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EDUCATION

06/1990 B.S., Biology, Slippery Rock University of Pennsylvania
06/1990 B.A., Philosophy, Slippery Rock University of Pennsylvania
08/1998 Ph.D., Environmental and Occupational Health, University of Pittsburgh

ACADEMIC APPOINTMENTS

1998-2002 Assistant Professor
Department of Environmental and Occupational Health
Graduate School of Public Health
University of Pittsburgh
Pittsburgh, PA 15260

2002-2006 Assistant Professor
Department of Environmental Studies
School of the Coast and Environment
Louisiana State University
Baton Rouge, LA 70803

2007-current Associate Professor
Department of Medicine
James Graham Brown Cancer Center
School of Medicine
University of Louisville
Louisville, KY 40202

OTHER POSITIONS AND EMPLOYMENT

1990 Electron Microscopist, Pittsburgh Testing Laboratories
1990-1993 Laboratory Director and Field Technician, Enspec, LTD
1993-1998 Teaching Assistant and Graduate Student Researcher
University of Pittsburgh
1998-2001 Consultant, MULTICASE, Inc.
2010-current President, Gnarus Systems, Inc.

CERTIFICATION AND LICENSURE

None

PROFESSIONAL MEMBERSHIPS AND ACTIVITIES

1998-current Society of Toxicology
1998-2013 American Association for the Advancement of Science

HONORS AND AWARDS

1989-1990 Dean's List: Slippery Rock University of Pennsylvania
1998 Outstanding Student Award, Graduate School of Public Health, University of Pittsburgh
2000 Outstanding Presentation in Risk Assessment, Society of Toxicology

COMMITTEE ASSIGNMENTS AND ADMINISTRATIVE SERVICES

University of Pittsburgh

1999-2000 Department Admission Committee

Louisiana State University

2003-2005 Department Admissions Committee Chair
2003-2005 Department Seminar Committee Chair
2003-2005 Department Curriculum Committee
2003-2005 School Curriculum Committee
2004-2005 Shell Coastal Environmental Modeling Laboratory Management Committee
2004 Dean's Search Committee
2003-2005 University Faculty Senate Curriculum Committee, Member, 2003; Vice-Chair, 2004; Chair, 2005

University of Louisville

2008 Institute for Molecular Diversity and Drug Design Poster Committee
2008-2011 Institute for Molecular Diversity and Drug Design Travel Award Committee
2009-2013 Biophysical and Structural Biology Seminar Committee Chair
2011 James Graham Brown Cancer Center Retreat Poster Committee
2012-current Institute for Molecular Diversity and Drug Design Fellowship Committee
2012 Institute for Molecular Design and Drug Diversity, Spring Symposium Session Chair
2013 James Graham Brown Cancer Center Summer Research Internship Program Selection Committee
2013-Current Institute for Molecular Diversity and Drug Design Undergraduate Scholars Committee

Non-University

2002-2004 EPA STAR Fellowship Scientific Reviewer, Toxicology Section
2006 U.S. Environmental Protection Agency
Environmental Research Grants, Scientific Reviewer
Fate and Effects of Hormones in Wastes from Concentrated Animal Feeding Operations
2006-2010 Department of Defense Breast Cancer Research Program
Clinical and Experimental Therapeutics Section
Idea and Synergistic Award Scientific Reviewer
Concept Award Scientific Reviewer

EDUCATIONAL ACTIVITIES

Courses/Lectures

University of Pittsburgh

- 1999-2000 EOH 2021, Health, Disease, and Environment
1 lecture, Topic: Endocrine Disruptors
~100 graduate students/year
- EOH 2121, Chemical, Physical, and Biological Agents
2 lectures, Topics: Health Effects of Global Climate Change and Environmental Endocrine Disruptors
~ 10 graduate students/year
- 2000 EOH 2175, Principles of Toxicology
1 lecture, Topic: Computational Toxicology
~30 graduate students
- 2000 EOH 2101, Introduction to Research Methods
1 lecture, Topic: Designing Experiments in Computational Toxicology
~5 graduate students
- 2000-2001 EOH 2120, Chemical, Physical, and Biological Agents I
Course Director and primary lecturer, 14 lectures
~5 graduate students/year
- 2000-2001 EOH 2120, Chemical, Physical, and Biological Agents II
Course Director and primary lecturer, ~14 lectures
~5 graduate students/year

Louisiana State University

- 2002-2005 ENVS 4477, Environmental Toxicology, Introduction and Application
Course director and primary lecturer, ~14 lectures
39 undergraduate students
- 2002-2006 ENVS 7100, Environmental Toxicology
Course director and primary lecturer, 14 lectures
27 graduate students
- 2004-2005 ENVS 4101, Environmental Chemistry
1 lecture, Endocrine Disruptors
~30/students/year

University of Louisville

- 2009 PHTX 674 Research Methods in Pharmacology and Toxicology
Capstone Lecture
9 graduate students
- 2010-2014 PHTX 674 Research Methods in Pharmacology and Toxicology
Lecture in Computational Toxicology
~6 graduate students/year

Students

University of Pittsburgh

Graduate Students

1999 Xinyu Zhu, Master's Committee Member

Undergraduate Interns

1998, 2000 Noam Pollack
1998 Freya Moskovites
1999-2000 Joseph Kosics
2000 Ariella Weinberg
2001 Steven Bodnar

Louisiana State University

Graduate Students

2002 William Troy Roussel, M.S. Committee Member
2004 Sidney Marlborough, M.S. Committee Member
2004 Kirk Hutchison, M.S. Committee Member
2005 Shanna Moss, M.S. Committee Chair
2005 Daniel Consoer, M.S. Committee Chair
2005 Maria Alejandra Diaz, Ph.D., Dean's Representative

University of Louisville

Postdoctoral Fellows

2008-2013 Carl A. Carrasquer, Ph.D.

Graduate Students

2007-2008 Seena Iype, Non-Thesis Project Supervisor
2009-2012 Huihui Wu, M.S. Committee Chair
2012-2014 Christopher England, Ph.D. Committee Member
2009- current Robert Adcock, M.S. Committee Member
2010-current Pretish Kumar, Ph.D. Committee Member

Undergraduate Student Researcher/Intern

2007-2012 Naureen Malik
2013-2014 Arren Carter

Graduate Student Research

2012-2014 Naureen Malik

High School Interns

2008	Gregory States
2009-2011	Sophia Mahmood
2010	Christopher George
2011-current	Hiba Abbas
2011	Hannah Wurth
2012	Brianna McColl
2012-2014	Kaylind Batey
2013-2014	Samuel Naser
2014	Qais Shaban
2014	Junaid Shahzad
2014	Nashwa Saleem

Other Trainees

2007-2008	Gefei Qian, Ph.D.
2007-2010	Shahid Qamar, Ph.D.

CLINICAL ACTIVITIES

None

GRANTS AND CONTRACTS

Grants

Current Funding

Pending

1. 2013 National Institutes of Health, Predictive modeling for anticarcinogenesis, \$375,000 (\$250,000 direct + \$125,000 indirect)
2. 2013 National Institutes of Health, Receptor-based structure-activity relationships for non-DNA reactive carcinogens, \$375,000 (\$250,000 direct + \$125,000 indirect)

Past

1. 1994-1996 Predoctoral Fellowship, Program in Breast Cancer Biology and Therapy, Pittsburgh Cancer Institute and the Department of Pharmacology, University of Pittsburgh, **A.R. Cunningham PI**, tuition and ~\$26,000 stipend.
2. 1996-1998 Predoctoral Traineeship, United States Department of Defense Breast Cancer Research Program, **A.R. Cunningham PI**, 100% effort, \$40,000.
3. 1999-2000 University of Pittsburgh Medical Center Competitive Medical Research Fund, Computational modeling of endocrine disruptors, **A.R. Cunningham PI**, 20% effort, \$25,000 (\$25,000 direct only).
4. 2000-2001 National Institutes of Health, Training in computational toxicology, **A.R. Cunningham Training Faculty**, Herbert S. Rosenkranz Program Director, \$1,420,151.
5. 2000 National Institutes of Health, Combinatorial approaches for novel anticancer agents, **A.R. Cunningham Computational Pharmacology Core Director**, 5% effort, John Lazo, Project Director, \$5,011,573.
6. 2001-2003 The Vira I. Heinz Endowment, Methods to improve the ability of toxicity tests to identify chemicals hazardous to humans, **A.R. Cunningham Co-PI** with Herbert S. Rosenkranz, \$260,000.
7. 2004-2005 Louisiana State University Council on Research, Faculty Research Grant Program, Identification of pharmacophores through differential toxicity analysis, **A.R. Cunningham PI**, \$10,000.
8. 2001-2006 Department of Defense Breast Cancer Research Program, Investigating the mechanisms of action and the identification of breast carcinogens by computational analysis of female rodent carcinogens, **A.R. Cunningham PI**, 25% effort, \$428,341 total.

9. 2007-2009 Department of Defense Breast Cancer Research Program, A novel approach for the identification of pharmacophores through differential toxicity analysis of estrogen receptor positive and negative cell lines, W81XWH-05-1-0236, **A.R. Cunningham PI**, 10% effort, \$306,332 (direct \$231,654 + \$74,688 indirect), speedtype GB071155.
10. 2009-2010 Center for Environmental Genomics and Integrative Biology—Pilot Project, University of Louisville, Rational selection of chemical probes for the identification of microRNA involved in breast cancer, 1P30ES014443, **A.R. Cunningham PI**, 0% effort, \$30,000 (30,000 direct only), Kenneth Ramos Program Director.
11. 2007-2012 National Institutes of Health, Center of Biomedical Research Excellence in Molecular Targets, P2ORR018733, **A.R. Cunningham PI Project 9**: Molecular target discovery: Structure-activity analysis of tissue-specific carcinogens, 30% effort \$1,110,502 (\$751,451 direct + \$359,051 indirect), Donald Miller Program Director, speedtype GB080120J5.

Contracts

Current Funding

1. 2008-2015 Cytec Industries, Inc, Computational toxicological assessment of chemicals, **A.R. Cunningham PI**, 2% effort, \$219,750 (\$159,080 direct + \$60,670 Indirect), speedtype IOIC101222X03.
2. 2013-2015 Allnex Belgium, Computational toxicological assessment of chemicals, **A.R. Cunningham PI**, 2% effort, \$12,000 (\$7,680 direct + \$4,320 indirect), speedtype IOICN131237.
3. 2009-2015 ToxFocus LLC, Computational toxicological assessment of chemicals, **A.R. Cunningham PI**, 2% effort, 12,000 (\$7,680 direct + \$4,320 indirect), speedtype IOIC090799X01.
4. 2013-2015 Gnarus Systems, Finalization and testing of Gnarus/cat-SAR structure-activity relationship expert system, **A.R. Cunningham, PI**, \$30,000.

Past

1. 2001-2003 The Clairol Corporation/Proctor & Gamble, Development of SAR models to assess potential health effects of newly developed agents, **A.R. Cunningham PI**, ~30% effort, \$214,000.
2. 2007-2009 Rohm and Haas Chemicals LLC, Carcinogenic assessment of antimicrobial isothiazolines, **A.R. Cunningham PI**, \$6,300 (IN080072).
3. 2007 Arch Chemicals Inc., Carcinogenic assessment of antimicrobial isothiazolines, **A.R. Cunningham PI**, \$3,000.
4. 2010-2012 Kentucky Science and Technology Corporation, **A.R. Cunningham PI** (w/ Gnarus Systems and MetaCyte Business Lab LLC), 15% effort, total award \$300,000 (University of Louisville subcontract \$92,429 (\$84,026 direct + \$8,403 indirect)) (IB091381).

PATENTS

1. Hybrid Fragment-Ligand Modeling for Classifying Chemical Compounds, Patent Application Serial No. 61/380,048 filed on September 3, 2011

EDITORIAL WORK

2012-current Editorial Board Member, SAR and QSAR in Environmental Research, Taylor & Francis

Manuscript Review

Journal of Toxicology and Environmental Health
Canadian Journal of Chemistry
Environmental Health Perspectives
4/2001 Chemical Research in Toxicology
06/2004 SAR and QSAR in Environmental Research
10/2004 Chemical Research in Toxicology
12/2004 SAR and QSAR in Environmental Research
10/2006 SAR and QSAR in Environmental Research
10/2009 Chemical Research in Toxicology
3/2010 SAR and QSAR in Environmental Research
3/2010 Chemical Research in Toxicology
3/2010 Steroids
10/2010 Chemical Research in Toxicology
8/2011 SAR and QSAR in Environmental Research
7/2012 Chemical Research in Toxicology
7/2012 SAR and QSAR in Environmental Research
10/2012 SAR and QSAR in Environmental Research
11/2013 SAR and QSAR in Environmental Research
8/2014 SAR and QSAR in Environmental Research

ABSTRACTS AND PRESENTATIONS

Oral Presentations: National/International Meetings

1. TestSmart--A Humane and Efficient Approach to Screening Information Data Sets at Johns Hopkins University, Baltimore, MD (1999) (Invited meeting participant).
2. TestSmart--A Humane and Efficient Approach to Screening Information Data Sets at Fairfax, VA (1999) (Invited meeting participant).
3. Department of Defense Era of Hope (2000) Mechanistic Assessment of Estrogenicity and its Relationship to Carcinogenicity (Abstract published in Department of Defense Breast Cancer Research Project Era of Hope Conference Proceedings II:537(2000)), Atlanta, GA.
4. Department of Defense Era of Hope Breast Cancer Research Meeting (2008) Invited Video Interview, Baltimore, MD, June 25-28, 2008.
5. American Thyroid Association (2009) Hyperthyroidism during pregnancy: balancing benefits and risks, Donald R Mattison (presenter), C. Alex Carrasquer and A.R. Cunningham, Washington D.C., April 18, 2009.

Oral Presentations: Local Regional Meetings

None

Oral Presentations: Invited Lectures

1. Slippery Rock University (2000) Computational Toxicology, Slippery Rock, PA
2. East Carolina University School of Medicine (2001) Computational Methods in Environmental Toxicology, Greenville, NC.
3. Southern University of Baton Rouge (2001) Computational Methods in Environmental Toxicology, Baton Rouge, LA.
4. Louisiana State University (2001) Computational Methods in Environmental Toxicology, Baton Rouge, LA.

5. Louisiana State University Environmental Lecture Series (2003) Structure-Activity Relationships: Estrogenic Mimics and Endocrine Disruptors, Baton Rouge, LA.
6. Proctor and Gamble (2004) Development of Aromatic Amine Genotoxicity, Carcinogenicity, and Sensitization SAR Models, Cincinnati, OH.
7. Tulane University (2004) Structure-Activity Relationships: Estrogenic Mimics and Endocrine Disruptors, New Orleans, LA.
8. Louisiana State University School of the Coast and Environment Advisory Council (2004) Predictive Toxicology: Estimating Human and Environmental Health Consequences of (Hazardous) Pollutants, Baton Rouge, LA.
9. Tulane University (2006) Predictive Toxicology: Estimating the Biological Activity of Chemicals, New Orleans, LA.
10. University of Texas at El Paso (2006) Predictive Toxicology and Pharmacology: Estimating the Biological Activity of Chemicals, El Paso, TX.
11. University of South Carolina (2006) Predictive Toxicology: Estimating the Biological Activity of Chemicals, Columbia, SC.
12. East Carolina University (2006) Structure-Activity Relationship Modeling: Carcinogens, Chemotherapeutics, and Molecular Targets, Greenville, NC.
13. University of Louisville (2006) Structure-Activity Relationship Modeling: Carcinogens, Chemotherapeutics, and Molecular Targets, Louisville, KY.
14. U.S. Environmental Protection Agency (2007) SAR Analysis of the Carcinogenic Potential of Isothiazolinones for Arch Chemicals, Inc., Washington, DC.
15. University of Louisville Pharmacology/Toxicology Seminar (2007) Structure-Activity Relationship Modeling: Carcinogens, Chemotherapeutics, and Molecular Targets, Louisville, KY.
16. University of Louisville James Graham Brown Cancer Center High School Summer Research Internship Program (2007) Structure-Activity Relationship Modeling: Carcinogens, Chemotherapeutics, and Molecular Targets, Louisville, KY.
17. University of Louisville Biophysical and Structural Biology Group (2008) Structure-Activity Relationship Modeling: Carcinogens, Chemotherapeutics, and Molecular Targets, Louisville, KY.
18. Cytec Industries Product Stewardship and Regulatory Affairs Division (2008) Computational Toxicological Assessment of Chemicals, Patterson, NJ, May 22, 2008.
19. Bergeson & Campbell, P.C. (2009) Predictive Toxicology: Structure-Activity Relationship Analysis for Human and Environmental Endpoints, Washington, D.C., February 29, 2009.
20. University of Louisville Molecular Targets Seminar (2009) Structure-Activity Relationship Analyses of Chemical Carcinogens, Louisville, KY, February 26, 2009.
21. University of Louisville Institute for Molecular Diversity & Drug Design Symposium (2009) Structure-Activity Relationship Analyses of Mammary Carcinogens, Louisville, KY, March 9, 2009.
22. University of Louisville Institute for Molecular Diversity & Drug Design Fall Fest (2009) Structure-Activity Relationship Analyses of Mammary Carcinogens, Louisville, KY, October 29, 2009 (Presented by C. Alex Carrasquer).

Poster Presentations: National/International Meetings

1. **Cunningham, A.R.** and H.S. Rosenkranz (1994) The Structural Basis of the Carcinogenicity of Diethylstilbestrol and Some of its Metabolites, Environmental Mutagen Society Annual Conference, Seattle, OR (Abstract published in *Environment and Molecular Mutagenesis*, 23: 11).
2. **Cunningham, A.R.**, H.S. Rosenkranz, and G. Klopman (1998) Structural Analysis of a Group of Phytoestrogens for the Presence of a 2-D Geometric Descriptor Associated With Non-Genotoxic Carcinogens and Some Estrogens, 2nd International Conference on Phytoestrogens, Little Rock, AK (Paper published in: *Proceedings of the Society for Experimental Biology and Medicine*, 217: 288-292).
3. **Cunningham, A.R.** and H.S. Rosenkranz (2000) SAR Analyses as Part of the High Production Volume Chemical Challenge Initiative, Society of Toxicology Annual Conference, Cincinnati, OH (Abstract published in *The Toxicologist* 54:872) Awarded Outstanding Presentation in Risk Assessment, Society of Toxicology.

4. **Cunningham, A.R.**, H.S. Rosenkranz, S.G. Grant, Copelin, E.P., Kosics, J.M., and Klopman, G. (2000) Mechanistic Assessment of Estrogenicity and its Relationship to Carcinogenicity, Department of Defense Breast Cancer Research Program Era of Hope Conference, Atlanta, GA (Abstract published in *Department of Defense Breast Cancer Research Project Era of Hope Conference Proceedings II:5372000*).
 5. Fishman, I., **A.R. Cunningham**, and M.H. Karol (2000) Comparison of the Guinea Pig Maximization Test (GPMT), the Murine Local Lymph Node Assay (LLNA) and Structure-Activity Relationship Models to Predict the Potential of Chemicals to Cause Allergic Contact Dermatitis, Society of Toxicology Annual Conference, Cincinnati, OH (Abstract published in *The Toxicologist* 54:153(2000)).
 6. **Cunningham, A.R.**, S.T. Moss, S.A. Iype, G. Qian, S. Qamar, S.L. Cunningham (2008) Structure-Activity Relationship Analysis of Rat Mammary Carcinogens, Department of Defense Breast Cancer Research Program Era of Hope Conference, Baltimore, MD, June 25-28, 2008 (Abstract published in *Department of Defense Breast Cancer Research Project Era of Hope Conference Proceedings*).
 7. *States, G., N. Malik, C.A. Carrasquer, S.L. Cunningham, and **A.R. Cunningham** (2009) Structure-Activity Relationships for Site-Selective Carcinogenesis, Society of Toxicology, Baltimore, MD, March 15-19, 2009.
 8. *Carrasquer, C.A., S. Qamar, and **A.R. Cunningham** (2009) Structure-Activity Relationship Analyses and the Identification of Mammary Anticarcinogens, Society of Toxicology, Baltimore, MD, March 15-19, 2009.
 9. Qamar, S., C.A. Carrasquer, S.L. Cunningham, and **A.R. Cunningham** (2009) Structure-Activity Relationship Model for Differential Growth Inhibition of MCF-7 and MDA-MB-231 Cells, Society of Toxicology, Baltimore, MD, March 15-19, 2009.
 10. **Cunningham, A.R.**, S. Qamar, C.A. Carrasquer, P.A. Holt, J.M. Maguire, S.L. Cunningham, N. Malik, and J.O. Trent (2010) Structure-Activity Relationship Analysis of Rat Mammary Carcinogens: Using Chemical-Protein Binding Potentials as Novel and Biologically Relevant Structure Descriptors, Society of Toxicology, Salt Lake City, UT, March 7-11, 2010.
 11. *Malik, N, S. Qamar, C.A. Carrasquer, **A.R. Cunningham** (2011) Virtual chemical-protein receptor interactions can differentiate tumor site selective carcinogens, Society of Toxicology Annual Conference, March 11-15, 2011
- *Mentored Students Presenters.

Poster Presentations: Local Regional Meetings

1. *States, G., N. Malik, C.A. Carrasquer, S.L. Cunningham, and A.R. Cunningham (2008) Structure-Activity Relationships for Site-Selective Carcinogenesis, Presented at 6th Annual Brown Cancer Center Retreat, October 28, 2008.
1. *States, G., N. Malik, C.A. Carrasquer, S.L. Cunningham, and **A.R. Cunningham** (2008) Structure-Activity Relationships for Site-Selective Carcinogenesis, Presented at Ohio Valley Society of Toxicology Conference, November 7, 2008.
2. **A.R. Cunningham**, S. Qamar, C.A. Carrasquer, P.A. Holt, J.M. Maguire, S.L. Cunningham, N. Malik, and J.O. Trent (2009) Structure-Activity Relationship Analysis of Rat Mammary Carcinogens: Using Chemical-Protein Binding Potentials as Novel and Biologically Relevant Structure Descriptors, 8th Annual Brown Cancer Center Retreat, November 6, 2009.
3. **A.R. Cunningham**, S. Qamar, C.A. Carrasquer, P.A. Holt, J.M. Maguire, S.L. Cunningham, N. Malik, and J.O. Trent (2010) Structure-Activity Relationship Analysis of Rat Mammary Carcinogens: Using Chemical-Protein Binding Potentials as Novel and Biologically Relevant Structure Descriptors, University of Louisville Institute for Molecular Diversity & Drug Design Symposium, March 9, 2010.
4. *Malik, N, S. Qamar, C.A. Carrasquer, **A.R. Cunningham** (2010) Virtual chemical-protein receptor interactions can differentiate tumor site selective carcinogens, Research Louisville, October 11-15, 2010.
5. *George C., N. Malik, C.A. Carrasquer, S.L. Cunningham, and **A.R. Cunningham** (2010) Structure-Activity Relationships for Site-Selective Carcinogenesis, Brown Cancer Center Summer Intern Poster Symposium, November 5, 2010.
6. *Malik, N, S. Qamar, C.A. Carrasquer, **A.R. Cunningham** (2010) Virtual chemical-protein receptor interactions can differentiate tumor site selective carcinogens, Brown Cancer Center Retreat, November 5, 2010.

7. *Carrasquer, C.A., S. Qamar, J.M. Maguire, S.L. Cunningham, J.O. Trent, and **A.R. Cunningham** (2011) Global structure-activity relationship model for non-genotoxic carcinogens using virtual ligand protein interactions as model descriptors, Ohio Valley Society of Toxicology Annual Meeting, September 23, 2011, Wright State University, Dayton Ohio
8. *Wurth, H., C.A. Carrasquer, and **A.R. Cunningham** (2011) SAR Ligand Model Analysis for the Identification of Novel Breast Cancer Targets, Ohio Valley Society of Toxicology Annual Meeting, September 23, 2011, Wright State University, Dayton Ohio
9. Qamar, S., S. Mahmood, C.A. Carrasquer, S.L. Cunningham, and **A.R. Cunningham** (2011) Structure-Activity Relationship Analyses for Skin Sensitization: Allergic Contact Dermatitis and the Mouse Local Lymph Node Assay, Ohio Valley Society of Toxicology Annual Meeting, September 23, 2011, Wright State University, Dayton Ohio
10. *Wu, H., C.A. Carrasquer, S. Qamar, **A.R. Cunningham** (2011) Structure Activity Relationship Modeling of Estrogen Receptor Ligands, Ohio Valley Society of Toxicology Annual Meeting, September 23, 2011, Wright State University, Dayton Ohio
11. *McColl, B., C.A. Carrasquer, **A.R. Cunningham** (2012) Structural Comparisons of Mutagens, Carcinogens, and Developmental Toxicants, Brown Cancer Center Retreat, October 26, 2012
12. *Abbas, H., S. Qamar, C.A. Carrasquer, **A.R. Cunningham** (2012) Can Hepatotoxicity be Predicted by Structure-Activity Relationship Models?, Brown Cancer Center Retreat, October 26, 2012
13. *Batey, K., N. Malik, C.A. Carrasquer, **A.R. Cunningham** (2012) Mutagenicity Significantly Influences the Predictivity of SAR Models for Carcinogenesis, Brown Cancer Center Retreat, October 26, 2012
14. *Carter, A., S. Qamar, C.A. Carrasquer, **A. R. Cunningham** (2013) Data Reduction for Structure Activity Relationship Modeling, University of Louisville Summer Undergraduate Research Poster Session, July 31, 2013
15. *Batey, K., *Q. Shaban, *J. Shahzad, N. Malik, *S. Naser, S. Qamar, **A.R. Cunningham (2014)** Structure-Activity Relationship Analyses and Predicting Anticarcinogenesis, University of Louisville Summer Undergraduate Research Poster Session, August 6, 2014
16. *Batey, K., *Q. Shaban, *J. Shahzad, N. Malik, *S. Naser, S. Qamar, **A.R. Cunningham (2014)** Structure-Activity Relationship Analyses and Predicting Anticarcinogenesis, University of Louisville Summer Undergraduate Research Poster Session, September 17, 2014

17.

*Mentored Student Presenter.

Publications

Peer-reviewed

1. Cunningham, A.R., G. Klopman, and H.S. Rosenkranz, *The carcinogenicity of diethylstilbestrol: structural evidence for a non-genotoxic mechanism*. Archives of Toxicology, 1996. **70**: p. 356-361.
2. Cunningham, A.R., G. Klopman, and H.S. Rosenkranz, *A study of the structural basis of the carcinogenicity of tamoxifen toremifene and their metabolites*. Mutation Research, 1996. **349**: p. 85-94.
3. Rosenkranz, H.S., A.R. Cunningham, and G. Klopman, *Identification of a 2-D geometric descriptor associated with non-genotoxic carcinogens and some estrogens and antiestrogens*. Mutagenesis, 1996. **11**: p. 95-100.
4. Rosenkranz, H.S., M. Liu, A.R. Cunningham, and G. Klopman, *Application of structural concepts to evaluate the potential carcinogenicity of natural products*. SAR and QSAR in Environmental Research, 1996. **5**: p. 79-98.
5. Cunningham, A.R., G. Klopman, and H.S. Rosenkranz, *A dichotomy in the lipophilicity of natural estrogens/xenoestrogens and phytoestrogens*. Environmental Health Perspectives Supplements, 1997. **105(Suppl3)**: p. 665-668.
6. Cunningham, A.R., H.S. Rosenkranz, Y.P. Zhang, and G. Klopman, *Identification of "genotoxic" and "non-genotoxic" alerts for cancer in mice: The carcinogenic potency database*. Mutation Research, 1998. **398**: p. 1-17.
7. Cunningham, A.R., H.S. Rosenkranz, and G. Klopman, *Identification of structural features and associated mechanisms of action for carcinogens in rats*. Mutation Research, 1998. **405**: p. 9-28.

8. Cunningham, A.R., H.S. Rosenkranz, and G. Klopman, *Structural analysis of a group of phytoestrogens for the presence of a 2-D geometric descriptor associated with non-genotoxic carcinogens and some estrogens*. Proceedings of the Society for Experimental Biology and Medicine, 1998. **217**: p. 288-292.
9. Pollack, N., A.R. Cunningham, G. Klopman, and H.S. Rosenkranz, *Chemical diversity approach for evaluating mechanistic relatedness among toxicological phenomena*. SAR and QSAR in Environmental Research, 1999. **10**: p. 533-543.
10. Rosenkranz, H.S., A.R. Cunningham, Y.P. Zhang, and G. Klopman, *Applications of the CASE/MULTICASE SAR method to environmental and public health situations*. SAR and QSAR in Environmental Research, 1999. **10**: p. 263-276.
11. Rosenkranz, H.S., A.R. Cunningham, Y.P. Zhang, H.G. Claycamp, O.T. Macina, N.B. Sussman, S.G. Grant, and G. Klopman, *Development, characterization and application of predictive-toxicology models*. SAR and QSAR in Environmental Research, 1999. **10**: p. 277-298.
12. Rosenkranz, H.S. and A.R. Cunningham, *The High Production Volume Chemical Challenge Program: The relevance of the in vivo micronucleus assay*. Regulatory Toxicology and Pharmacology, 2000. **31**: p. 182-189.
13. Rosenkranz, H.S. and A.R. Cunningham, *The High Production Volume Chemical Challenge Program: The rodent LD₅₀ and its possible replacement*. Alternatives to Laboratory Animals, 2000. **28**: p. 271-277.
14. Rosenkranz, H.S., N. Pollack, and A.R. Cunningham, *Exploring the relationship between inhibition of gap junctional intracellular communication and other biological phenomena*. Carcinogenesis, 2000. **21**: p. 1007-1011.
15. Rosenkranz, H.S. and A.R. Cunningham, *A new approach to evaluate mechanistic relationships among genotoxic phenomena: Validation*. Mutagenesis, 2000. **15**: p. 325-328.
16. Rosenkranz, H.S. and A.R. Cunningham, *A battery of cell toxicity assays as predictors of eye irritation: A feasibility study*. Alternatives to Laboratory Animals, 2000. **28**: p. 603-607.
17. Rosenkranz, H.S. and A.R. Cunningham, *SAR modeling of genotoxic phenomena: The effect of supplementation with physiological chemicals*. Mutation Research, 2000. **476**: p. 133-137.
18. Cunningham, A.R. and H.S. Rosenkranz, *Estimating the extent of health hazard posed by high production volume chemicals*. Environmental Health Perspectives, 2001. **109**: p. 953-956.
19. Karol, M.H., O.T. Macina, and A.R. Cunningham, *Cell and molecular biology of chemical allergy*. Annals of Allergy, Asthma, and Immunology, 2001. **87**: p. 28-32.
20. Rosenkranz, H.S. and A.R. Cunningham, *Chemical categories for health hazard identification: A feasibility study*. Regulatory Toxicology and Pharmacology, 2001. **33**: p. 313-318.
21. Rosenkranz, H.S. and A.R. Cunningham, *Prevalence of mutagens in the environment: Experimental data vs. simulation*. Mutation Research, 2001. **484**: p. 49-51.
22. Rosenkranz, H.S. and A.R. Cunningham, *SAR modeling of unbalanced data sets*. SAR and QSAR in Environmental Research, 2001. **12**: p. 267-274.
23. Cunningham, A.R., S.L. Cunningham, and B.W. Day, *Identification of structural components associated with cytostatic activity in MCF-7 but not in MDA-MB-231 cells*. Bioorganic and Medicinal Chemistry, 2003. **11**: p. 5249-5258.
24. Pollack, N., A.R. Cunningham, and H.R. Rosenkranz, *Environmental persistence of chemicals and their carcinogenic risk to humans*. Mutation Research, 2003. **528**: p. 81-91.
25. Rosenkranz, H.S. and A.R. Cunningham, *Environmental odors and health hazards*. Science of the Total Environment, 2003. **313**: p. 15-24.
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