C.A., Southeast-Southwest Regional Meeting of the American Chemical Society, New Orleans, Louisiana, December, 1990.
72. "Characterization of Some N-Substituted Derivatives of 3,4-Methylenedioxy-amphetamines via Thermospray LC/MS and Tandem MS," Korfmacher, W.A.; Hansen, E.B.; Churchwell, M.I.; Clark, C.R.; DeRuiter, J.; Noggle, F.T., Jr., Pittsburgh Conference, 1991.
73. "Multisite-directed inhibition by aldose reductase inhibitors as determined by conformational analysis," Davis, R.A.; Mayfield, C.A.; Elder, T.; DeRuiter, J., Auburn University Graduate Student Forum, November, 1990.
74. "The Differentiation of 3,4-Methylenedioxymethamphetamine from Some Regioisomers," DeRuiter, J.; Clark, C.R.; Noggle, F.T., 68th Annual Meeting of the Alabama Academy of Science, Jacksonville, AL, March, 1991. Abstract: Journal of the Alabama Academy of Science, 1991, 62, 84.
75. "Synthesis of 1-(Hydroxyphenyl)ethyl]propananilidoperhydroazepine: A Potential Analgesic," Andurkar, S.V.; Riley, T.N.; DeRuiter, J., 68th Annual Meeting of the Alabama Academy of Science, Jacksonville, AL, March, 1991. Abstract: Journal of the Alabama Academy of Science, 1991, 62, 83.
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107. Closing the Loop: Curricular Mapping Strategies in the Auburn University Harrison School of Pharmacy. Sharon K. McDonough, Ph.D., Kristen L. Helms, Pharm.D., Jack DeRuiter, Ph.D., Kristi W. Kelley, Pharm.D., BCPS, Paul Jungnickel, Ph.D., R. Lee Evans, Pharm.D., Amy R. Donaldson, Pharm.D., BCPS, Karen F. Marlowe, Pharm.D., BCPS. 2007 AACP Annual Meeting and Seminars, July 2007, Lake Buena Vista, Fla.

108. GC-MS analysis of ring and side chain regioisomers of ethoxyphenethylamines. C. Randall Clark, Tamer Awad, and Jack DeRuiter. 235th National Meeting of the American Chemical Society, April 6-10, 2008, New Orleans, LA.
109. School-wide Utilization of a Course Review Process, Karen Marlowe, Kristi Kelley, Jack DeRuiter, Amy Donaldson, 2008 AACP/AFPC Annual Meeting and Seminars, July 2008, Chicago, IL.
110. C. Randall Clark, Jack DeRuiter and Tamer Awad, "Synthesis and Analytical Profiles for Regioisomeric and Isobaric Amines Related to MDMA, MDEA and MBDB: Differentiation of Drug and non-Drug Substances of Mass Spectral Equivalence," U.S. Department of Justice NIJ Grantees Meeting, Feb 18, 2009, Denver Colorado.
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119. C. R. Clark, Karim M. Abdel-Hay, Younis F Abiedalla, Jack DeRuiter. Forensic Analysis of Regioisomeric Aminoketones Related to Methylenedioxypyrovalerone (MDPV). Program No: 2650-3, PITTCON Conference and Expo, March 2012, Orlando, FL.
120. K. A. Hay, C. R. Clark and J. DeRuiter, GC-MS, GC-TOF-MS and GC-IRD Methods for the Differentiation of Regioisomeric and Isobaric Designer Drugs of the Piperazine Class, PITTCON Conference and Expo, March 2014, Chicago, IL.
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131. C. Randall Clark, Jack DeRuiter and Younis Abiedalla, GC-MS GC-MS/MS and GC-IR studies on Substituted Cathinone Designer Drugs, 21<sup>st</sup> Triennial Meeting of the International Association of Forensic Sciences 2017, August 21-25, 2017. Toronto, Canada.
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136. Younis F. Abiedalla C Randall Clark and Jack DeRuiter. Investigating a Derivatization Technique for Synthetic Cathinones Using Ethylchloroformate: GC-MS Analysis of Cyclic Tertiary Amines Related to MDPV, Poster 1560-7 P. PITTCON, Pennsylvania Convention Center, Philadelphia, PA, March 17 - 21, 2019, USA.
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139. Almaghrabi, Mohammed, Ahmad Almaki, Mohammed Majrashi, DeRuiter, Jack, Clark, Randall C. and Dhanasekaran, Muralikrishnan, Design, synthesis and pharmacologic activity of novel psychoactive substituted piperazines. Auburn University Research Symposium, Auburn, Alabama, April 2019.
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141. Burgess, Bethany N Additional Authors: Lee, Wooseok; Fujihashi, Ayaka; Govindarajulu, Manoj; Ramesh, Sinhu; Deruiter, Jack; Majrashi, Mohammad; Almaghrabi, Mohammad; Nadar, Rishi; Moore, Timothy; Agrawal, Dinesh; Dhanasekaran, Muralikrishnan. Neuroprotective effects of mushrooms Primary Author (and presenter); Auburn University Research Symposium, Auburn, Alabama, April 2019.
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144. Centella asiatica extract exhibit anti-oxidative stress effect in neuronal cells and improves synaptic plasticity Primary author (and presenter): Majrashi, Mohammed Additional authors: Ahuja, Manuj; Almaghrabi, Mohammed; Clark, Randall; Deruiter, Jack; Dhanasekaran, Muralikrishnan, Auburn University Research Symposium, Auburn, Alabama, April 2019.
145. Assessing the pharmacodynamics and pharmacokinetic effects of Designer Drugs using computational design Primary Author: Rajendran, Soorya Gokulan Additional Authors: Alturki, Mansour; Majrashi, Mohammed; Almaghrabi, Mohammed; Fujihashi, Ayaka; Ramesh, Sindhu; Moore, Timothy; Forrest, Smith; Clark, Randall; Deruiter, Jack; Dhanasekaran, Muralikrishnan, Auburn University Research Symposium, Auburn, Alabama, April 2019.
146. G. P. Jackson, J. T. Davidson, Z. J. Sasiene, Y. Abiedalla, J. DeRuiter, R. Clark, “On the Mass Spectral Interpretation of Cathinones and Fentanyl Analogs” presented at SciX Conference, Palm Springs, California. October 2019. (Oral)



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148. Almaghrabi, Mohammed, Almalki, Ahmad, DeRuiter, Jack, Clark, Randall C. and Dhanasekaran, Muralikrishnan Design, synthesis and analytical profiles of N-methoxybenzyl substituted chlorophenylpiperazine regioisomers as novel psychoactive agents. (2020) Auburn Research Day
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151. Alghenaim, F; Alturki, Mansour; Almaghrabi, Mohammed; Harshan, Aisha; Zhao, Mingliu; Ramesh, Sindhu; Smith, Forest; Clark, Randall; Deruiter, Jack; Dhanasekaran, Muralikrishnan. Investigate the Comparative Neurotoxicity 1-methyl-4-phenylpyridinium (MPP+) and Kainic acid on Dopaminergic neurons. (2020) Auburn Research Day
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160. Mary Fabbri, Aisha Harshan, Sindhu Ramesh, Manoj Govindarajulu, Mingliu Zhao, Mohammed Almaghrabi, Timothy Moore, Jack Deruiter, Randall Clark, Muralikrishnan Dhanasekaran. Investigate the ovarian toxicity of psychoactive substances in vitro (Piperazine designer drugs and its structural congeners) has been accepted for presentation at Technological Advances in Science, Medicine and Engineering Conference, Virtual Meeting 2021-07-02 to 04.

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162. Dylan Robert Bowen, Suhrud Pathak, Sindhu Ramesh, Manoj Govindarajulu, Jack Deruiter, Randall Clark, Tim Moore, Muralikrishnan Dhanasekaran, Surekha Kadannagari, Cannabis: The Future of Medicine and Recreation, Technological Advances in Science, Medicine and Engineering Conference 2021.

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**RESEARCH PUBLICATIONS (PEER-REVIEWED):**

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2. DeRuiter, J.; Brubaker, A.N.; Millen, J.; Riley, T.N. Design and Synthesis of 2-(Arylamino)-Quinazolinones as Novel Inhibitors of Rat Lens Aldose Reductase, *Journal of Medicinal Chemistry*, 1986, **29**, 627-629.
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5. Noggle, F.T.; DeRuiter, J.; Clark, C.R. Liquid Chromatographic Determination of the Enantiomeric Composition of Methamphetamines Prepared from Ephedrine and Pseudoephedrine, *Analytical Chemistry*, 1986, **58**, 1643-1648.
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### **PROFESSIONAL PUBLICATIONS (Reviewed)**

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32. Cannabis as a Unique and Valuable Nutraceutical Formulation for the Current and Future Global Wellbeing. Suhrud Pathak, Rishi Nadar, Jack Deruiter, Sindhu Ramesh, Jayachandra Babu Ramapuram, Manoj Govindarajulu, Timothy Moore, Dinesh Chandra Agrawal, Muralikrishnan Dhanasekaran. (2022). In: Agrawal, D.C., Kumar, R., Dhanasekaran, M. (eds) Cannabis/Marijuana for Healthcare. Springer, Singapore. [https://doi.org/10.1007/978-981-16-8822-5\\_14](https://doi.org/10.1007/978-981-16-8822-5_14)
33. Cosmetic Importance and Benefits of Cannabinoid Products, Rishi Nadar, Suhrud Pathak, Sindhu Ramesh, Manoj Govindarajulu, Jack Deruiter, Randall C. Clark, Timothy Moore, Dinesh Chandra Agrawal, Muralikrishnan Dhanasekaran, "Medicinal aspects of Cannabis", Springer, 2022.
34. Understanding the Pharmacokinetics, Safety Profile, and Scope of the Concerned Issue to Evade the Consumption of Cannabis/Marijuana. Sindhu Ramesh, Kruthi Gopal, Jack Deruiter, Payton Lowery, Manoj Govindarajulu, Suhrud Pathak, Rishi Nadar, Dinesh Chandra Agrawal, Muralikrishnan Dhanasekaran. In: Agrawal, D.C., Kumar, R., Dhanasekaran, M. (eds) Cannabis/Marijuana for Healthcare. Springer, Singapore. [https://doi.org/10.1007/978-981-16-8822-5\\_8](https://doi.org/10.1007/978-981-16-8822-5_8).

35. Central and peripheral pharmacological properties of *Centella asiatica*, Kruthi Gopal, Jack DeRuiter, Sarah Moss, Kelli McDonald, Muralikrishnan Dhanasekaran Bioactive Botanicals.
36. The Pharmacological Aspects of the botanical *Trichopus zeylanicus*, Summer Duley, Kelli McDonald, Jack Deruiter, Muralikrishnan Dhanasekaran Bioactive Botanicals.
37. A Review on Phytochemistry and Biological Activities of Cannabis Sativa, Kelli McDonald, Jack DeRuiter, Muralikrishnan Dhanasekaran Bioactive Botanicals.
38. Bioactives and Pharmacology of *Oroxylum indicum* (Sonapatha), Chemistry and Pharmacology of Bioactive Botanicals, Payton Lowery, Payton Lowery, Sarah Moss, Kelli McDonald, Jack Deruiter, Muralikrishnan Dhanasekaran, Orange Publications.
39. A Review on Phytochemistry and Pharmacological effects of *Mucuna pruriens*, Rishi M. Nadar, Kelli McDonald, Jack DeRuiter, Sindhu Ramesh, Manjoj Govindarajulu, Timothy Moore, Muralikrishnan Dhanasekaran Bioactive Botanicals.
40. A Review on Phytochemistry and Pharmacological effects of *Mucuna pruriens*. Chemistry and Pharmacology of Bioactive Botanicals, Rishi M. Nadar, Kelli Mcdonald, Jack Deruiter, Sindhu Ramesh, Manoj Govindarajulu, Timothy Moore, Muralikrishnan Dhanasekaran, , Orange Publications.
41. Advanced drug delivery systems targeting to improve therapeutic outcomes in Porphyria. Drug delivery systems for metabolic disorders, Vindhya Basetty, Jack Deruiter, Suhrud Pathak, Muralikrishnan Dhanasekaran, Elsevier Science incorporation, 2022.
42. Novel Drug Delivery system to treat Niemann-Pick disease. Drug delivery systems for metabolic disorders, Evan Lawson, Erin Harrell, Jack Deruiter, Suhrud Pathak, Muralikrishnan Dhanasekaran., Elsevier Science incorporation, 2022.
43. Neuropharmacological Approaches to Modulate Cannabinoid Neurotransmission. Dylan Bowen, Sindhu Ramesh, Jack Deruiter, Manoj Govindarajulu, Payton Lowery, Timothy Moore, Dinesh Chandra Agrawal, Muralikrishnan Dhanasekaran. (2022). In: Agrawal, D.C., Kumar, R., Dhanasekaran, M. (eds) Cannabis/Marijuana for Healthcare. Springer, Singapore. [https://doi.org/10.1007/978-981-16-8822-5\\_2](https://doi.org/10.1007/978-981-16-8822-5_2).
44. Critical Clinical Evaluation of Covid-19 Patients with Tuberculosis in the Indian Sub-Continent. Hemalatha Selvaraj, Kumudha Damadarosamy, Kiruthiga Natarajan, K Reeta Vijaya Rani, Kanagaraj Duraisamy, Rachel Parise, Muralikrishnan Dhanasekaran, Jack Deruiter, Jun Ren, Sivakumar Thangavel. Current Drug Safety. 2022 May. DOI: 10.2174/1574886317666220518092819. PMID: 35593332.
45. Compelling Impacts For Natural Polymer-Centered Drug Delivery Systems as Prophylactic and Therapeutic Approaches in Various Pulmonary Disorders/Lung Diseases, Kruthi Gopal<sup>1</sup>, Suhrud Pathak<sup>1</sup>, Jack Deruiter<sup>1</sup>, Rishi M. Nadar<sup>1</sup>, Sindhu Ramesh<sup>1</sup>, R Jayachandra Babu<sup>1</sup>, Courtney Suzanne Watts Alexander<sup>2</sup>, Kamal Dua<sup>3,4</sup>, Randall Clark<sup>1</sup>, Timothy Moore<sup>1</sup>, Muralikrishnan Dhanasekaran<sup>1\*</sup>.

46. Elucidating the molecular mechanisms of toxicity of natural polymer-based drug delivery systems used in various pulmonary disorders, Suhrud Pathak<sup>1</sup>, Kruthi Gopal<sup>1</sup>, Jack Deruiter<sup>1</sup>, Rishi M. Nadar<sup>1</sup>, Satyanarayana Pondugula<sup>2</sup>, Sindhu Ramesh<sup>1</sup>, Kamal Dua<sup>4,5</sup>, Harish Dureja<sup>6</sup>, Randall Clark<sup>1</sup>, Timothy Moore<sup>1</sup>, Muralikrishnan Dhanasekaran<sup>1\*</sup>.



**GRANTS, CONTRACTS AND FELLOWSHIPS AWARDED/FUNDED:**

- "Design, Synthesis and Evaluation of Derivatives of Azaserine as New Potential Anti-cancer Drugs," Auburn University Grant-in-Aid, principal investigator, 1984-1986, \$3,000.
- "Potential Aldose Reductase Inhibitors for the Prevention of Diabetic Pathologies," American Diabetes Association, Alabama Affiliate, co-principal investigator with A.N. Brubaker, 1984- 1985, \$1,000.
- "Graduate and Professional Study Fellowship Grant Program," U.S. Department of Education, co-investigator with C. Curtis and E. Parish, 1984-1985, \$58,000.
- "Study of Novel Inhibitors of Aldose Reductase: Potential Drugs for the Prevention of Diabetic Complications," Auburn University Grant-in-Aid, co-principal investigator with A.N. Brubaker, 1985, \$3,000.
- "Synthesis of Malonamide AntiEpileptics," Research Corporation, Tuscon, Arizona, Co-PI with C.R. Clark, 1986, \$8,400.
- "Patricia Roberts Harris Fellowship Program", U.S. Department of Education, Co-PI with C. Curtis, T. Webb, D. Ford and K. Parker, November, 1987, \$80,000, (\$26,666 Department of Pharmacal Sciences).
- "Synthesis and Evaluation of Potential Multisite-Directed Inhibitors of Aldose Reductase," Revised Application, Alabama Academy of Science, Student Research Grant Program, C.A. Mayfield, February, 1988, \$250.
- "Patricia Roberts Harris Fellowship Program", US Department of Education, Co-PI with C. Curtis, T. Webb, October, 1988, \$80,000, (\$32,000 Department of Pharmacal Sciences).
- "Fundamental Principles of Substance Abuse," Auburn University Extension Development Seed Grant Program, co-PI with T. N. Riley and C. R. Clark, February 1990, \$14,250.
- "Patricia Roberts Harris Fellowship Program," US Department of Education, Co-PI with C. Curtis and T. Webb, October, 1989, \$80,000 (\$32,000 Dept. of Pharmacal Sciences).
- Mobay Corporation, Kansas City, MO, with F.T. Smith, C.R. Clark and T.N. Riley, \$5000 and \$3000.
- "Patricia Roberts Harris Fellowship Program," U.S. Department of Education, Co-PI with C. Curtis, T. Webb, January, 1991, (\$16,000 to School of Pharmacy).
- Future Life Science Scholars Program, Auburn University, support for L Hayes, PI, 1993, \$1,800.
- Compound Acquisition Agreement, DowElanco, Indianapolis, Indiana, PI, August, 1994. \$4,800.

- Collaborative Agreement for Analytical Consulting Services, Co-PI (with C. R. Clark), Alabama Reference Laboratory, Montgomery, AL, January, 1995, \$6,000.
- Material Transfer Agreement: Acquisition of Methamphetamine Derivatives and Derivatives of MDMA, PI, Research Biochemicals International, Natick, MA, February, 1995, \$3,500.
- Future Life Science Scholars Program, Auburn University, support for S. Taylor and T. Ivery, PI, June 1995, \$4,800.
- Synthesis of 4-Methoxymethylene-4-propananilidopiperidine, Co-PI with C. R. Clark, Alabama Reference Laboratory, Montgomery, AL, June, 1995, \$400.
- Future Life Science Scholars Program, Auburn University, support for S. Graham, PI, September, 1995, \$1,500.
- Evaluation of analgesic activity of a series of 4-anilidoperhydroazepines". PI: T. N. Riley, CoIs: J. DeRuiter and D. E. Walters, \$4,500, School of Pharmacy Grant-in-Aid, September, 1995.
- Compound Acquisition Agreement, DowElanco, Indianapolis, Indiana, PI, March, 1996. \$2,500, pending.
- Material Transfer Agreement: Acquisition of the N-Methyl-3,4-methylenedioxyphenyl-2-butanamine, PI, Research Biochemicals International, Natick, MA, June, 1996, \$1,000.
- Future Life Science Scholars Program, Auburn University, support for J. Wiggins, PI, June, 1996, \$1,000.
- "Systemic and ocular delivery of novel ARIs. (Revision)". National Institutes of Health, PI: U. Kompella, CoIs: J. DeRuiter and C. R. Clark, \$107,996, June, 1996. Funded March, 1997
- Synthesis of fentanyl standards and sufentanil metabolites, Radian, Texas, Co-PI with C. R. Clark, \$5,000, February 1997.
- Future Life Science Scholars Program, Auburn University, support for E. Thomas and S. Armstrong, PI, 1997, \$3,600.
- "The ABCs (Authorware-Based Cases) for Infectious Disease", PI: C. M Reinke, D.F. Breeden Grant Application, Auburn University, March 2002, Budget \$1961, Project from June 1, 2002-May 31, 2003. Funded.
- "Norsufentanil Oxalate for Analytical Studies", Centers for Disease Control, Atlanta, GA, Budget: \$1200, December, 2002.
- Material Transfer Agreement: Synthesis of MDI 1040601. Molecular Design Incorporated, Memphis, TN, DeRuiter (PI) and F. T. Smith (co-PI), \$3730, August, 2004.

- Contract Synthesis of GG1-GG6 (Material Transfer Agreement). Molecular Design Incorporated, Memphis, TN, DeRuiter (PI), and F. T. Smith (co-PI), \$23,800, January, 2005.
- Contract Synthesis of MDI-30305 Series, April 2005, Molecular Design International, Memphis, TN, William Purcell, PI: Dr. Jack DeRuiter, CoPIs; F. T. Smith and C. R. Clark  
*Total Costs: \$2,500*
- Proposal for the Synthesis of 3-Amido-5-Phenyl-Pyrazolo[3,4-b]pyridazines (MDI 4050401 and 4050402), Molecular Design International, Memphis, TN, William Purcell, PI: Dr. Jack DeRuiter, CoPI; F. T. Smith, June 2005, *Total Costs: \$25,980.*
- Proposal for the Synthesis of MDI 4050801, Molecular Design International, Memphis, TN, William Purcell, PI: Dr. Jack DeRuiter, CoPI; F. T. Smith, August, 2005, *Total Costs: \$8,850*
- Proposal for the Synthesis of MDI 101, October 2005, Molecular Design International, Memphis, TN, William Purcell, PI: Dr. Jack DeRuiter, CoPI; F. T. Smith, October, 2005, *Total Costs: \$2,417*
- Proposal for the Synthesis of MDI 101, January, 2006, Molecular Design International, Memphis, TN, William Purcell, PI: Dr. Jack DeRuiter, CoPI; F. T. Smith, October, 2005, *Total Costs: \$1,800*
- Synthesis and analytical profiles for regioisomeric and isobaric amines related to MDMA, MDEA and MBDB: Differentiation of drug and non-drug substances of mass spectral equivalence. US Department of Justice, Office of Justice programs, National Institutes of Justice. PI: C. R. Clark; Co-PI: J. DeRuiter, Total Costs: (Award Number: 2006-DN-BX-K016) \$537,746.00. Funded, January 1, 2007-December 31, 2009.
- Synthesis of aminorex standards for equine testing. Iowa State University, Des Moines, IA, PI: C. R. Clark; Co-PI: J. DeRuiter, Total Costs: \$440, March and June, 2007.
- Synthesis of aminorex standards for equine testing. Cantest LTD, Burnaby, BC Canada, PI: C. R. Clark; Co-PI: J. DeRuiter, Total Costs: \$800, Feb and August, 2007.
- Synthesis of aminorex and rexamino standards for equine testing. University of Pennsylvania, Philadelphia, PA, PI: C. R. Clark; Co-PI: J. DeRuiter, Total Costs: \$1300, Jan-April, 2007.
- Analytical and Synthetic Studies on Designer Drugs of the Piperazine Class, U.S. Department of Justice, Office of Justice Programs, National Institute of Justice, C. Randall Clark (PI) and Jack DeRuiter Co-PI), \$484,819.00, Funded: January 1, 2012-December 31, 2013. Award Number: 2011-DN-BX-K530
- Forensic Chemistry of Substituted 1-Alkyl-3-Aroylindole: Isomeric Synthetic Cannabinoids, US Department of Justice, National Institute of Justice, PI: C. R. Clark; Co-PIs: J. DeRuiter and F. T. Smith, Total Direct Costs: \$584,988 (Total costs: \$865,784). Funded: Project Period: January 1, 2013 - December 31, 2016, Award Number: 2012-DN-BX-K026.

- Bath Salt-type Aminoketone Designer Drugs: Analytical and Synthetic Studies on Substituted Cathinones, C. Randall Clark and Jack DeRuiter, U.S. Department of Justice, Office of Justice Programs, National Institute of Justice, Solicitation: SL#001059, Applied Research and Development in Forensic Science for Criminal Justice Purposes, NIJ-2013-3361, Amount Requested: \$498,220. Funded: January 2014-Dec 2015; \$344,325.00, January 1, 2014-June 30, 2015.
- Forensic Chemistry of Substituted N-Benzylmethoxy (N-BOMe) Phenethylamines: Isomeric Designer Drugs Related to 25I-N-BOMe, U.S. Department of Justice, Office of Justice Programs, National Institute of Justice, C. Randall Clark (PI) and Jack DeRuiter, \$215,000.00, January 1, 2017-December 31, 2019.
- Structural Characterization of Emerging Synthetic Drugs, U.S. Department of Justice, Office of Justice Programs, National Institute of Justice, Glen Jackson (West Virginia University, Department of Chemistry, PI: C. Randall Clark, Jack DeRuiter, \$214,328.00, January 1, 2019- December 31, 2020.

#### **GRANTS PENDING AND APPROVED BUT NOT FUNDED:**

- "Synthesis and Evaluation of Novel Inhibitors of Aldose Reductase for the Prevention of Diabetic Retinopathy and Cataract Formation," National Society to Prevent Blindness, principal investigator, approved, not funded, 1985.
- "Study of Structurally Novel Aldose Reductase Inhibitors," National Institutes of Health, co-principal investigator with A.N. Brubaker, approved, not funded, 1984.
- "An Approach to Develop Potent and Selective Inhibitors of Aldose Reductase: Potential Agents to Prevent Pathologies of Chronic Diabetes," American Diabetes Association, New York, principal investigators, approved, not funded, 1985.
- "Synthesis and Evaluation of Ring Substituted Benzopyran-acetic Acids and Quinoline acetic Acids as Inhibitors of Aldose Reductase: Potential Agents for the Prevention of Diabetic Complications," American Diabetes Association, Alabama Affiliate, co-principal investigator with A.N. Brubaker, March, 1986, \$500.
- "Synthesis and Evaluation of Novel Inhibitors of the Enzyme Aldose Reductase," American Association of Colleges of Pharmacy Young Investigators Program, August, 1986, \$4,900.
- "Investigation of N-arylglycine Aldose Reductase Inhibitors: Potential Agents for the Prevention of the Complications of Chronic Diabetes," Diabetes Research and Education Foundation, Bridgewater, NJ, principal investigator, September, 1986, \$20,000.
- "Investigation of Novel Inhibitors of Aldose Reductase," National Institutes of Health, principal investigator, November 1986, \$265,173.

- "Synthesis and Evaluation of Potential Multisite-Directed Inhibitors of the Enzyme Aldose Reductase," Alabama Academy of Science, Student Research Grant Program, Co-PI with C.A. Mayfield, March, 1987, \$250.
- "Investigation of the Aldose Reductase Inhibitory Activity and Enzyme Specificity of N-arylglycine Derivatives," American Association of Colleges of Pharmacy Young Investigators Program, August, 1987, \$5000.
- "Absorption and Bioavailability of Structurally Novel Inhibitors of Aldose Reductase", Diabetes Research and Education Foundation, Bridgewater, NJ, PI with W.R. Ravis COI, \$20,000, March, 1988.
- "Investigation of Novel Inhibitors of Aldose Reductase," revised Application, National Institute of Health, Principal Investigator, February, 1988, \$290,000.
- "Investigation of Aldose Reductase Activity and Aldose Reductase Inhibition in Hypoxic Ventricular Muscle," Glaxo Cardiovascular Discovery Grants, Glaxo, Inc., \$697,800.
- "Investigation of Aldose Reductase and Inhibitors", Graduate Student Researchers Program, Robert A. Davis, NASA, Marshall Flight Center, Huntsville, AL, \$17,620.
- "Study of Multisite Aldose Reductase Inhibitors", National Institutes of Health, PI, Bethesda, June, 1991, \$423,000.
- "Aldose Reductase Multisite Inhibition by Arylsulfonylamino Acids", American Chemical Society, Medicinal Chemistry Graduate Student Fellowship Program (R.A. Davis), \$15,000, December, 1991.
- "Modulation of Gene Expression and the Malignant Phenotype by Triplex Forming Acridine Oligonucleotide Conjugates", National Institutes of Health, Program Project Grant", D.M. Miller, PI, Consultant, \$20,000, December, 1991.
- "Effects of 'Designer Drugs' on the Fetus and Neonate", National Institutes of Health, PI: M. Bronson, Co-PIs: J. DeRuiter and C. R. Clark, \$97,500, January, 1993.
- "Effects of 'designer drugs' on the embryo, neonate and adult, Army, PI: M. Bronson, Co-PIs: J. DeRuiter and C. R. Clark, \$477,814 September, 1993.
- "Designer drug effects on the adult female and the embryo", National Institutes of Health, PI: M. Bronson, CoI: J. DeRuiter and C. R. Clark, \$626,944, November, 1993.
- "DNA sequencing shared used resource, NIH, National Center for Research Resources, PI: Henry J. Baker (Scott-Ritchey): Co-PIs 200,122, March, 1993
- "Tolerance/sensitization to MDMA & other designer drugs." National Institutes of Health, PI: M. Bronson, Co-PIs: J. DeRuiter and C. R. Clark, \$504,543, July, 1995.

- Improved Specificity of Phenethylamine Analyses: Differentiation of Isomers", Office of National Drug Control Policy, Innovative Research and Development Program, FBI, Quantico, VA, Co-PI with C. R. Clark and F. T. Noggle, \$100,688, July, 1995.
- Material Transfer Agreement: Acquisition of the Enantiomers of Methcathinone, PI, Research Biochemicals International, Natick, MA, May, 1995, \$1,000, Resubmit June 1996, \$750.
- Synthesis of 4-propananilidopiperidine-d5, Co-PI with C. R. Clark, Alabama Reference Laboratory, Montgomery, AL, June, 1995, \$200.
- "Ocular delivery of novel ARIs.". National Institutes of Health, PI: U. Kompella, CoIs: J. DeRuiter and C. R. Clark, \$460,586, October, 1995. Not Funded
- "Tolerance/sensitization to amphetamine-related "designer drugs". PI: M E. Bronson, CoIs: J. DeRuiter and C. R. Clark, \$69,580, BioGrants Program, Auburn University, October, 1995.
- Collaborative Agreement for Analytical Consulting Services, Co-PI (with C. R. Clark), Alabama Reference Laboratory, Montgomery, AL, October, 1995, \$6,000, Not Funded.
- Design, synthesis and testing of sequence-selective alkylators of DNA as potential anticancer agents", PI: F. T. Smith, CoIs: J. DeRuiter, \$25,000, BioGrants Program, Auburn University, October, 1995. Not Funded
- Upgrade of a 400 MHz NMR Spectrometer for the NMR Center at Auburn University, National Science Foundation, PI: H. Hargis (Chemistry), CoI: J. DeRuiter, F. T. Smith, etc. \$164,000, January, 1996. Not Funded
- Improved synthesis of drugs of abuse, PI: W. L. White, RBI, Natick MA, Office of National Drug Control Policy, Role: consultant.
- Methods for the differentiation of designer substances from the methylenedioxy-methamphetamine drugs of abuse, Office of National Drug Control Policy, Department of Justice, PI (Co-I C. R. Clark and F. T. Noggle), January, 1997. Not funded
- Upgrade of a 400 MHz NMR Spectrometer for the NMR Center at Auburn University, National Science Foundation, PI: H. Hargis (Chemistry), CoI: J. DeRuiter, F. T. Smith, etc. \$164,000, January, 1997.
- Material Transfer Agreement: Acquisition of N-Ethyl-3,4-Methylenedioxyamphetamine, PI, Research Biochemicals International, Natick, MA, October, 1997, \$5,000.
- Development of a routine toxicological assay for the major metabolites of fentanyl, 3-methylfentanyl, sufentanil and alfentanil, Office of National Drug Control Policy, Department of Justice, Co-I with C. R. Clark, \$100,000, December, 1997.
- Differentiation of designer substances from the methylenedioxymethamphetamine (MDMA) drugs of abuse, Office of National Drug Control Policy, Department of Justice, PI (Co-I C. R. Clark and F. T. Noggle), June, 1998. \$110,000. Not Funded.

- "Biodegradable Implant of a Novel ARI for Ocular complications of Diabetes". National Institutes of Health, PI: U. Kompella, CoIs: J. DeRuiter and C. R. Clark, \$100,000, March, 1999. Not funded.
- Analytical methods for the differentiation of the methylenedioxyphenethylamine drugs of abuse from regioisomeric and isobaric substances., US Department of Justice, Office of Justice Programs, National institute of Justice, General Research and Development. PI: C. R. Clark, CoI: J. DeRuiter, Total Costs: \$432,756, Project Period, July, 2003- June, 2005.
- Differentiation of MDMA and Related Drugs from Potentially Coeluting Substances of Mass Spectral Equivalence. U.S. Department of Justice, Office of Justice Programs, National Institute of Justice, Total Costs: \$432,756. Project Period, July, 2004- June, 2006.
- Synthesis of fentanyl and norsulfentanil metabolite standards, Material Transfer Agreement. US Drug Testing Labs, Chicago, IL, \$8,900, August 2004, PI
- Synthesis of Labeled Ephedrine, Corium Laboratories, \$24,000, Co-PI with Forrest Y. Smith, October, 2004. Not Funded.
- Design of Novel benzodiazepine metabolites, March 2005, GMP Companies Inc., Fort Lauderdale, FL, PI: Dr. Jack DeRuiter, *Total Costs: To be determined upon negotiation*
- "Synthesis of MDI 406 Series of Target Compounds", Fixed Price Research Services/License Agreement, Molecular Design International, Memphis, TN, William Purcell, PI: Dr. Jack DeRuiter, CoPI; F. T. Smith, September, 2005, Total Costs: \$59,167.
- Chemical and Stereochemical Profiling in Substituted Phenethylamines: Investigation of the Precursors, Products and By-Products in the Clandestine Synthesis of Phenethylamines and "Designer Analogs." US Department of Justice, Office of Justice programs, National Institutes of Justice. PI: C. R. Clark; Co\_PI: J. DeRuiter, Total Direct Costs: \$850,000 (1.2 Million). Submitted November 2007.
- Analytical and Synthetic Studies on Designer Drugs of the Piperazine Class (2010-90297-AL-DN). US Department of Justice, Office of Justice programs, National Institutes of Justice. PI: C. R. Clark; Co\_PI: J. DeRuiter, Total Direct Costs: \$879,000. Submitted March 2010. Not funded
- Bath Salt-type Aminoketone Designer Drugs: Analytical and Synthetic Studies on Substituted Cathinones. US Department of Justice, Office of Justice programs, National Institutes of Justice. PI: C. R. Clark; Co-PI: J. DeRuiter, Submitted April 2012, Not funded.
- Forensic Chemistry of Substituted N-Benzylmethoxy (N-BOMe) Phenethylamines: Isomeric Designer Drugs Related to 25I-N-BOMe, U.S. Department of Justice, Office of Justice Programs, National Institute of Justice, Solicitation: SL#001058, Submitted April 2014.
- Forensic Chemistry of Substituted N-Benzylmethoxy (N-BOMe) Phenethylamines: Isomeric Designer Drugs Related to 25I-N-BOMe, U.S. Department of Justice, Office of Justice

Programs, National Institute of Justice, C. Randall Clark (PI) and Jack DeRuiter, \$654,217.00, Re-application submitted February 1, 2016.

- Vapor Phase Infrared Data Base for Novel Psychoactive Substances: GC-IR Studies on Regioisomeric Cathinone Bath Salts, U.S. Department of Justice, Office of Justice Programs, National Institute of Justice, NIJ Research and Evaluation on Drugs and Crime FY 2016. C. Randall Clark (PI) and Jack DeRuiter, Total costs \$738,532.00 (2016-2018), Submitted April 2016. Not funded.
- Aminocyclohexylbenzamide Opiate Derivatives: U-47700 Isomers, Esters, Ethers and Designer Substances, U.S. Department of Justice, Office of Justice Programs, National Institute of Justice, Research and Development in Forensic Science for Criminal Justice Purposes, Funding Opportunity Number: NIJ-2017-11080, PI: C. Randall Clark; Co-PIs: Jack DeRuiter and Forrest Smith, Project Period, January 1, 2018-December 31, 2020, Total Costs \$898,468.00, submitted February 28, 2017. Not funded.
- Vapor Phase Infrared Data Base for Novel Psychoactive Substances: GC-IR Studies on Regioisomeric Cathinone Bath Salts, U.S. Department of Justice, Office of Justice Programs, National Institute of Justice, NIJ Research and Evaluation on Drugs and Crime FY 2017. C. Randall Clark (PI) and Jack DeRuiter, Project Period: Three Years, January 1, 2018-December 31, 2020, Total costs: \$848,245.00. Submitted March, 2017. Not funded.
- Analytical Profiles for the Isomeric Amides of the Synthetic Opiate U-47700, U.S. Department of Justice, Office of Justice Programs, National Institute of Justice, NIJ Research and Evaluation on Drugs and Crime FY 2017, NIJ-2017-12043. PI: C. Randall Clark; Co-PIs: Jack DeRuiter and Forrest Smith, Project Period, January 1, 2018-June 30, 2019. Total Costs \$392,785, submitted April 24, 2017. Not funded.
- Aminocyclohexylbenzamide Opiate Derivatives: U-47700 Isomers, Esters, Ethers and Designer Substances, U.S. Department of Justice, Office of Justice Programs, National Institute of Justice, C. Randall Clark (PI), Jack DeRuiter and Forrest Smith \$491,090.00, January 1, 2019-December 31, 2020. Submitted, 4/24/2018. Not funded.
- Vapor Phase Infrared Data Base for Novel Psychoactive Substances, U.S. Department of Justice, Office of Justice Programs, National Institute of Justice, C. Randall Clark (PI), Jack DeRuiter and Forrest Smith \$888,060.00, January 1, 2019-December 31, 2021. Submitted, 4/24/2018.
- IGE F-PHARM: Framework for Pharmacy Healthcare and Research Modernization, National Science Foundation, NSF Research Traineeship (NRT) Program, NSF 17-585. PI: Murali Dhanasekaran. Co-PI: Jack DeRuiter, Timothy Moore, Diane E. Boyd, 3 Years, Submitted September, 2018. \$499,988. Not funded.
- Modernizing basic pharmaceutical sciences graduate education to catalyze advances in health sciences research and improve healthcare therapeutics. PI: Muralikrishnan Dhanasekaran; Co-PIs: Jack DeRuiter, Timothy Moore, Diane Boyd, 2019 IGP Interdisciplinary Team Research Grant, Auburn University, Submitted November 2018, \$91,000. Not funded.



- Title: Mentored Clinical Scientist Development in Substance Use and Substance Use Disorders to Address Disparities and Unmet Need in the Rural Southeastern U.S., K12 DA053528-01, Source: NIH/National Institute on Drug Abuse (NIDA), Role: Faculty Preceptor, Dates: 4/2021 – 3/2026, Total Funds: \$2,491,263, Status: Not funded (under revision)
- Neurochemistry, Toxicology, Metabolism of Piperazine Next Generation NPS/SPD, National Institutes of Health. Role: Co-PI with C. R. Clark and M. Dhanasekaran. Dates: 04/01/2022 03/31/2027. Total Funds requested: \$1,887,495.00. Submitted June 2021.

### **CAMPUS PROGRAM AFFILIATIONS:**

- Biochemistry and Cell and Molecular Biology Program: Chair, 92-93
- Future Life Science Scholar Institute:
  - Mentor for Lisa E. Hayes: High School Teacher/Lanett: Summer 1993
  - Mentor for Stepanie Taylor, High School Student/Decatur: Summer, 1995
  - Co-Mentor for Dr. Thelma Ivery, Alabama State Univ.: Summer, 1995
  - Mentor for Sarah C. Graham, Undergraduate Student, 1995-1996
  - Mentor for Jibri Wiggins, Undergraduate Student, Summer 1996
  - Mentor for Erica Thomas, Undergraduate Student, Summer, 1997

### **SOCIETIES AND ORGANIZATIONS:**

#### National and Regional:

- American Chemical Society
  - Chaired Section of SE/SW Meeting, Med. Chem., 1990
  - Member of Division of Medicinal Chemistry
- Southeastern Pharmacology Society
- MALTO: Medicinal Chemistry/Pharmacognosy Organization
  - Meeting Organizer, 1988, Auburn, AL
  - Meeting Organizer, 1993, Monroe, LA
- Phi Kappa Phi
- Rho Chi
- Sigma Xi: Departmental Representative, 1989 to present
- Kappa Psi Pharmaceutical Fraternity
- Phi Lambda Sigma

#### State and Local:

- Alabama Academy of Science:
  - Chaired Session of Chemistry Section of 1991 Meeting
  - Symposium Organizer (Drugs of Abuse) for 1992 Meeting
  - Vice-chairman, Chemistry Section, 1992-1994
  - Committee on Membership (1992-1995)
  - Chair: Student Research Competition, Chemistry (1993)

Chaired Session of Chemistry Section of 1993 Meeting  
Chairman: Chemistry Section (1994-1996)  
Chaired Session of Chemistry Section of 1994 Meeting  
Chair: Student Research Competition, Chemistry (1994)  
Chaired Session of Chemistry Section of 1995 Meeting  
Member: Student Research Competition, Chemistry (1995)

- Auburn Section, American Chemical Society  
Chairman-Elect 1989  
Chairman 1990