CURRICULUM VITAE

Carolyn M. Klinge

PERSONAL DATA

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EDUCATION

1979 B.A., Biology, *Magna cum laude* Keuka College Keuka Park, New York

1981 M.S., Genetics Milton S. Hershey College of Medicine of the Pennsylvania State University, Hershey, PA.
M.S. thesis: "Genetic Regulation of Testosterone-Induced Ornithine Decarboxylase Activity in Mouse Kidney", Leslie P. Bullock, D.V.M., advisor.

1984 Ph.D., Pharmacology Milton S. Hershey College of Medicine of the Pennsylvania State University, Hershey, PA.
Ph.D. dissertation: "Activity and Regulation of DNA Polymerases in Normal Rat Mammary Gland and R3230AC Mammary Tumor", Dai Kee Liu, D.V.M., Ph.D., advisor.

POST-DOCTORAL TRAINING

12/84-6/89 University of Rochester School of Medicine and Dentistry,
Department of Biochemistry and the Cancer Center, Rochester, N.Y.
1986-87: U.S.P.H.S. Cancer Research Training Grant (T32CA09363)
1988-89: U.S.P.H.S. Diabetes, Endocrine, and Metabolic Research Training Grant (T32AM07092)

ACADEMIC CERTIFICATONS

Certificate in Health Professions Education, 5/2014 University of Louisville School of Medicine, College of Education and Human Development & Graduate School, Department of Leadership, Foundations and Human Resource Education

Certificate in Organizational Change in Higher Education, 8/2021 University of Louisville, College of Education and Human Development & Graduate School.

ACADEMIC POSITIONS HELD

9/87-5/88 (*while full time post doc at UofR*) Adjunct Assistant Professor in Biology, Monroe Community College, Rochester, N.Y. Course: "Principles in Biochemistry" (4 semester hours- maternity leave replacement)

7/89-12/95 Assistant Research Professor, University of Rochester School of Medicine and Dentistry, Department of Biochemistry and the Cancer Center, Rochester, N.Y.

1/96-7/96 Associate Research Professor, University of Rochester School of Medicine and Dentistry, Department of Biochemistry and the Cancer Center, Rochester, N.Y.
8/96-9/99 Adjunct Assistant Professor, University of Rochester School of Medicine and Dentistry, Department of Biochemistry and Biophysics, Rochester, N.Y.
8/96-6/30/01 Assistant Professor, Department of Biochemistry and Molecular Biology, University of Louisville School of Medicine, Louisville, KY.
7/1/01-6/30/05 Associate Professor (tenured), Department of Biochemistry and Molecular Biology, University of Louisville School of Medicine
9/01- 6/30/21 Member, Center for Genetics and Molecular Medicine (CGeMM), University of Louisville School of Medicine
10/01-**present** Member, James Graham Brown Cancer Center, University of Louisville School of Medicine
2/04-6/06 Director, Endocrinology and Developmental Biology Core, Center for Genetics and Molecular Medicine (CGeMM), University of Louisville School of Medicine
6/07-6/12 Member, NIEHS Center for Genomics and Integrative Biology (CEGIB), University of Louisville School of Medicine
7/01/05-**present Professor of Biochemistry and Molecular Genetics**, Department of Biochemistry and Molecular Genetics, University of Louisville School of Medicine
12/18**-present** Member, Christina Lee Brown Envirome Institute.
7/20-**present** Member, Center for Integrative Environmental Health Sciences (CIEHS) 5P30ES030283, J. Christopher States, Ph.D., Director
7/21**-present** Leader, Cancer Research Interest Group (CIG), CIEHS

OTHER POSITIONS

9/85-8/88	Green Ribbon Panel, Keuka College, Keuka Park, NY
9/88-5/90	Vice President, Personnel, Alumni Association, Keuka College, Keuka Park, NY
5/90-5/96	President, Alumni Association, Keuka College, Keuka Park, NY
7/1/11-6/30/14	Alumna Trustee, Keuka College, Keuka Park, NY; Committees: Academic Affairs and Long Range Strategic Planning
7/1/14-6/30/20	Trustee-at-large, Keuka College, Keuka Park, NY: Committees: Chair, Academic Affairs: 2014-19; Long Range Strategic Planning- member 2012-15; Diversity and Cultural Competency 2012-2019; Presidential Search Committee 2019; Executive Committee 2014-19; Student Success Committee 2019-20;
7/1/11-6/30/20	Member, Association of Governing Boards of Colleges and Universities
7/1/22-present	Trustee Emerita, Keuka College

MEMBERSHIP IN LEARNED AND PROFESSIONAL SOCIETIES

1978	*Chi Beta Phi*
1984	American Association for the Advancement of Science
1988	American Association for Cancer Research
1989	New York Academy of Sciences
1991	The Endocrine Society
1992	Women in the Endocrine Society
1996	American Association of University Professors
1996	American Society for Biochemistry and Molecular Biology
1997	*Sigma Xi*
2001	American Heart Association Scientific Council for Basic Cardiovascular Sciences
2022	Society of Toxicology

HONORS AND AWARDS

1975	Rotary Summer exchange student in Nürnberg, Germany
1975-79	New York State Regents Scholarship; Keuka College Presidential Scholarship
1976	Freshman Chemistry Prize and German Book Prize, Keuka College
1978	*Chi Beta Phi,* a national scientific honor fraternity
1978	Keuka College academic honor fraternities: *Sigma Lambda Sigma* (the Mortarboard chapter for Keuka) and *Alpha Sigma Kappa*
1978-79	Grant from the Rochester (NY) Academy of Sciences for Senior Research in Biology
1978-79	Who's Who Among American College and University Students
1979	Senior Honors in Biology/Biochemistry from Keuka College: "Isolation and Characterization of DNA from Bean Seed Embryos", Joan M. Griffiths, Ph.D., advisor.
1983-84	American Cancer Society Institutional Research Grant (IN-109H)
1990	American Cancer Society Institutional Research Grant (IN-18)
1990	Nichols Institute New Investigator Award from the Endocrine Society
1993	University of Rochester Department of Biochemistry Commencement speaker, selected by senior Biochemistry students
1994	Selected by senior undergraduate students to write an essay to graduating class that was published in the 1994 yearbook of the University of Rochester
1995	Keynote speaker, Eighth Annual Graduate Research Forum, The Milton S. Hershey College of Medicine of the Pennsylvania State University.
1997	Eleanor Judd Wilkes Service to Keuka College award
1997	Research! Louisville poster competition: second place in the "Originality" category
1998	Travel award from the Endocrine Society
2003	Gender Equity Award for a basic science medical faculty member from the Louisville chapter of the American Women's Medical Association.
2004	Community Service Award from the University of Louisville
2009-2019	University Scholar, University of Louisville
2012	Alumna Professional Achievement award from Keuka College
2013	Honored at Celebration of Faculty Excellence, University of Louisville
2017	World Association for Cooperative Education (WACE) Hall of Fame from Keuka College
2018	Chautauqua Literary & Scientific Circle, Chautauqua Institution, Chautauqua, NY

Editorial Board Positions

2003-**present**	Editorial Board, *Molecular and Cellular Endocrinology*
7/1/14-12/31/17	Editor for the Americas*, Molecular and Cellular Endocrinology*
1/1/18-present	**Co-Editor-in-Chief,** *Molecular and Cellular Endocrinology*
2009-2012	Editorial Board *Endocrinology*
2013-2017	Editorial Board *Endocrine Disruptors*
2018-2020	Editorial Board *Nature Scientific Reviews*
2019-	Editorial Board *Endocrine and Metabolic Science*
2022-	Editorial Board, *Vitamins and Hormones*

ad hoc REVIEWER

Biochemistry	Biochemical Pharmacology
Cancer Research	Nucleic Acids Research
Molecular and Cellular Endocrinology	Steroids
Molecular Endocrinology	J. Clinical Endocrinol. & Metabolism

Oncology Research	Endocrinology
Journal of Biological Chemistry	Toxicological Sciences
Journal of Steroid Biochemistry and Molecular Biology	
Molecular Human Reproduction	Biopolymers
Journal of Lipid Research	Hormones and Behavior
International Journal of Cancer	Medical Principles and Practice
Nutrition and Cancer	Toxicological Sciences
J. Society for Gynecological Investigation	EMBO J
Reproduction	Chirality
Trends in Endocrinology & Metabolism	Environ. Health Perspective
Biol. Reprod.	Medical Principles & Practice
Cancer Epidemiology, Biomarkers and Prevention	
Molecular Endocrinology	Endocrine Related Cancer
Gene	Molecular Cancer Research
Molecular Cancer Therapeutics	Toxicology & Applied Pharmacology
Cancer Letters	Clinical Cancer Research
Proceedings of the National Academy of Sciences (PNAS)	
Reproductive Toxicology	Drug Metabolism and Disposition
Atherosclerosis	FASEB J.
Pharmaceutical Research	J. Mol. Endocrinol.
Cell Biology International	BMC Genomics
Current Genomics	Expert Opinion on Therapeutic Targets
Hormones and Cancer	Journal of Pharmacology & Therapeutics
PLoS One	Journal of Cell Science
Oncogene	The Ocular Surface
Cell Biology and Toxicology	Cellular Biochemistry
Lung Cancer	BMC Bioinformatics
British Journal of Cancer	Brain Research
J. Endocrinol. & Metabolism	Lung Cancer Management
Carcinogenesis	Nutrition Reviews
Journal of Applied Physiology	Oncotarget
Biochem Biophys Acta Molecular Cell Research	
Nuclear Receptor Signaling	Hepatology
Molecular Human Reproduction	Cell and Tissue Research
Clinical and Translational Medicine	Am. Journal of the Medical Sciences
J. Cellular Biochemistry	Frontiers in Artificial Intelligence
Scientific Reports	Advances in Medical Sciences
Cellular and Molecular Life Sciences	Toxicology
International Journal of Toxicology	J. Mammary Gland Biology and Neoplasia
npj Breast Cancer	Oncology Reports
Epigenomics	iScience
Physiology International	Cancer and Metastasis Reviews

GRANT REVIEW PANEL APPOINTMENTS

1995, 1996	DOD CDMRP Breast Cancer Research Program (BCRP), member Molecular Biology Panel 2,
1997	U.S. Environmental Protection Agency Endocrine Disruptors peer review panel
1997, ’98, ‘99	DOD CDMRP BCRP, member Clinical and Experimental Therapeutics Section 4

1998	Post-doctoral Fellowship review panel, The Susan G. Komen Breast Cancer Research Foundation
1998, 1999	Panel II, the American Institute for Cancer Research; *ad hoc* member
1999	U.S. Environmental Protection Agency Endocrine Disruptors peer review panel
1999	NIH/NIEHS Special Emphasis Panel for RFA ES 98-001, Superfund basic research review.
2000-2011	Panel II, American Institute for Cancer Research; regular member
2000	NCI/NIH panel Special Emphasis Panel (ZCA1-SRRB-E (M2)), Breast Cancer Research
2001, 2002	DOD CDMRP Prostate Cancer Research Program, member Clinical and Experimental Therapeutics Section 2
2001	NIH SBIR BCE review panel: applications from small businesses involving research in reproduction, endocrinology and cancer
2001	NCI *ad hoc* review panel for PA 01-021, Small Grants Program for Cancer Epidemiology and PAR 00-025, Cancer Prevention Small Grant Programs
2001	NIH *ad hoc* review panel for RFA HD-00-022: "Special Cooperative Centers Program in Reproductive Research (SCCPRR) (U54 grant applications)."
2001	California Cancer Research Grant program; regular member of review panel
2002	NIH *ad hoc* reviewer for Biochemical Endocrinology (BCE) study section
2002-04	NIH *ad hoc* reviewer for Endocrinology (END) study section
2003,2004	DOD CDMRP BCRP, member Endocrinology Panel 2
2004	Member, American Heart Association Grant Review Panel 5B
2004-2007	NIH regular member of Molecular and Cellular Endocrinology (MCE) panel
2004	NIH Special Emphasis Panel member for the Nutritional & Metabolic Sciences IRG
2005	DOD CDMRP Prostate Cancer Research Program, member Clinical and Experimental Therapeutics-2 panel
2005	External Reviewer, Health Research Board of Ireland
2006	DOD CDMRP Ovarian Cancer Research Program, member OC-2 Panel
2007	S.G. Komen Breast Cancer Research Foundation Post-doctoral fellowship review panel
2007	DOD CDMRP BCRP, member Endocrinology panel I
2008	S.G. Komen Breast Cancer Research Foundation, Systemic Therapy 2 review panel
2008	NIH Molecular and Cellular Oncology P01 Special Emphasis Panel
2008	DOD CDMRP BCRP Era of Hope Postdoctoral Fellow Awards Review Panel
2009	DOD CDMRP BCRP Era of Hope Concept Awards Endocrinology Review Panel
2009	DOD CDMRP BCRP, Idea and Postdoctoral Award review panel Clinical & Experimental Therapeutics (IPA-4)
2009	NIH ZRG1 CB-B 10 B, Cell Biology SBIR/STTR review panel
2009	NCI/NIH Challenge Grants RC-1 review panel
2009	NIH NIDDK Special Emphasis Panel/Scientific Review Group 2009/10 ZRG1 EMNR-A (95) S
2009	NIH/NCI Special Emphasis Panel SEP- ZRG1 OBT A 58 for the review of ARRA Challenge Grants
2009	DOD CDMRP Ovarian Cancer Research Program, member panel OC 4
2009	DOD CDMRP BCRP, Integration Panel (IP) for the programmatic review of fiscal year 2009 BCRP Predoctoral Traineeship, Postdoctoral Fellowship, and Idea Award proposals.
2009	NIH Tumor Cell Biology (TCB) Study Section, *ad hoc* reviewer, Oct. 5-6, 2009.
2010	S.G. Komen For the Cure Research Foundation, Molecular Biology-2, Post-doctoral fellowship grant reviewer, Febr. 5, 2010.

2010 NIH Molecular and Cellular Endocrinology (MCE), *ad hoc* reviewer, Febr. 8-9, 2010.
2010 DOD CDMRP BCRP, Integration Panel (IP) for the programmatic review of fiscal year 2010 BCRP Predoctoral Traineeship, Postdoctoral Fellowship, and Idea Award proposals.
2011 NIH ICER Study Section, *ad ho*c reviewer January 27-28, 2011.
2011 Science Foundation of Ireland Breast Cancer Research Program review, Royal College of Surgeons in Ireland (RCSI), Dublin, March 24-25, 2011.
2011 DOD CDMRP BCRP, Pre-screening of Idea Grant applications, online, June 2011.
2011 NIH NCI U54 Tumor Microenvironment Network (TMEN) Special Emphasis Review Panel, *ad ho*c reviewer June 29-July 1, 2011.
2011 DOD CDMRP BCRP, Integration Panel (IP) for the programmatic review of fiscal year 2010 BCRP Predoctoral Traineeship, Postdoctoral Fellowship, and Idea Award proposals.
2011 S.G. Komen For the Cure Research Foundation, post-doctoral fellowship review (20 online reviews, Oct-Nov. 2011)
2012 DOD CDMRP BCRP Pre-screening of Idea Grant applications, online, June 2012.
2012 NIH Molecular Oncogenesis (MONC) study section, F09 panel (ZRG1 F09-A (09) L), *ad ho*c reviewer 7/25/12
2012 DOD CDMRP BCRP, Integration Panel (IP) for the programmatic review of fiscal year 2012 BCRP Postdoctoral Fellowship
2012 NIH ZRG1 EMNR-S, *ad hoc* reviewer, October 2012
2013 NCI Special Emphasis Panel ZCA1 RPRB-C (M1) Breast Cancer P01 reviewer, February 11-12, 2013 in Rockville, MD.
2013 DOD CDMRP BCRP, Integration Panel (IP) for the programmatic review of fiscal year 2012 BCRP Idea, Pre-, post-doctoral Fellowship applications, Washington, DC, April 25, 2013.
2013 DOD CDMRP BCRP, Breakthrough grant applications online screening review July-August, 2013
2013 NIH ZAT1 SM 29, RFA-AT- 11-011 *ad hoc* reviewer, R01 grant reviews Sept. 13, 2013
2013 NIH/NCI 2014/01 ZRG1 F09A-L (20) L *ad hoc* reviewer of NCI fellowship applications Nov. 14, 2013
2014 DOD CDMRP BCRP, Integration Panel (IP)- January 20-21, Washington, DC
2014 Endocrine Society annual meeting abstract reviewer; judge for posters at the Endocrine Society meeting in Chicago (June)
2014 DOD CDMRP BCRP, Integration Panel (IP)-May 20-21, Baltimore, MD
2014 NIH ZRG1 F09A-A(20)L, NCI Fellowship Review, Washington, D.C. 11/13-14/14
2015 NIH Oncology ZRG1 F09A-D, Fellowship review, March 26-27, 2015.
2015 DOD CDMRP BCRP, Integration Panel (IP)-May 18-19, 2015, Herndon, VA; August 11, 2015, Herndon, VA.
2015 NIH Oncology Special Emphasis Panel 2015/10 ZCA1 SRB-L (O1) June 9-10, Bethesda, MD
2015 NIH Oncology Special Emphasis Panel 2016/01 ZRG1 F09A-D (20) November 5-6, San Francisco, CA
2016 NIH Special Emphasis Panel F09A-D Fellowships: Oncology, 7/13-14/16, Washington, D.C.
2016 DOD CDMRP BCRP, Integration Panel, 9/12-13/16, Reston, VA
2017 NIH Special Emphasis Panel ZRG1 OBT-X (02) M 3/29/17

2017	NIH F09 Fellowships: Oncology Study Sections: July 13-14, 2017, McClean, VA.; Nov. 6-7, 2017 Chevy Chase, MD.
2018	NIH Cancer Research Workforce Diversity R21 Review, 3/23/18, Washington, DC
2018	DOD CDMRP BCRP, Integration Panel, 4/10/18, Reston, VA
2018	NIH Special Emphasis Panel ZRG1 F09A-R Fellowships: Oncology, 7/12-13/18, Seattle, WA; 11/8-9/18 Bethesda
2019	NIH Special Emphasis Panel ZRG OBT-R (55) Cancer Workforce Diversity Study Section, 4/17/19
2019	NIH Special Emphasis Panel ZRG1 F09A-R Fellowships: Oncology, 7/11-12/19; 11/7-8/19, Chevy Chase, MD (co-chair)
2020	NIH Special Emphasis Panel ZRG1 F09A-R Fellowships: Oncology, 3/16-17; 7/16-17, 11/5-6/20- online review due to COVID-19 (co-chair)
2020	DOD CDMRP BCRP, Integration Panel, 8/11/20; 11/5-6/20 -online review due to COVID-19
2021	NIH Special Emphasis Panel ZRG1 OBT-R (55) Cancer Workforce Diversity Study Section, 4/20/21
2021	NIH Special Emphasis Panel ZRG1 F09B-Z (20) L - Fellowships: Oncology 7/28-29, 2021; 11/4-5/21
2022	DOD CDMRP BCRP, Integration Panel, 1/25/22 -online review due to COVID-19
2022	NIH Special Emphasis Panel ZRG1 F09B-Z 20 L, Fellowships: Oncology, 3/15-16/22 (co-chair)

OTHER *ad hoc* GRANT REVIEWS

2005-2008	Science Foundation of Ireland
2010	Association for International Cancer Research UK
2010	Cancer Research UK
2011	Medical Research Council (MRK, UK) *ad hoc* grant review
2012	National Research Council of the Romanian Government (CNCS), *ad hoc* grant review
2012	Science Foundation of Ireland
2013	The Netherlands Organization for Health Research and Development
2014	Reviewer for the 2015 Iraq Science Fellowship Program
2015	Reviewer for the Louisiana Board of Reagents Research Competitiveness Subprogram
2016, 2018	Reviewer for the National Science Centre, Poland (Narodowe Centrum Nauki – NCN)
2017	External Reviewer for the Israeli Ministry of Science, Technology, and Space
2017-present	External Reviewer for Deutsche Forschungsgemeinschaft (DFG German Research Foundation)
2019	European Research Council (ERC) *ad hoc* reviewer
2019	Reviewer for the Netherlands Organisation for Scientific Research
2019	Review for the Croatian Science Foundation
2020, 2022	European Science Foundation *ad hoc* reviewer
2020	National Science Centre Poland *ad hoc* reviewer
2021	Institut Pasteur (Paris, France) *ad hoc* reviewer
2022	FWF Austrian Science Fund *ad hoc* reviewer

UNIVERSITY of LOUISVILLE COMMITTEE ASSIGNMENTS

1996-2000	Personnel Committee, Department of Biochemistry and Molecular Biology
1999-2000	Chair, Personnel Committee, Department of Biochemistry and Molecular Biology

1996-1998	Search Committee for new genetics faculty member, Department of Biochemistry and Molecular Biology
1996-2009	School of Medicine Academic Grievance Committee
1999- 2005	School of Medicine Distinguished Service Award Committee
2000-2008	Member, Graduate School Council (one of 4 UofL School of Medicine faculty reps.)
2000-2001	Search Committee for Vice Provost for Diversity and Equal Opportunity: UofL hired Dr. Mordean Taylor Archer who served from 2002-2019.
2001-2004	Research Committee, Department of Biochemistry and Molecular Biology; Chair 2004
2001-2004	Exam I Committee, Department of Biochemistry and Molecular Biology
2002-2004	Chair, Exam I Committee, Department of Biochemistry and Molecular Biology
2001-2003	Curriculum Committee, School of Medicine
2002-2006	Personnel Committee, Department of Biochemistry and Molecular Biology, Chair 2005
2003-2004	Search Committee for Faculty Recruitment for the Gheens Aging Center and Dept. Biochemistry and Molecular Biology
2003-2007	Chair, Search Committee for Faculty Recruitment, Dept. Biochemistry and Molecular Biology
2003-2007	Chair, Search Committee for the Preston Popes Joyes Chair in Biochemistry, Dept. Biochemistry and Molecular Biology
2003-2009	Chair, School of Medicine Academic Grievance Committee
2004-2005	Pharmacology Chair (David W. Hein, Ph.D.) Review Committee, School of Medicine
2004-2005	External-member of the mid-tenure review committee for David Clouthier, Ph.D., Assistant Professor, Department of Molecular, Cellular and Craniofacial Biology, School of Dentistry
2005-2006	Chair, Periodic Career Review for Barbara J. Clark, Ph.D., Associate Professor of Biochemistry and Molecular Biology
2006-2008	Advisory Board for "School to Career: Development for a High School Health Science Career Pathway", National Center for Research Resources, Dr. David Tollerude, M.D., PI.
2007	Chair, Promotion and Tenure Review for Jason Chesney, M.D., Ph.D., Assistant Professor of Dept. of Medicine, Division of Medical Oncology and Biochemistry and Molecular Biology
2007	Chair, Periodic Career Review for Thomas E. Geoghegan, Ph.D., Associate Professor, Dept. of Biochemistry and Molecular Biology
2009-12	Center for Genetics and Molecular Medicine, member of the Finance Advisory Committee
2009-15	School of Medicine Promotion and Tenure (PAT) Committee
2009	Chair, Promotion and Tenure Review for Mark W. Linder, Assistant Professor of Biochemistry (Secondary appointment), Associate Professor of Pathology and Laboratory Medicine.
2009	Chair, Periodic Career Review for Brad Chaires, Professor of Medicine, Professor of Biochemistry (Secondary appointment).
2010	Psychiatry Chair (Dr. Allan Tasman) Review Committee School of Medicine
2010-11	Chair, Periodic Career Review and Endowed Chair for Russell A. Prough, Preston Pope Joyes Endowed Chair in Biochemistry and Molecular Biology
2012	LCME Faculty Committee
2012-13	Vice-Chair, School of Medicine Promotion and Tenure (PAT) Committee
2012-13	Search Committee for Chair of Microbiology and Immunology
2013-14	Chair, School of Medicine Promotion and Tenure (PAT) Committee (7/1/13-6/30/14)

2012-14	Research and Academic Programs Task Group, member, Office of the Executive Vice President for Research and Innovation
2012-18	Faculty Research Advisory Council, Office of the Executive Vice President for Research and Innovation (EVPRI)
2015	Executive Vice President for Research and Innovation *ad hoc* committee on internal grant programs
2016-present	Executive Committee of the Interdisciplinary Studies with Specialization in Translational Bioengineering (ISSTBE) Ph.D. Program
2016-17	Search Committee for new cancer biology faculty member, Department of Biology
2016-17	Chair, Search Committee for three new faculty members, Department of Biochemistry and Molecular Genetics
2017-present	Faculty Diversity Representative – School of Medicine
2017-present	Exam I Committee, Department of Biochemistry and Molecular Genetics
2020	UofL School of Medicine Strategic Planning Committee, Committee on Graduate and Postdoctoral Education
2021	Chair, Periodic Career Review for Barbara J. Clark, Ph.D., Associate Professor of Biochemistry and Molecular Genetics
2021-24	Elected Faculty member, University of Louisville Athletic Association Board (ULAAB) of Directors, serving on the Committee on Academic Performance (CAP): member of the Annual Election and CAP/ULAAB Orientation Sub-committee; Chair of the Student Athlete Wellness Sub-committee

UNIVERSITY of LOUISVILLE SERVICE ACTIVITIES

1996-	Judge, Panel Judge, School of Medicine Student Research Day (Research!Louisville)
1997	Grand Awards Judge for Biochemistry, Intel International Science and Engineering Fair, 5/12-13/97 at the Kentucky Commonwealth Convention Center.
1997, 1998	*Sigma-Xi*-sponsored Research Day for Girl Scouts; hands-on protein gel/demonstration.
1997	Torch bearer (one of 75) in U of L bicentennial "kick-off" run.
1998-2000	Faculty Representative to Trialogue (Presbyterian Church [USA], United Church of Christ, and Reformed Church of America) U of L Campus Ministries Board
1998, 1999	Biochemistry and Molecular Biology Dept. representative to U of L School of Medicine commencement ceremony
1998-2002	Unit lab advisor to first year medical students
2002-**present**	Organizer of the Molecular Endocrinology seminar series for the Multidisciplinary Endocrine Conference, Dept. of Endocrinology, Division of Medicine, Dr. Stephen Winters (Chair)
1999-**present**	Judge for the U of L Junior Science and Humanities Symposium
1997-**present**	Judge for Research!Louisville
2002, 2004	Judge for Intel Science Fair, Louisville, KY.
2004-**present**	member Summer Research Opportunity Program (SROP) selection committee for UofL summer undergraduate research scholars
2004-2008	Faculty and Staff for Human Rights Committee
2010-2011	Distinction in Research Committee (for medical students)
2011-2012	Committee on Faculty of the School of Medicine for the Liaison Committee on Medical Education (LCME) accreditation review in April 2013

TEACHING EXPERIENCE

Keuka College

1977-79 Undergraduate Tutor for Chemistry 1001 and 1002, and General Microbiology

The Milton S. Hershey College of Medicine of the Pennsylvania State University

1981-83 Graduate teaching assistant for Techniques in Pharmacology

Keuka College Field Period intern student: (minimally 200 hours in five consecutive weeks in the lab): Dawn L. Cooke (Keuka 1983)

University of Rochester School of Medicine

years	course	format	topic	hours
1988-96	BCH 208	(lecture and lab)	Protein purification, enzyme kinetics, and isoenzymes	12
1988-96	BCH 402	(lecture)	DNA replication, steroid and nuclear receptors, & gene transcription	6
1993-5	BCH 401	(lecture)	Thermodynamics and enzyme kinetics	5
1992-4	BCH 512	(lecture)	Ligand-protein interaction, binding kinetics, and cooperativity	3

Mentored Graduate Students at the Univ. of Rochester School of Medicine:

- Jennifer H. Anolik (May 1990-July 1994; M.D./Ph.D. student). Ph.D. in Biochemistry awarded July 1994. M.D. awarded May 1996. Presently an Associate Professor of Medicine/Rheumatology at the Univ. of Rochester.
- Mark D. Driscoll (September 1990-November 1996); Ph.D. in Biochemistry awarded in November 1996. Presently a scientist at Molecular Staging, Inc.
- Colleen L. Brolly (February 1995-December 1996). M.S. in Toxicology awarded November 1996. Presently employed as a Research Technician at Schering-Plough Pharmaceutical Co. in Princeton, N.J.
- Ganasan Sathya (April 1995-August 1996; Ph.D. student in Biochemistry). M.S. awarded in November 1996. Ph.D. awarded September 1999. Completed a post-doc in Dr. Donald McDonnell's lab at Duke University and is now a Principal Scientist at Affinergy, Inc (a spin-off biotech company from Dr. McDonnell's lab whose main technology is identifying M13 phage displayed peptides to coat implantable devices so they can be better adapted to restore bone growth).
- Luanne Levin, M.S. in Biochemistry received from the University of Rochester, 1995. Ph.D. in Biochemistry and Biophysics received from the University of Rochester in 2000.

Undergraduate students: Karin Bean, Noah Goldman, Gordon Luan, Dai Nguyen, Ethel Reubin, Kathy Scott, Frank Setter, April L. Studinski, Michael C. Rutundo, Joel Shapiro, Markus Wahl (Fullbright Scholar from Germany), and David Z. Tzeng.

Keuka College Field Period intern students: (minimally 200 hours in five consecutive weeks in the lab): Darby T. Knox'87, Catherine Lockley'89, and Pieter Van Horn'95.

Medical student summer research fellows: Christopher D. Turner and Minh Doan T. Nguyen

Post-doctoral fellows: (shared supervision with Drs. Robert Bambara and Russell Hilf): Drs. Linda B. Ludwig, M.D., Franklin V. Peale, M.D., Ph.D., Yuko Ishibe, M.D., and Shuenn Liou, Ph.D.

University of Louisville School of Medicine

formal courses:

years	course	format	topic	hours
1996-9	BCH611	lecture and lab	enzyme kinetics	23
1997-9	BCH650	lecture	advanced enzyme kinetics and allosterism	13
1997-**present**	**(graduate course, Molecular Biology)**			
	BCH668	lecture & student-directed learning activities		14

	transcription by prokaryotic RNA polymerase	
	transcription by eukaryotic RNA Pol. I, II, & III	
	post-transcriptional processing	
	regulation of eukaryotic gene transcription	
	development and transcription	
	coactivator and corepressor complexes	
	chromatin structure and gene regulation	
	non-coding RNAs	
	RNA binding proteins	
	miRNAs	
1997-03 BCH660 lecture	molecular endocrinology, steroid and nuclear receptors, coregulatory proteins, transcription	6
1998-**present** Medical Biochem./Genetics and Molecular Medicine/ Normal Body Systems II	carbohydrate metabolism	6
1999- Medical Biochem.	fat-soluble vitamins, Vitamin A	1
2001- 2006 Medical Biochem.	Membrane transport, signal transduction, and regulation of homeostasis	3
	(topics moved to Physiology)	
	molecular endocrinology and oncogenes	6
2007- **present** First year MD students:	Regulation of satiety, weight, GI hormones	2
2007- **present** Second year MD students.	Inhibitors of steroid hormone action in cancer treatment	1
2002-4 PHM661: Molecular Pharmacology	"Molecular Pharmacology of Steroid Hormones and Nuclear Receptor Ligands"	2
2006-7 BIOC Methods I lecture & lab	transfection of mammalian cells; Q RT-PCR	10

2006-**present** Created and am Director of the course "Special Topic Course in Summer Endocrine Health Science Research Program for Medical Students" (Biochemistry 816). I give one (2 h) lecture.

2007-2010 PHTX 657:Endocrine and Metabolic Pharmacology	"Research approaches in Endocrinology: Cellular and molecular level	
2005- **present** BIOC661: Molecular Toxicology	"Endocrine Disruptors"	4

2019- **present** BIOC661: Molecular Toxicology: Toxicant-Receptor interactions (2 h); Nuclear receptor regulation of xenobiotic and sterol metabolism (4h); Circadian clock and drug metabolism (2 h)

2019- **present** Facilitator/director Special Topics: Student Journal Club for BMG graduate students

Undergraduate students (Independent study): Jennifer L. Bowers (Honors thesis in Biology UofL CAS); Kenya V. Hurt, Alyson Spille, Brenda Burnett; Melanie Lippmann; Timothy L. Ramsey (Honors thesis in Biology UofL CAS); Tien Nguyen; Lilibeth Lancetta; Rosemary L. Sims; C. Nicole Dickenson (Honors thesis in Biology UofL CAS); Monica N. Hall (Honors thesis in Biology UofL CAS); Catherine Grove; Leslie Schier; Eric Yoder (Honors thesis in Biology; supported by NIH R25CA044789 (N. Burzynski, PI); Andrew Barnes; Susan Isaacs (supported by NIH R25CA044789 (N. Burzynski, PI); Neesha Patel, Alyson M. Hockenberry (won the David Smith Memorial Award for Undergraduate Research in the Biology Dept. and received Biology honors for her research), Brandie N. Radde, Alexandra Martin, Laura Don Oliver (Honorable Mention

for her Senior Honors Thesis, April 2011); Stephanie Pearl Glisson; Negin Alizadeh-Rad; Kendra Swope; Stephany Vittitow, Haasya Kanamarlapudi.

Summer Research Opportunity Program (SROP) undergraduate students: Stacey Lynn Smith (Centre College, Summer 1999); Jennie E. Lee (Centre College, Summer 2000); Monica N. Hall (U of L, Summer 2003); Leslie Schier, Renate A. Cochrum, and Joseph A. Blackmon (Summer 2005); Eric Yoder (Summer 2006); Susan Isaacs (Summer 2007); Neesha Patel (Summer 2007); Jeremy S. Harbour (Summer 2008); Brandie N. Radde, Akriti Kapur, and Tara Kollenberg (Summer 2009); Felicia Lenzo (Keuka College Class of 2011, Summer 2010); Laura Don Oliver (Summer 2010); Katelyn Barnhart (married name Ponder) (Keuka College Class of 2012, Summer 2011); Jacob Bell (Summer 2011); Maria Lohr (Centre College, Class of 2012, Summer 2011); Cody M. Sterling (Summer 2013); Robert Wieland (DePauw University, Class of 2014, Summer 2013); Negin Alizadeh-Rad (Summer 2015); Stephany Vittitow (Summer 2016); Madelyn A. Green (Summer 2017).

James Graham Brown Cancer Center Summer Research Internship Program for high school and undergraduate students: Abirami Krishnasamy (Summer 2008); Shemiah Clark and Abirami Krishnasamy (Summer 2009); Sumata Bhimani (Summer 2010); Leetah Kruer (Summer 2011); Meghan Hyman (Summer 2012); Rachel Williams (Summer 2013); Weijing Huang (Summer 2014); Stephanie Price (Summer 2015); Victoria Brown (Summer 2019); Claire Poulton (Summer 2021); Sanhita Kutumbaka (Summer 2022).

Summer Minority Scholars program students: Anissa Lefta (Berea College, Summer 2002); Mellani Lefta (Eastern Kentucky University, Summer 2002); Candice Brady (University of Louisville, Summer 2003); Esughani Okonny (Kentucky State University, Summer 2003).

Keuka College Field Period intern students: (minimally 200 hours in five consecutive weeks in the lab): Cristi L. Brockway'00; Krista A. Robinson'02 (now Krista Riggs), Sara B. King'04; Ashley Leubner'08; Felicia Lenzo'11 (Summer 2010); Katelyn Barnhard'12 (Summer 2011); Mackenzie Ellis'15 and Kirsten Richardson'15 (Summer 2014)

Rotation Graduate students: Jennifer Bowers, Timothy Ramsey, Diego Montoya, Loretta Doan, Traci L. Smith, Awedis Kazawjian, Jodi Niederschmidt Condra, Kathleen A. Travis, Krista A. Robinson, Paul Noralez, Dan Xin, Smita Ranjan, Matthew Herrnberger, Brandi Warren, Tissa Thomas Manavalan, Lacey M. Litchfield, Kristen N. Harrison (Luken), Rihab E Hamed-Berair, Saasha Anil Kareparembil, Jennie Bartels-Kersey, Penn Muluhngwi, Linda Omer, Jessica Cannon, Arnela Alomerovic, Belinda Petri, Hieu Dai Li Vo, Justin Ventura.

Mentored Graduate Students:

1. Jennifer L. Bowers (January 1997- August 2000) M.S. in Biochemistry and Molecular Biology awarded August 2000. Global Treasury Manager at United Parcel Service.
2. Timothy L. Ramsey (January 2000-May 2002) M.S. student in Biochemistry and Molecular Biology awarded April 2002. Graduate Dean's Citation award for M.S. thesis, May 2002. Mr. Ramsey completed an MBA at the University of Chicago in June 2003. He was then CFO for Neuroscience Discovery at Eli Lilly in Indianapolis, IN. Since 2005, Tim has been Vice President of Product Development at SureGene, LLC, Louisville, KY.
3. Jodi A. Condra (September 2001-November 2002) Ph.D. student in Biochemistry and Molecular Biology. Ms. Condra withdrew from the Ph.D. program and is working as a

research technician in the laboratory of Mark D. Brennan, Ph.D. at the University of Louisville School of Medicine.

4. Kathleen A. (nee Travis) Mattingly January 2002-May 2007) Ph.D. in Biochemistry and Molecular Biology: "Regulation of Nuclear Respiratory Factor-1 (NRF-1) Expression by 17β-Estradiol: A New Mechanism for Coordinating Mitochondrial Gene Expression". Ph.D. dissertation exam passed March 22, 2007. Ph.D. conferred May 12, 2007. Dr. Mattingly received a Graduate Dean's citation. She is currently a high school biology teacher in the Jefferson County Public School District, Louisville, KY: Valley High School (8/07-6/09); Brown High School (8/09-present).
5. Krista A. (nee Robinson) Riggs (June 2003-December 2008) Ph.D. in Biochemistry and Molecular Biology: "Role of COUP-TFII in Tamoxifen-resistance in Human Breast Cancer" Ph.D. dissertation exam passed November 19, 2008. Ph.D. conferred December 18, 2008. Dr. Riggs received a Graduate Dean's citation. She completed post-doctoral training in the labs of Dr. Chuan Hu and Aruni Bhatnagar at the University of Louisville School of Medicine. Dr. Riggs was an Assistant Professor of Biochemistry and Molecular Biology at the Alabama College of Osteopathic Medicine, Dothan, AL (2013-14); Director of Assessment and Basic Sciences Curriculum and Associate Professor at Sullivan University, Louisville, KY (2014-19), and is now Associate Professor, University of the Cumberlands, Florence, KY (2019-present).
6. Williard Mazhawidza (July 2004-December 2007) Ph.D. in Biochemistry and Molecular Biology "Role of Estrogen Receptors and Coregulators in Lung Adenocarcinoma". Ph.D. dissertation exam passed December 3, 2007. Ph.D. conferred May 10, 2008. Dr. Mazhawidza completed a post-doctoral fellowship at Kentucky State University, taught Biological Sciences at Jefferson County Community College, completed Physician's Assistant training at the University of Kentucky, and is now in Cardiothoracic Surgery at the University of Chicago.
7. LaSharon D. Moseley (September 2004-May 2007) Graduate student in Pharmacology and Toxicology, co-mentor with Dr. Richard E. Goldstein, M.D., Ph.D., Professor of Surgery. M.S. degree conferred May 12, 2007.
8. Yoannis Imbert-Fernandez (January 2006-Dec. 2010) Ph.D. in Biochemistry and Molecular Biology "The Role of MUC1 Splice Variants in Dry Eye and Inflammation". Ph.D. dissertation exam passed November 11, 2010. Ph.D. conferred December 15, 2010. Dr. Imbert-Fernandez received a Graduate Dean's Dissertation Award. She completed a post-doctoral fellowship in the lab of Jason Chesney, M.D., Ph.D., James Graham Brown Cancer Center, University of Louisville School of Medicine. She is now an Assistant Professor of Medicine (Cancer Center), University of Louisville School of Medicine.
9. Tissa Thomas Manavalan (January 2008, dissertation defense 9/20/12, degree conferred 5/13) Ph.D. in Biochemistry and Molecular Biology "Regulation of miRNA and downstream target genes in endocrine-resistant breast cancer" Dr. Manavalan completed a post-doctoral fellowship in the lab of Dr. Wendell (Dell) Yarborough, M.D., Chief, Otolaryngology Department of Surgery, Yale School of Medicine, New Haven, CT from 1/13-1/14; she completed a post doc in the lab of Dr. Andrei Medvedev, Dept. of Immunology, University of Connecticut Health Center, Farmington, CT.; and is now a DNA Analyst for the Wisconsin State Crime Laboratory in Madison (Madison Crime Laboratory)
10. Kristen N. (nee Harrison) Luken (May 2009-August 2011) Graduate student in Biochemistry and Molecular Biology. Ms. Luken left the program to pursue a career in teaching high school science at Jeffersonville High School in Jeffersonville, KY

11. Lacey M. Litchfield (March 2009-2013, dissertation defense 4/5/13, degree conferred 5/13) Ph.D. in Biochemistry and Molecular Biology. Dissertation: "COUP-TFII and its interacting proteins in breast cancer and endocrine resistance" defended 4/5/13. Lacey received the John M. Houchens Prize that is awarded to the doctoral student who presents the most meritorious dissertation for the May 2013 commencement. Lacey completed a post-doctoral fellowship in the labs of Drs. Iris Romero and Lenguel Department of Obstetrics and Gynecology, Center for Integrative Science, University of Chicago, Chicago, IL. She completed a Post-doctoral fellowship at Eli Lilly, Indianapolis, IN. and is now a Senior Advisor at Eli Lilly and Company at Eli Lilly.
12. Penn Muluhngwi (April 2013-June 2017) Ph.D. in Biochemistry and Molecular Biology. Penn received his B.S. in Biochemistry from the University of Buea, Cameroon and an M.S. in Biology from New Mexico Highlands University. Dissertation: "Role of miR-29b-1 and miR-29a in endocrine-resistant breast cancer" defended 4/12/17. Penn received a Graduate Dean's citation for excellence in graduate studies on 5/12/17. He completed a two-year postdoctoral fellowship in Clinical Chemistry in the Dept. of Pathology and Laboratory Medicine at the University of Louisville School of Medicine 5/2019. He is certified with the National Registry of Clinical Chemist (NRCC). Penn is currently HLA director-in-training at the Feinberg School of Medicine, Northwestern University (August 2019-).
13. Belinda J. Petri (January 2019-) is a fifth year Ph.D. student in Biochemistry and Molecular Genetics. She received her B.S. in Biology *cum laude* \from Indiana University Southeast, New Albany, IN in 2018. Her dissertation project examines the role of HNRNPA2B1 overexpression on endocrine resistance in breast cancer and the role of epitranscriptomics in environmental liver disease.

<u>External reviewer on foreign Ph.D. dissertation exam committees:</u>

1. L. Vani, Ph.D. thesis: "Antiproliferative and chemopreventive potential of *Semecarpus anacardium* Linn nut milk extract on experimental mammary carcinoma" Dept. of Medical Biochemistry, University of Madras, India.
2. S. Yuvaraj, Ph.D. thesis: "Ameliorating effect of coenzyme Q10 riboflavin and niacin when co-administered with tamoxifen in postmenopausal breast cancer women" Dept. of Medical Biochemistry, University of Madras, India. (Dr. P. Sachdanandam, Supervisor)
3. Reeta Kangas, Ph.D. thesis: "Aging and microRNA messaging: Associations with systemic estrogen levels and physical performance". February 25, 2018, I was the Opponent (only one) for 2 h oral Ph.D. dissertation exam at the University of Jyväskylä, Jyväskylä, Finland
4. Elisabet A. Frick, Ph.D. Thesis "MicroRNA-190b in breast and ovarian cancer". March 30, 2023 University of Iceland, Laeknagarour, Reykjavik, Iceland. I am an Opponent for the dissertation exam.

<u>Summer Medical students</u> (Summer Research Scholar's Program funded by NIH Training Grant T35 BM08561; and from 2006- present, T35 DK072923-NIH-NIDDK (C.M. Klinge, PI):

1. Edouard L. Noisin, Ph.D. (Summer 1998)
2. Melissa A. McCarty (Summer 1999); M.D.'03-won the Physician/Scientist Biochemistry prize at the School of Medicine Honors Convocation at graduation in May 2003.
3. Sarah C. Jernigan (Summer 2000 and Summer 2001) M.D.'04-won the Physician/Scientist Biochemistry prize at the School of Medicine Honors Convocation at graduation in May 2004.

4. Mary Beth Watts (entering MD student, Summer 2002) M.D.'06-won the Physician/Scientist Biochemistry prize at the School of Medicine Honors Convocation at graduation in May 2006 (2 prizes were awarded in 2006).
5. Aimee R. Bohn (2nd year MD student, Summer 2003) M.D.'06 won the Physician/Scientist Biochemistry prize at the School of Medicine Honors Convocation at graduation in May 2006 (2 prizes were awarded in 2006).
6. Benjamin J. Johnston M.D. '07 (2nd year MD student, Summer 2004) was awarded the Physician/Scientist Biochemistry prize at the School of Medicine Honors Convocation at graduation in May 2007.
7. Brannon Mangus, M.D. '08 (2nd year MD student, Summer 2005); notably, Mr. Mangus was awarded a highly competitive Endocrine Society Summer Medical Student fellowship based on his qualifications and the application that we submitted.) Dr. Mangus was awarded the Physician/Scientist Biochemistry prize at the School of Medicine Honors Convocation at graduation in May 2008.
8. David B. McConda (entering MD student, Summer 2006; second year MD student, Summer 2007) Dr. McConda was awarded the Physician/Scientist Biochemistry prize at the School of Medicine Honors Convocation at graduation in May 2010.
9. Katherine Visanescu (entering MD student (Class of 2008, Summer 2006)
10. Marjorie L. Pilkington (second year MD student (Class of 2008), Summer 2007)
11. Sabra M. Abner (second year MD student (Class of 2009), Summer 2008)
12. Parul N. Barry (second year MD student (Class of 2010), Summer 2008)
13. John M. Fox (second year MD student (Class of 2011), Summer 2009)
14. Amber S. Zimmer (second year MD student, (Class of 2012), Summer 2009)
15. Ryan J. Smith (second year MD student (Class of 2013), Summer 2010), supported by NIH T35-DK072923notably, Mr. Smith received an honorable mention citation for his poster presentation in the Medical Student competition at Research!Louisville in October 2010.
16. Vandra Harris (second year MD student (Class of 2014), Summer 2011) , supported by NIH T35-DK072923, notably, Ms. Harris received an honorable mention citation for her poster presentation in the Medical Student competition at Research!Louisville in October 2011.
17. Makinzie D. Mott (second year MD student (Class of 2015), Summer 2012, supported by NIH T35-DK072923
18. Huy Xian Mai (second year MD student (Class of 2016), Summer 2013, supported by NIH T35-DK072923
19. David Patterson (second year MD student (Class of 2017), Summer 2014,supported by NIH R25-CA134283
20. Joshua Napier (second year MD student (Class of 2018), Summer 2015,supported by NIH T35-DK072923
21. Abirami Krishna (second year MD student (Class of 2019), Summer 2016, supported by NIH T35-DK072923: received first place Greater Louisville Medical Society's Women in Medical Sciences Award for her Poster presentation at Research!Louisville, 10/11/16. Received the Biochemistry and Molecular Genetics Physician/Scientist Award at UofL Medical School graduation, 5/11/19.
22. Gordon Cooper South Whitt (second year MD student (Class of 2022), Summer 2019, supported by NIH T35-DK072923: received second place among M.D. students for his poster presentation at Research!Louisville, 9/10/19. Dr. Whitt will be awarded the Physician/Scientist Biochemistry prize at the School of Medicine Honors Convocation at graduation in May 2022.

23. Ali Witt (second year MD student (Class of 2024), Summer 2021, supported by NIH T35-DK072923. Distinction in Research (DIR) started Jan. 2022-
24. Alexa D. Howser (second year MD student (Class of 2025), Summer 2022, supported by NIH T35-DK072923.

Post-doctoral fellows:

1. Kulwant Kaur, Ph.D. (November 1997- January 1998); Ph.D. from Guru Nanak Dev University, Amritsar, India, 1994; Post-doctoral fellow, Centre for Cellular and Molecular Biology, Hyderabad, India (1994-Nov. 1997). *Current*: Clinical Research/Scientist- Pharmaceutical/Biotech/Healthcare, Minneapolis, MN.
2. Peter Kulakosky, Ph.D. (January 1998- October 2001); Ph.D. in Biology from the University of Pennsylvania, 1989. Post-doctoral research associate Carnegie Mellon University, Nov. 1989-June 1991; Post-doctoral research associate, University of Arizona, July 1991-August 1994; Post-doctoral research associate, Boyce Thompson Institute for Plant Research, Cornell University, Sept. 1994-Dec. 1997. *Current*: Research Scientist, Autoimmune Technologies, New Orleans, LA.
3. Valentyn V. Tyulmenkov, M.D., Ph.D.(May 1999- June 2001); M.D. from the Crimean Medical Institute, Simferopol, Ukraine, 1985; Internship in Internal Medicine at Central District Hosp., Saki, Ukraine, 1985-86; Ph.D. in Environmental Toxicology from Moscow Medical Institute #1, Russia, 1989; Physician, Internal Medicine, Central District Hosp., Simferopol, Ukraine, and then Dept. Head, 1993-97; Medical Administrator, A.C.T.S. Inter-national Health Organization, Simferopol, Ukraine, 1997-98; Research Fellow, Hormone Receptor Laboratory, Brown Cancer Center, Univ. of Louisville School of Medicine, 1998-99. Residency in Internal Medicine, Interfaith Medical Center, Brooklyn, N.Y. *Current*: Hospitalist (physician) Norton Suburban Hospital, Louisville, KY.
4. Padmaja B. Nair Thomas, Ph.D. (August 2001- September 2002) Ph.D. from the University of Kerala, Trivandrum, Kerala, India, 1997. 1997-1998, Lecturer, Sri Vani Higher Secondary School, Thoppapatty P.O, Salem, TN, India.1999-2000, Lecturer, Department of Zoology, St. John's College, Anchal, Kerala, India. *Current:* Research Scientist, Ocular Surface Center, Doheny Eye Institute, UCLA.
5. Rhona E. Feltzer, Ph.D. (February 2002-October 2002); Ph.D. from the University of Louisville, 2000. Dr. Felzer is currently employed by the University of Notre Dame.
6. Edouard L. Noisin, Ph.D. (April 2003-January 2004); Ph.D. from Meharry Medical College in 1989. Post-doctoral fellow, Research Instructor, Vanderbilt University 1989-96; Medical student University of Louisville: 1996-2002. Dr. Noisin completed his M.D. at St. Matthews School of Medicine in Atlanta, GA. He currently practices medicine in Atlanta, GA.
7. Shephali Bhatnagar, Ph.D. (April 2003- November 2004); Ph.D. from Banaras Hindu University, India, 2000. Post-doctoral fellow, Dept. Microbiology and Immunology, University of Louisville School of Medicine 2001-2003. Dr. Bhatnagar is a Research Associate in the Dept. of Anatomical Sciences and Neurobiology at the University of Louisville School of Medicine.
8. Kristy A. Blankenship, Ph.D. (July 2003-August 2004); Ph.D. from Marshall University School of Medicine, 1998. Post-doctoral fellow at the University of Louisville School of Medicine; Dept. Biochemistry and Molecular Biology 1997-1999; Dept. Nephrology 1999-2001. Post-doctoral fellow at the Medical University of South Carolina,

Department of Medicine, Division of Nephrology 2001-2002. Dr. Blankenship is a high school chemistry teacher in Boyd County High School in eastern Kentucky.

9. John Zhang, Ph.D. (October 2003-March 2004); Ph.D. from Dalhousie University, Halifax, N.S. Canada, 1995. Post-doctoral fellow, Dept. Biology, University of Toronto, Canada 1995-1997; Post-doctoral fellow, Department of Cell Biology, Hospital for Sick Children, University of Toronto, Canada 1997-1999; Research Associate, Dept. of Medicine, University of Toronto, Canada 1999-2001; Research Scientist and General Manager, Inno Biotech, Inc., Toronto, Canada 2001-2003. He is currently an Assistant Professor in Biochemistry Hunan Chansha University in China.
10. Wasana K. Sumanasekera, Ph.D. (December 2003-August 2006); Ph.D. in Molecular Toxicology from the Pennsylvania State University, August 2003. Post-doctoral fellow, Dept. of Chemistry, August 2003-November 2003. Dr. Sumanasekera was a part-time Instructor in Biology at UofL, part-time Instructor in Biology at Bellarmine University, and a post-doctoral fellow in the laboratory of Dr. Greg Rokosh at the Univ. of Louisville School of Medicine from Dec. 2003-June 2008. She is now Professor of Pharmaceutical Sciences at Sullivan University College of Pharmacy in Louisville, KY.
11. Nalinie S. Wickramasinghe, Ph.D. (July 2004-November 2009); Ph.D. in Biochemistry, University of Maryland, College Park, MD, 1986; Senior Lecturer, Dept. of Biochemistry, Faculty of Medicine, University of Ruhuna, Sri Lanka, 1986-1990; Post-Doctoral Fellow, Dept. of Biochemistry and Molecular Genetics, School of Medicine, University of Alabama, 1990-1993; Post-Doctoral Research Fellow, Dept. of Pathology, School of Medicine, University of Alabama 1993-1996; Senior Lecturer Dept. of Biochemistry, Faculty of Medical Sciences, University of Sri Jayewardenepura, Sri Lanka 1996-2000; Professor Dept. of Biochemistry, Faculty of Medical Sciences, University of Sri Jayewardenepura, Sri Lanka 2000-2003; Visiting Scientist, Brown Cancer Center, University of Louisville 2003-2004; Dr. Wickramasinghe is currently a Research Scientist in the lab of Dr. Sanjay Srivastava in the Center for Obesity and Diabetes headed by Dr. Aruni Bhatnagar at the University of Louisville.
12. Margarita M. Ivanova, Ph.D. (November 2004-July 2013); Ph.D. in Biochemistry in 1998 from the Academy of Agricultural Science, Institute of Agricultural Biotechnology, Russia; Post-Doctoral Fellow, Breast Cancer Center, Baylor College of Medicine 2000-2004. Dr. Ivanova is Director of the Translational Medicine Unit at Lysosomal Storage Disorders and Rare Disease Center (LDRTC), O& O Alpan, LLC in Fairfax, VA.
13. Akhilesh Kumar, Ph.D. (January 2005-June 2009) Dr. Richard E. Goldstein (Dept. of Surgery) and I co-mentored Dr. Kumar on a project examining estrogen action in thyroid cancer cells. Dr. Kumar is currently a Research Associate in the laboratory of Dr. Ashok Kumar, Dept. of Anatomy and Neurobiology, University of Louisville School of Medicine.
14. Harini S. Aiyer, Ph.D. (July 2007-July 2010); Ph.D. Nutritional Sciences, University of Kentucky, 2007. Dr. Robert Martin (Dept. of Surgery) and I co-mentored Dr. Aiyer who was awarded an AICR post-doctoral fellowship (2010-12) for her work on green tea polyphenols in endocrine resistant breast cancer. Dr. Aiyer completed postdoctoral training in the laboratory of Dr. Robert Clarke at Georgetown University School of Medicine and is now an Imaging Sales Specialist at GE Healthcare.
15. Phani K. Patibandla, Ph.D. (February 2009-August 2009); Ph.D. in Microbiology, Chhatrapati Shahuji Maharaj Medical University, Lucknow, India, 2007; Post-doctoral fellow in Physiology at the University of Louisville School of Medicine 2008-9. Dr.

Patibandla is currently a post-doctoral fellow in Dr. Claudio Madonado's lab in Physiology at the University of Louisville School of Medicine.

16. Yun Teng, Ph.D., M.D. (June 2010- Dec. 2013**)** Ph.D. in Tumor Immunology from Huazhong University of Science and Technology, Tongji Medical College, China, 2004. Post-doctoral fellow in the James Graham Brown Cancer Center (in the lab of Paula J. Bates, Ph.D.) at the University of Louisville School of Medicine 2004-10. Dr. Teng moved to NYC to accompany his wife and family to her new job as a resident in internal medicine.
17. Numan Al-Rayyan, Ph.D. (September 2011-June 2013); Ph.D. from Virginia Polytechnic Institute and State University (August 2011). Next position: post-doctoral fellow in the lab of Dr. Keith Davis, Brown Cancer Center, University of Louisville.
18. Ahmed Elbedewy, M.D. (May 2013-April 2014); MB Bch, Cairo University Egypt (April 2009). Medical Resident in Brooklyn, NY.
19. Andrea Young Angstadt, Ph.D. (February 2014-1/9/15); Ph.D. in Functional Genomics from North Carolina State University, Raleigh, NC, 2010. Post-doctoral fellow in the Penn State Cancer Institute, Hershey College of Medicine 2010-13 and Instructor of Public Health Sciences 7/13-1/14. Lab Manager of Next-Generation Laboratory Operations at Eurofins MWG Operon, Inc., Louisville, KY

Dissertation committee membership:

Dissertation completed:

1. Clavia Ruth Wooten-Kee: M.S. student in the laboratory of Barbara J. Clark, Ph.D. M.S. thesis: Steroidogenic acute regulatory (StAR) protein. M.S. in Biochemistry and Molecular Biology received 5/2000. Ph.D. in Toxicology received from the Univ. of Kentucky School of Medicine in Lexington, KY in 2010. Currently Assistant Professor of Pediatrics and Nutrition, Baylor College of Medicine, Houston, TX.
2. Jason R. Neale: Ph.D. student in the laboratory of William M. Pierce, Jr, Ph.D., Pharmacology and Toxicology Dept. Thesis project: "Mechanisms of action of novel bone-targeted estrogens." M.S. in Pharmacology received February 23, 2000. Ph.D. received April 5, 2002. Completed post-doctoral training in the laboratory of David Hein, Ph.D., Univ. of Louisville School of Medicine.
3. Katherine Brittingham: Ph.D. student in the laboratory of Jill R. Suttles, Ph.D., Microbiology and Immunology Dept. Ph.D. Thesis project: "The role of aP2 and Small Fatty Acid Binding Proteins in Macrophage Biology." Ph.D. received September 2003. Completed a postdoc at NIH and is currently Principal Research Scientist at Battelle.
4. Loretta Doan: Ph.D. student in the laboratory of H. Leighton Grimes, Ph.D., Institute for Cellular Therapeutics. Thesis project "The Transcriptional Repressor Protein Growth Factor Independence-1B in T lymphocytes". Ph.D. received January 2004. Completed a postdoc at NCI. She is currently Vice President of Policy and Global Affairs of AACC.
5. Kristy K. Michael-Miller: Ph.D. student in the laboratory of Russell A. Prough, Ph.D., Dept. of Biochemistry and Molecular Biology. Thesis project "DHEA action is mediated by multiple receptors and metabolites". Ph.D. received April 2004. Currently Professor of Chemistry and Chair of Chemistry at, University of Evansville, Indiana.
6. Shi (Sid) Gu: Ph.D. student in the laboratory of Thomas E. Geoghegan, Ph.D., Dept. of Biochemistry and Molecular Biology. Thesis project "Regulation of 11Beta-Hydoxysteroid Dehydrogenase 1 by DHEA" Ph.D. received September 2004. He was a post-doctoral fellow in Dr. Geoghegan's lab at UofL.

7. Diego Montoya-Durango: Ph.D. student in the laboratory of H. Leighton Grimes, Ph.D., Institute for Cellular Therapeutics. Thesis project "Targeted transcriptional repression of Gfi1 by GFI1 and GFI1B in lymphoid cells." Ph.D. received January 2005. He completed aa post-doctoral fellow in Dr. Kenneth S. Ramos' lab and is now an Assistant Professor in the Dept. of Ophthalmology.
8. Brian F. Clem: Ph.D.: student in the laboratory of Barbara J. Clark, Ph.D., Dept. of Biochemistry and Molecular Biology. Thesis project: "Mechanisms of transcriptional regulation of the mouse steroidogenic acute regulatory (StAR) protein gene promoter". Ph.D. received May 2005. Currently Dr. Clem was a post-doctoral fellow in Dr. Jason Chesney's lab in the Brown Cancer Center at U of L and is now an Associate Professor in the Dept. of Biochemistry and Molecular Genetics at UofL School of Medicine.
9. Anwar Husain, Ph.D.: student in the laboratory of David W. Hein, Ph.D., Dept. of Pharmacology and Toxicology. Thesis project: "Regulatory control regions of human arylamine N-acetyltransferase 1 and 2: Implications for genetic predisposition to breast cancer." Ph.D. received May 2005. Dr. Husain completed a post-doctoral fellow at Georgetown University.
10. Mary Costantino, Ph.D: student in the laboratory of Mark D. Brennan, Ph.D., Dept. of Biochemistry and Molecular Biology. Thesis project: "The role of Mod(mdg4)-67.2 in transcriptional stimulation and enhancer-blocking by the gypsy insulator in *Drosophila melanogaster*." Ph.D. received October 2006. Dr. Costantino is Research Lead at Comprehensive Health Insights.
11. Awedis Kazanjian, Ph.D.: student in the laboratory of H. Leighton Grimes, Ph.D., Institute for Cellular Therapeutics. Thesis project: "The role of growth factor independence 1 (Gfi1) in human neuroendocrine lung cancers." Ph.D. received December 2005. Dr. Kazanjian is currently a post-doctoral fellow in the laboratory of Mariusz Ratajczak Ph.D., in the Stem Cell Biology Program, J.G. Brown Cancer Center, UofL School of Medicine.
12. Doreen Nebane, Ph.D.: student in the laboratory of Michele Kosiewicz, Ph.D., Dept. of Microbiology and Immunology. Thesis project: "Sex-based differences in Regulatory T cells" Ph.D. received December 2005. She is Manager of Clinical Outsourcing and Vendor Management of Biogen PRA Health Sciences.
13. Bradford G. Hill, Ph.D.: student in the laboratory of Aruni Bhatnagar, Ph.D., Dept. of Medicine, Cardiovascular Institute and Dept. of Biochemistry and Molecular Biology. Ph.D. received May 2007. Completed a post-doctoral fellow at the Univ. of Alabama at Birmingham. Dr. Hill is Professor of Medicine at the UofL School of Medicine.
14. Jason M. Walraven, Ph.D.: student in the laboratory of David W. Hein, Ph.D., Dept. of Pharmacology and Toxicology. Thesis project: "Computational and Functional Analyses of human and rat N-acetyltransferase genetic variants". Ph.D. received August 2007. Currently Dr. Walraven is a staff toxicologist at WIL Research Laboratories, LLC, Ashland, OH.
15. Joseph M. Reynolds, Ph.D. student in the laboratory of Jill R. Suttles, Ph.D., Dept. of Microbiology and Immunology. Thesis project: "Regulation of inflammation and autoimmune disease by the adipocyte and epidermal fatty acid-binding proteins". Ph.D. Received December 2007. Dr. Reynolds was a post-doctoral fellow in the laboratory of Dr. Chen Dong, Department of Immunology, University of Texas MD Anderson Cancer Center, Houston, Texas.
16. Adrian Nanez, Ph.D. in the laboratory of Kenneth S. Ramos, Ph.D., Dept. of Biochemistry and Molecular Biology Ph.D. Received December 2007. Dr. Nanez is Senior Medical Science Liaison and Associate at Takeda Oncology in San Antonio, TX.

17. Xiaoyan (Susan) Zhang, Ph.D. in the laboratory of David W. Hein, Ph.D., Dept. of Pharmacology and Toxicology. Ph.D. dissertation: "Characterization of N-Acetyltransferase 1 (NAT1) Expression in Breast Cancer" Ph.D. received May 2007. Dr. Zhang was a post-doctoral fellow at SUNY Buffalo.
18. Monica Unseld, Ph.D. in the laboratory of Cynthia Corbitt, Ph.D., Dept. of Biology, College of Arts and Sciences. Ph.D. dissertation: "The Effects of Dietary Isoflavones on the Menopausal Symptoms of Memory Loss and Loss of Lung Function in a Rodent Model of Aging". Currently, Dr. Unseld is an Assistant Professor Department of Mathematics & Natural Sciences; St. Catharine's College; St. Catharine, KY.
19. Edward P. Womack (Pete) completed his M.S. in December 2009 in Roland Valdes, Jr. Ph.D.'s lab in Laboratory Medicine. M.S. thesis: Digoxin and Ouabain as Cytotoxic Agents and probes in Lung Cancer Cells". Pete is a technician in Dr. Valdes' lab.
20. Renate K. (Cochrum) Meier, M.S. in the laboratory of Barbara J. Clark, Ph.D. M.S. thesis: "Molecular mechanism for angiotensin II-dependent transcriptional activation of the human steroidogenic acute regulatory (StAR) protein. M.S. in Biochemistry and Molecular Biology received 3/24/09. Renate received a MSN and is an Assistant in Obsterics and Gynecology at Vanderbilt University.
21. Maia L. Green, Ph.D. in the laboratory of Thomas Knudsen, Ph.D., Dept. of Molecular, Cellular & Craniofacial Biology, UofL School of Dentistry. Ph.D. dissertation: "Pharmacological Intervention of Stress-Induced Release of Tumor Suppressor p53 from the Mitochondrion." Ph.D. defense June 18, 2009. Dr. Green is a Toxicologist with ExxonMobil.
22. Charu Agarwall, Ph.D. in the laboratories of Michael Perlin, Ph.D. and David J. Schultz, Ph.D., Dept. of Biology, College of Arts and Sciences. Ph.D. dissertation: "Biochemical and biological characterization of two putative phosphodiesterases from *Ustilago maydis*, a pathogen of maize." Ph.D. defense passed November 8, 2010.
23. Enid N. Choi, M.D. (2012) Ph.D. student in the laboratory of Paula J. Bates, Ph.D., Brown Cancer Center. Ph.D. dissertation: "Tumor-targeting aptamers for the treatment of prostate cancer". Ph.D. defense passed November 3, 2011. Dr. Choi completed a residency in Radiation Oncology at the University of Michigan and is currently a clinical lecturer.
24. Alex M. Porter, Ph.D. student in the laboratory of Andrea S. Gobin, Ph.D., Dept. of Biomedical Engineering, Speed School of Engineering. "Covalently grafted VEGF165 in PEG hydrogels stimulates angiogenic processes in HUVEC and HMEC" Ph.D. defense passed November 10, 2011.
25. Alan C. Brooks, M.D./ Ph.D. student in the laboratory of Dr. Aruni Bhatnagar, Dept. of Medicine/ Environmental Cardiology. Ph.D. dissertation: "Unfolded protein response signaling in myocardial response to ischemia"; Ph.D. defense passed June 12, 2012, Ph.D. degree awarded August 2012; M.D. awarded May 2014.
26. Aaron D. DenDekker, Ph.D. student in the laboratory of Dr. David J. Samuelson, Dept. Biochemistry and Molecular Biology. Ph.D. awarded 2013.
27. Michael Gordon was a Ph.D. student in the laboratory of Dr. Yong Li, Dept. Biochemistry and Molecular Biology. Mike died suddenly and unexpectedly on 1/29/2013 and was awarded a Ph.D. posthumously in May 2013.
28. Jennifer Sanders was a Ph.D. student in the laboratory of Dr. David J. Samuelson, Dept. Biochemistry and Molecular Biology. Ph.D. dissertation: "Genetic and mechanistic analysis of rat mammary susceptibility" Ph.D. defense passed June 9, 2014, Ph.D. awarded August 2014.

29. Dominique Jones was a Ph.D. student in the laboratory of Dr. LaCreis Kidd, Dept. of Pharmacology and Toxicology. Ph.D. dissertation: "MicroRNA-186 and Metastatic Prostate Cancer." Ph.D. defense passed March 24, 2016.
30. Jessica Mezzanotti is an M.D./ Ph.D. student in the laboratory of Dr. Geoffrey Clark, James Graham Brown Cancer Center. Ph.D. dissertation: The discovery of a novel, RAS-mediated NRE1A/PMLIV tumor suppressor complex." Ph.D. defense passed June 17, 2016.
31. Sanaya Bamji Stocke was a Ph.D. student in the laboratory of Dr. Cynthia Corbitt, Dept. of Biology, College of Arts and Sciences, Belknap campus. Ph.D. dissertation: "Effects of Glyceollin on mRNA expression in the female mouse brain." Ph.D. defense passed July 15, 2016.
32. Laila Al-Eryani was a Ph.D. student in the laboratory of Dr. J. Christopher States, Dept. of Pharmacology and Toxicology: Ph.D. dissertation: miRNA Expression Changes in Arsenic-induced Skin Cancer *in vitro* and *in vivo.* Ph.D. defense passed August 3, 2017.
33. Margaret Wallen was a Ph.D. student in the laboratory of Dr. Michael Perlin, Dept. of Biology, College of Arts and Sciences, Belknap campus. Ph.D. dissertation: "Regulation of Haploid Phenotypes in *Ustilago Maydis* by Ammonium Transporters and Components of the *b* Mating Locus" Ph.D. defense passed August 4, 2017.
34. Catherine Cobb was a Ph.D. student in the laboratory of Dr. Ronald G. Gregg, Professor and Chair of Biochemistry and Molecular Genetics, University of Louisville School of Medicine. Ph.D. dissertation: Functional and Structural Impact of the Loss of the Leucine-rich repeat Protein LRIT1 in the Mouse Retina" Ph.D. defense passed April 4, 2018.
35. Christopher D. Nevitt was a Ph.D. student in Biochemistry and Molecular Biology (UofL) working in the laboratory of Dr. Christine Schaner Tooley, Assistant Professor of Biochemistry, University at Buffalo, SUNY. Ph.D. dissertation: "Alpha-Amino Methylation and acetylation are Novel Regulators of MYL Function." Ph.D. defense exam passed on June 27, 2018.
36. Samantha Carlisle was a Ph.D. student in the laboratory of Dr. David W. Hein, Dept. of Pharmacology and Toxicology: Ph.D. dissertation: Deciphering the role of Human Arylamine-N-acetyltransferase I (NAT1) Activity in Breast Cancer Cell Metabolism Using a Systems Biology Approach. Ph.D. defense exam passed on July 20, 2018. Currently Assistant Professor of Biochemistry at New Mexico State University.
37. Josiah Hardesty was a Ph.D. student in the laboratory of Dr. Matthew Cave, Dept. of Medicine, University of Louisville School of Medicine; Ph.D. Dissertation: "Epidermal growth factor receptor (EGFR) Inhibition by Polycholorinated biphenyls (PCBs) contributes to Non-alcoholic Fatty Liver Disease NAFLD" Ph.D. defense exam passed on August 20, 2018. He is a postdoctoral fellow in the lab of Drs. Irina Kirpich and Craig McClain in the Dept. of Medicine.
38. Swathi Kuppireddy was a Ph.D. student in the laboratory of Dr. Michael Perlin, Dept. of Biology, College of Arts and Sciences, Belknap campus. Ph.D. Dissertation: "Identification and functional characterization of effectors from an anther smut fungus: *Microbotryum lynchnidis-dioicae*" Ph.D. defense exam passed on November 14, 2018. She is a postdoctoral fellow in the lab of Dr. Brad Hill in the Dept. of Medicine.
39. Stephanie A. Metcalf was a Ph.D. student in the laboratory of Dr. Brian Clem, Associate Professor of Biochemistry and Molecular Genetics, University of Louisville School of Medicine; Project: Investigation of Phosphoserine Aminotransferase 1 (PSAT1) in breast cancer" Ph.D. defense exam passed on August 23, 2019. She is now a postdoctoral fellow in the lab of Dr. Peter Hollenhorst, Indiana University.

40. Zackary R. Fitzsimonds was an D.M.D./Ph.D. student in the laboratory of Dr. Richard J. Lamont, Delta Dental Endowed Professor, Chair, Oral Immunology and Infectious Diseases, University of Louisville School of Dentistry. Zack was awarded F30 DE028166-01A1 to support his research and training. Ph.D. defense exam passed on July 14, 2020: "Epithelial responses to *Porphyromonas gingivalis* in the community context".
41. Biyik Rumeysa was a Ph.D. student in the laboratory of Dr. Brian Clem, Assistant Professor of Biochemistry and Molecular Genetics, University of Louisville School of Medicine; Project: Investigating a Novel Function for Phosphoserine Aminotransferase 1 (PSAT1) in Epidermal Growth Factor Receptor (EGFR)-Mediated Lung Tumorigenesis. Ph.D. defense exam passed on March 18, 2021. She is now a postdoctoral fellow in the lab of Dr. Brian Clem at UofL JGBCC.
42. Emily Duderstadt was a Ph.D. student in the laboratory of Dr. David Samuelson, Associate Professor of Biochemistry and Molecular Genetics, University of Louisville School of Medicine; Project: "Genetic and functional analysis of rat mammary cancer susceptibility". Ph.D. defense exam passed on April 21, 2021. Dr. Duderstadt was a postdoctoral fellow at Children's Hospital at the University of Cincinnati and is now a scientist at Proctor and Gamble.
43. Mark Vincent Carreon Dela Cerna was a Ph.D. student in the lab of Donghan Lee and T. Michael Sabo Ph.D., University of Louisville School of Medicine; Project: "Application s of Nuclear Magnetic Resonance Spectroscopy: From Drug Discovery to Protein Structures and Dynamics." Ph.D. defense exam passed on July 18, 2022. Dr. Dela Cerna is an Assistant Professor of Chemistry at the Georgia Southern University in Savannah.
44. Claire Jones Westcott was a Ph.D. student in the Kevin Sokoloski, Ph.D., Assistant Professor, Dept. of Microbiology and Immunology, University of Louisville School of Medicine; Project: "Defining the importance of hnRNP-I binding to the Sindbis virus subgenomic viral RNA suing an innovative tethering approach". Ph.D. defense exam passed on July 28, 2022. Dr. Westcott is now a free-lance science writer.

Membership on Current Ph.D. Students' Dissertation Committees:

1. Nicholas C. Allen is a Ph.D. student in Interdisciplinary Studies with Specialization in Translational Bioengineering in the laboratory of Dr. Martin O'Toole; Project: Synthesis and Evaluation of a DNA aptamer/siRNA dual conjugated gold nanoparticle system for tumor targeting.
2. Muge Sak is a Ph.D. student in the lab of Norman Lehman, M.D., Ph.D., Professor of Pathology. Project: "Understanding the mechanism of synergy between Aurora A Kinase inhibitor alisertib and DNA damaging agent carboplatin on poor-prognosis O6-methyl guanine methyltransferase (MGMT) expressing glioblastoma'
3. Makayla P. Brady is a Ph.D. student in the lab of David W. Powell, Ph.D., Associate Professor of Medicine. Project: "Lupus Nephritis Development by IP10 Overexpression Induced via ABIN1 Dysregulation."
4. Collin F. Wells is a Ph.D. student in the lab of Bradford G. Hill, Ph.D., Professor of Medicine. Project: "Metabolic changes in the heart that affect cardiovascular cell phenotype and biosynthetic pathway activity."
5. Shikhi Baruri is a Ph.D. student in the lab of Mike Perlin, Ph.D., Professor of Biology. Project: "RNA editing and characterization of Adenosine deaminase (ADA)gene of *Microbotryum dianthorum*".
6. Alexis Vega is a Ph.D. student in the lab of Levi Beverly, Ph.D., Associate Professor of Medicine. Project: "The interplay between lung adenocarcinoma and its microbiome".

Master's Thesis Committee memberships:

1. Divya Karukonda was a M.S. student in the laboratory of Dr. Ramesh Gupta, Dept. of Pharmacology and Toxicology. M.S. Thesis: Advances in Tumor-targeted therapy using Nanomedicine. M.S. thesis defense passed July 31, 2017.
2. Kirsten M. Richardson was a M.S. student in the laboratory of Dr. Michael H. Perlin, Professor of Biology, University of Louisville. M.S. Thesis: "Gene expression of ammonium transporters in *Ustilago Maydis* and their role in pathogenicity and virulence. M.S. thesis defense passed August 1, 2017. Currently Associate Project Manager, BioServices at Q^2 Solutions, Ithaca, NY.
3. Angeliki Lykoudi was an M.S. student in the lab of J. Christopher States, Ph.D., Professor of Pharmacology and Toxicology. Thesis Project: "Assessing the role of arsenic exposure and miR-186 in skin tumorigenesis and chromosomal instability". Thesis defense passed December 8, 2020.

Univ. of Louisville School of Medicine Faculty Mentoring Program

2001-2003	Mentor for Yiru Guo, M.D., Assistant Professor, Division of Cardiology, Dept. of Medicine
2004-2006	Mentor for LaCreis Kidd, Ph.D., M.P.H., Assistant Professor, Dept. of Pharmacology and Toxicology
2007-8	Mentor for David J. Samuelson, Ph.D., Assistant Professor, Dept. of Biochemistry and Molecular Biology
2007-8	Mentor for Chuan Hu, Ph.D., Assistant Professor, Dept. of Biochemistry and Molecular Biology
2008-9	Mentor for Siva K. Panguluri Ph.D., Assistant Professor, Dept. of Anatomical Sciences and Neurobiology
2009-10	Mentor for Kara J. Sedoris, Ph.D., Instructor of Medicine, Dept. of Medicine, Brown Cancer Center.
2011-12	Mentor for Marcie Cole, Ph.D., Assistant Professor, Dept. of Biochemistry and Molecular Biology
2012-13	Mentor for Brian P. Ceresa, Ph.D., Associate Professor, Dept. of Pharmacology and Toxicology
2016-19	Mentor for Suzanne N. King, Ph.D., Assistant Professor, Department of Otolaryngology HNS and Communicative Disorders
2018-20	Mentor for Anna Gumpert, Ph.D., Assistant Professor, Department of Medicine, Cardiovascular Institute

Hosted Sabbatical Faculty

2008	Dr. Joan E. Magnusen, Professor of Biology, Keuka College, spent 7 weeks in my lab learning cell culture, western blotting, Q-PCR, and other molecular techniques. Dr. Magnusen studies estrogen receptor variants in brain regions which link to schizophrenia.
2011	Dr. Cynthia Corbitt, Associate Professor of Biology, University of Louisville, spent the Spring semester in my lab
2012	Dr. Zainab Mohammed Taher Jafaar, Principal Researcher, Molecular Biology and Immunology, Baghdad University, Baghdad, Iraq. Dr. Jaafar was in my lab 6 mos (June

8-Dec 7, 2012) as part of U.S. Dept. of State-sponsored Iraq Science Fellowship Program.

2018 Dr. David J. Schultz, Associate Professor, Biology, University of Louisville. Dr. Schultz spent 6 mos (June-December 2018) in my lab on his sabbatical "Anacardic acid treatment to prevent evolution of endocrine resistant breast cancer"

PEER-REVIEWED PUBLICATIONS

1. Klinge, C.M. and Liu, D.K. Inhibition of DNA polymerase alpha activity by proteins from rat liver. Int. J. Biochem. 17: 347-353, 1985. PMID: 4007244

2. Klinge, C.M. and Liu, D.K. Intranuclear dynamics of DNA polymerase differ between the transplanted R3230AC mammary adenocarcinoma and the host mammary gland depending on lactation cycle. Biochim. Biophys. Acta 868: 24-29, 1986. PMID: 3756167

3. Liu, D.K. and Klinge, C.M. Phenobarbital treatment of rats has no effect on DNA replication in liver. IRCS Medical Science 14: 885-886, 1987.

4. Klinge, C.M. and Liu, D.K. An endogenous protein inhibitor of DNA polymerase alpha in normal and neoplastic rat mammary tissues. Int. J. Biochem. 26: 521-26, 1987. PMID: 359599

5. Klinge, C.M., Bambara, R.A., Zain, S., and Hilf, R. Estrogen receptor binding to nuclei from normal and neoplastic rat mammary tissues *in vitro*. Cancer Res. 47: 2852-2859, 1987. PMID: 3105869

6. Lerea, C.C., Klinge, C.M., Bambara, R.A., Zain, S., and Hilf, R. Characterization of a cytosolic inhibitor of calf estrogen receptor-binding to nuclei. Endocrinology 121: 1146-1154, 1987. PMID: 3304979

7. Klinge, C.M., Bambara, R.A., Zain, S., and Hilf, R. Effects of host hormonal status on binding of activated estrogen receptor to nuclei from R3230AC and 7, 12-dimethylbenz[a]anthracene-induced mammary tumors. Cancer Res. 49: 1165-1170, 1989. PMID: 3105869

8. Klinge, C.M., Knox, D.T., Bambara, R.A., Zain, S., and Hilf, R. Antiestrogen (4-hydroxy-tamoxifen)- charged estrogen receptor binding to nuclei from normal and neoplastic rat mammary tissues is not affected by host hormonal status. J. Steroid Biochem. 33: 335-340, 1989. PMID: 2779224

9. Peale, F.V., Jr., Ishibe, Y., Klinge, C.M., Zain, S., Hilf, R., and Bambara, R.A. Rapid purification of the estrogen receptor by sequence-specific DNA affinity chromatography. Biochemistry 28: 8671-8675, 1989. PMID: 2605215

10. Klinge, C.M., Bambara, R.A., Zain, S., and Hilf, R. Nuclease sensitivity of estradiol-charged estrogen receptor binding sites in nuclei isolated from normal and neoplastic rat mammary tissues. J. Steroid Biochem. 36: 7-14, 1990. PMID: 2194077

11. Ludwig, L.B., Peale, F.V., Jr., Klinge, C.M., Bambara, R.A., Zain, S., and Hilf, R. A microtiter well assay for quantitative measurement of estrogen receptor binding to estrogen-responsive elements. Mol. Endocrinol. 4: 1027-1033, 1990. PMID: 2284005

12. Ishibe, Y., Klinge, C.M., Hilf, R., and Bambara, R.A. Estrogen receptor alters the topology of plasmid DNA containing estrogen responsive elements without ATP hydrolysis. Biochem. Biophys. Res. Comm. 176: 486-491, 1991. PMID: 1850269

13. Klinge, C.M., Peale, F.V., Jr., Hilf, R., Bambara, R. A., and Zain, S. Cooperative estrogen receptor interaction with consensus or variant estrogen responsive elements *in vitro*. Cancer Res. 52: 1073-1081, 1992. *(CMK corresponding author)* PMID: 1737365

14. Klinge, C.M., Bambara, R.A., and Hilf, R. What differentiates antiestrogen-liganded *versus* estradiol-liganded estrogen receptor action? Oncology Res. 4: 1073- 1081, 1992. PMID: 1504373

15. Klinge, C.M., Bambara, R.A., and Hilf, R. Antiestrogen-liganded estrogen receptor interaction with estrogen responsive element DNA *in vitro*. J. Steroid Biochem. Molec. Biol. 43: 249-262, 1992. *(CMK corresponding author)* PMID: 1390277

16. Anolik, J.H., Klinge, C.M., Bambara, R.A., and Hilf, R. Differential impact of flanking sequences on estradiol- *versus* 4-hydroxytamoxifen-liganded estrogen receptor binding to estrogen responsive element DNA. J. Steroid Biochem. Molec. Biol. 46: 713-730, 1993. PMID: 8274405

17. Thomas, T., Gallo, M.A., Klinge, C.M., and Thomas, T.J. Polyamine-mediated conformational perturbations in DNA alter the binding of estrogen receptor to poly(dG-m5dC).poly(dG-m5dC) and a plasmid containing the estrogen response element. J. Steroid Biochem. Molec. Biol. 54: 89-99, 1995. PMID: 7662593

18. Anolik, J.H., Klinge, C.M., Hilf, R., and Bambara, R.A. Cooperative binding of estrogen receptor to DNA depends on spacing of binding sites, flanking sequence, and ligand. Biochemistry 34: 2511-2520*,* 1995. PMID:

19. Traish, A.M., Al-Fadhli, S., Klinge, C.M., Kounine, M., and Quick, T.C. Identification of structurally-altered estrogen receptors in human breast cancer by site-directed monoclonal antibodies. Steroids 60: 467-474, 1995. PMID:

20. Azadniv, M., Klinge, C.M., Gelein, R., Carstensen, E.L., Cox, C., Brayman, A.A., and Miller, M.W. A test of the hypothesis that a 60 Hz magnetic field affects ornithine decarboxylase activity in mouse L929 cells *in vitro*. Biochem. Biophys. Res. Comm. 214: 627-631, 1995. PMID: 7677775

21. Klinge, C.M., Traish, A.M., Bambara, R.A., and Hilf, R. Dissociation of 4-hydroxytamoxifen, but not estradiol or tamoxifen aziridine, from the estrogen receptor when the receptor binds estrogen response element DNA. J. Steroid Biochem. Molec. Biol. 57: 51-66, 1996. *(CMK corresponding author)* PMID: 8645617

22. Klinge, C.M., Traish, A.M., Driscoll, M.D., Hilf, R., and Bambara, R.A. Site-directed estrogen receptor antibodies stabilize 4-hydroxytamoxifen ligand, but not estradiol, and indicate ligand-specific differences in the recognition of estrogen response element DNA *in vitro*. Steroids 61: 278-289, 1996. *(CMK corresponding author)* PMID: 8738832

23. Driscoll, M.D., Klinge, C.M., Hilf, R., and Bambara, R.A. Footprint analysis of estrogen receptor binding to adjacent estrogen response elements. J. Steroid Biochem. Molec. Biol. 58: 45-61, 1996. *(CMK corresponding author)* PMID: 8809185

24. Tzeng, D.Z. and Klinge, C.M. Phosphorylation of purified estradiol-liganded estrogen receptor by caseine kinase II increases estrogen response element binding but does not alter ligand stability. Biochem. Biophys. Res. Communic. 223: 554-560, 1996. *(CMK corresponding author)* PMID: 8687434

25. Anolik, J.H., Klinge, C.M., (note that CMK and JHA are equal first authors on this ms.) Brolly, C.L., Bambara, R.A, and. Hilf, R. Stability of the ligand of estrogen response element-bound estrogen receptor depends on flanking sequences and cellular factors. J. Steroid Biochem. Molec. Biol. 59: 413-429, 1996. *(CMK corresponding author)* PMID: 9010347

26. Klinge, C.M., Bodenner, D.L., Desai, D., Niles, R.M., Traish, A.M. Binding of type II nuclear receptors and estrogen receptor to full and half-site estrogen response elements *in vitro*. Nucleic Acids Res. 25: 1903-1912, 1997. *(CMK corresponding author)* PMID: 9115356

27. Klinge, C.M., Brolly, C.L., Bambara, R.A., and Hilf, R. Hsp70 is not required for high affinity binding of purified calf uterine estrogen receptor to estrogen response element DNA *in vitro*. J. Steroid Biochem. Molec. Biol. 63:283-301, 1997. *(CMK corresponding author)* PMID: 9459195

28. Sathya, G., Wenzhou, L., Klinge, C.M., Anolik, J.H., Hilf, R., and Bambara, R.A. Effects of multiple estrogen responsive elements, their spacing and location on estrogen response of reporter genes. Mol. Endocrinol.11:1994-2003, 1997. PMID: 9415403

29. Klinge, C.M., Driscoll, M.D., Sathya, G., Bambara, R.A., and Hilf, R. Chicken Ovalbumin Upstream Promoter-Transcription Factor (COUP-TF) interacts with estrogen receptor and binds to estrogen response elements and a single half-site as a homodimer *in vitro*. J. Biol. Chem. 272: 31465-31474, 1997. *(CMK corresponding author)* PMID: 9395481

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31. Driscoll, M.D., Sathya, G., Muyan, M., Klinge, C.M., Hilf, R., and Bambara, R.A. Sequence requirements for estrogen receptor binding to estrogen response elements. J. Biol. Chem. 273: 29321-29330. 1998. PMID: 9792632

32. Thomas, T., Shah, N., Klinge, C.M., Faaland, C.A., Adihkarakunnathu, S., Gallo, M.A., and Thomas, T.J. Polyamine biosynthesis inhibitors alter protein-protein interactions involving the estrogen receptor in MCF-7 breast cancer cells. J. Mol. Endocrinol. 22: 131-139, 1999. PMID: 10194516

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34. Klinge, C.M., Bowers, J.L., Kulakosky, P.C., Kamboj, K.K., and Swanson, H.I. The aryl hydrocarbon receptor (AHR)/AHR nuclear translocator (ARNT) heterodimer interacts with naturally occurring estrogen response elements. Mol. Cell. Endocrinol. 157: 105-119, 1999. PMID: 10619402

35. Klinge, C.M. Role of estrogen receptor ligand and estrogen response element Sequence on Interaction with Chicken Ovalbumin Upstream Promoter Transcription Factor (COUP-TF). J. Steroid Biochem. Molec. Biol. 71: 1-19, 1999. PMID: 10619353

36. Klinge, C.M., Kaur, K., and Swanson, H.I. The aryl hydrocarbon receptor interacts with estrogen receptor alpha and orphan receptors COUP-TFI and ERRα1. Arch. Biochem. Biophys. 373: 163-174, 2000. PMID: 10620335

37. Klinge, C.M. Estrogen receptor interaction with co-activators and co-repressors. Steroids 65:227-251, 2000. PMID: 10751636

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39. Tyulmenkov, V.V. and Klinge, C.M. Selectivity of antibodies to estrogen receptors α and β (ERα and ERβ) with for detecting DNA-bound ERα and ERβ *in vitro*. Steroids 65: 505-512, 2000. PMID: 10978729

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41. Bowers, J.L., Tyulmenkov, V.V., Jernigan, S.C., and Klinge, C.M. Resveratrol acts as a mixed agonist/antagonist for estrogen receptors alpha and beta. Endocrinology 141: 3657-3667, 2000. PMID: 11014220

42. Klinge, C.M., Jernigan, S.C., Smith, S.L., Tyulmenkov, V.V., and Kulakosky, P.C. Estrogen response element sequence impacts the conformation and transcriptional activity of estrogen receptor α. Mol. Cell. Endocrinol. 174: 151-166, 2001. PMID: 11306182

43. Shah, N., Thomas, T.J., Lewis, J. S., Klinge, C.M., Shirahata, A., Gelinas, C., and Thomas, T. Regulation of estrogenic and nuclear factor κB functions by polyamines and their role in polyamine analog-induced apoptosis of breast cancer cells. Oncogene 20: 1715-1729, 2001. PMID: 11313919

44. Klinge, C.M., Jernigan, S.C., Risinger, K.E., Lee, J.E., Tyulmenkov, V.V., Falkner, K.C., and Prough, R.A. Short Heterodimer Partner (SHP) orphan nuclear receptor inhibits the transcriptional activity of aryl hydrocarbon receptor (AHR)/AHR nuclear translocator (ARNT). Arch. Biochem. Biophys. 390: 64-70, 2001. PMID: 11368516

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47. Klinge, C.M. Estrogen receptor interaction with estrogen response elements. Nucleic Acids Res.29: 2905-2919, 2001. (Supplementary material available online: http://nar.oupjournals.org/cgi/content/full/29/14/2905/DC1). PMID: 11452016

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52. Okamura, K., Kizu, R., Toriba, Klinge, C.M., and Hayakawa, K. Antiestrogenic activity of extracts from diesel exhaust particulate matter. Polycyclic Aromatic Hydrocarbons 22: 747-759, 2002.

53. Kulakosky, P.C. and Klinge, C.M. Maximizing production of estrogen receptor β with the baculovirus expression system. BioTechniques 34: 334-343, 2003. PMID: 12613256

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56. Kizu, R., Okamura, K., Toriba, A., Mizokami, A. Burnstein, K.L., Klinge, C.M., and Hayakawa, K. Antiandrogenic activities of diesel exhaust particle extracts in PC3/AR human prostate carcinoma cells. Tox. Sci. 76: 299-309, 2003. PMID: 12970580

57. Khalyfa, A., Hall, W.C., Zhao, X.C., Klinge, C.M., Miller, M.M., and Wang, E. DNA microarray analysis of estrogen target gene expression in young and old mouse uterus. Exp. Gerontol. 38: 1087-1099, 2003. PMID: 14580862

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1. Klinge, C.M. A Conceptual Framework for Mentoring in a Learning Organization. Adult Education 26 (4): 160-166, 2015. DOI:10.1177/1045159515594154

MANUSCRIPTS SUBMITTED:

1. Allen, N.C., Rodriguez, L.G., Klinge, C.M., Bates, P.J. and O'Toole, M.G. Synthesis and Evaluation of Tumor Targeting Gold Nanoparticles with RNAi for Glioblastoma Applications submitted to Pharmaceutics ms id # pharmaceutics-2213884
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   ULRF Ref. No. 07018
   C/M Code: UN024/0UN90-US
   Inventors: Rathissh Dorairaj, Robert S. Keynton, Thomas J. Roussel, Jr, **Carolyn M. Klinge**, Wasana Sumanasekera, and Gamini Sumanasekera

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61. Zhang, X., Barker, D.F., Doll, M.A., Martin, R.C., States, J.C., Klinge, C.M., and Hein, D.W. Effect of estrogen on *NAT1* expression in breast tumor cells. Abstract #2895, presented at the Centennial meeting of the AACR, Los Angeles, April 14-18, 2007.

62. Dorairaj, R., Cambron, S.D., Sumanasekara, G., Sumanasekara, W., Klinge, C.M., and Keynton, R.S. Fabrication of Carbon Nanotube-Filled Microchannels for Biological Separations. (Abstract as Paper # 286) Session 09: MEMS for Biological Applications I; presented at the SEM Annual Conference & Exposition on Experimental and Applied Mechanics, Springfield, Massachusetts, June 3-6, 2007.

63. Riggs, K.A., Wickramasinghe, N.S., and Klinge, C.M. Decreased COUP-TFII Expression in Tamoxifen Resistant Breast Cancer Cells. Abstract # P2-262 presented at the Endocrine Society meeting in Toronto, June 2007. Program Abstracts of the 89th annual meeting of the Endocrine Society in Toronto, Ontario, Canada, June 2-6, 2007. Ms. Riggs received a Women in Endocrinology (WE) Abstract award for this presentation.

64. Wickramasinghe, N.S., Riggs, K.A., Li, Y., and Klinge, C.M. Estradiol regulates miRNA expression and miR-21 downstream gene targets in MCF-7 breast cancer cells. Abstract # P4-323 presented at the Endocrine Society meeting in Toronto, June 2007. Program Abstracts of the 89th annual meeting of the Endocrine Society in Toronto, Ontario, Canada, June 2-6, 2007.

65. Kumar, A., Klinge, C.M., Goldstein, R.E. Estradiol and Selective Estrogen Receptor Modulators (SERMs) Modulate the Proliferation of Thyroid Cancer Cells: Role of Estrogen Receptors alpha and beta. Abstract # P1-646. Program Abstracts of the 89th annual meeting of the Endocrine Society in Toronto, Ontario, Canada, June 2-6, 2007.

66. Sumanasekera, W.K., Ivanova, M.M., Riggs, K.A., Dougherty S.M., Ali,, Myers, S.R., Kizu, R., and Klinge, C.M. Diesel Exhaust Particulate Extracts Alter Nongenomic Estrogenic Responses in Human Endothelial Cells. Abstract accepted for presentation at the N.I.E.H.S. special meeting "Future Research on Endocrine Disruption" held in Durham, N.C. August 27-29, 2007.

67. Porter, A., Klinge, C., Gobin, A.S. Assessment of Endothelial Cell Processes in a Synthetic Angiogenesis Model Containing VEGF. Oral presentation by Dr. Andrea Gobin at the Biomedical Engineering Society Meeting, St. Louis, MO, Oct 1-4, 2008.

68. Klinge, C.M., Ivanova, M.M., Abner, S.M., Imbert, Y. and Pierce, W.M., Jr. Identification and characterization of gender-specific differences in estrogen receptor beta-interacting proteins in

lung adenocarcinoma cells. (Abstract R8) Annual Environmental Health Sciences Core Center Meeting and Symposium: Omics Approaches in Environmental Health Sciences, October 19-21, 2008, Philadelphia, PA.

69. Aiyer, H., Klinge, C.M., and Martin, R.C. Effect of green tea polyphenol EGCG on steroid-receptor coregulator expression in tamoxifen resistant breast cancer. Abstract presented at the 2008 annual American Institute for Cancer Research (AICR) Annual Research Conference on Food, Nutrition, Physical Activity and Cancer to be held in Washington, DC, November 6-7, 2008.

70. Wickramasinghe, N.S., Manavalan, T.T., Riggs, K.A., Li, Y., and Klinge, C.M. Estradiol downregulates miR-21 expression and miR-21 gene targets in MCF-7 breast cancer cells. Abstract 3051 presented at the 31st annual San Antonio Breast Cancer Symposium, Dec. 10-14, 2008.

71. Snowden, C., Klinge, C.M., Riggs, K.A., Griffith, Z., and Kulesza, P. COUP TF-II and Estrogen Receptor in Breast Cancer: Do They Correlate? Abstract #302 presented at the United States and Canadian Academy of Pathology (USCAP) 2009 Annual Meeting in Boston, MA, March 11, 2009.

72. Porter, A., Klinge, C., Gobin, A.S., The Use of PEG Hydrogels with PEG-Modified Human VEGF165 to Promote Angiogenesis i*n Vitro*. Oral presentation at the Biomedical Engineering Society Meeting, Pittsburgh, PA, Oct 7-10, 2009.

73. Klinge, C.M., Wickramasinghe, N.S., Manavalan, T.T., Datta, S., and Kalbfleisch, T. Differential expression of microRNAs in tamoxifen-sensitive versus tamoxifen-resistant human breast cancer cells. Abstract #211 an invited presentation at the 2nd annual NCI Translational Science meeting in Tyson's Corner, VA. November 5-7, 2009.

74. Klinge, C.M., Ivanova, M.M., Luken, K.H., Zimmer, A.S., and Kollenberg, T.J. Tamoxifen stimulates NRF-1 transcription by activating estrogen receptor beta- DNA interaction in MCF-7 cells. (Abstract # 230) Keystone Symposia (X7): Nuclear Receptors: Signaling, Gene Regulation, and Cancer, March 21 - 26, 2010; Keystone, CO.

75. Porter, A., Klinge, C., Gobin, A.S., The Use of PEG Hydrogels to Analyze Angiogenic Processes In Vitro Oral presentation by Dr. Gobin at the *Society for Biomaterials*, Seattle, WA. April 2010

76. Yuan, Y., Klinge, C.M., and Gobin, A.S. The Influence of Fibroblast Growth Factor in a Biomimetic Hydrogel System on Endothelial Cell Proliferation Oral presentation by Dr. Gobin *Society for Biomaterials,* Seattle, WA. April 2010

77. Imbert-Fernandez, Y. and Klinge, C.M. The Role of MUC1 Splice Variants in Cellular Inflammation. FASEB mtg. Abstract # A376, Experimental Biology 2010, ASBMB Annual Meeting, Anaheim, CA. April 26, 2010.

78. Klinge, C.M., Manavalan, T.T., Datta, S., and Kalbfleisch, T.S. Differential expression of microRNAs in tamoxifen-sensitive versus tamoxifen-resistant human breast cancer cells. (Abstract 1397) Abstracts of the 92nd annual meeting of the Endocrine Society, San Diego, CA., June 19, 2010.

79. Klinge, C.M. COUP-TFII in tamoxifen-resistant breast cancer. (Abstract # 199). **Oral presentation (30 min)** at the 15th World Congress on Advances in Oncology, October 8, 2010, Loutraki, Greece (published in Int. J. Mol. Medicine vol. 26, supplement 1, 2010).

80. Klinge, C.M. and Ivanova, M.M. Tamoxifen stimulates NRF-1 transcription by activating estrogen receptor beta-DNA interaction in MCF-7 cells. (Abstract # 200, poster). 15th World Congress on Advances in Oncology, October 7-9, 2010, Loutraki, Greece (published in Int. J. Mol. Medicine vol. 26, supplement 1, 2010).

81. Porter, A., Yuan, Y., Klinge, C.M., Berry, S., Cohn, R., Keynton, R., and Gobin, A. oral presentation by Dr. Gobin: "Development of Biomimetic Materials for Guided Endothelial Cell Morphogenesis, Organization and Vessel Formation" Nanomaterials for Biomedical Applications, Symposium at the XIX International Materials Research Congress, Cancun, Mexico, August 15-19, 2010.

82. Clark, B.J., Meier, R.K., Patel, N.S., Dougherty, S.M., and Klinge, C.M. STARD5 expression and chemoresistance in lung adenocarcinoma cells. Abstract presented at Experimental Biology, ASBMB meeting in Washington, DC, April 11, 2011.

83. Huff, M.O., Todd, S.L., Riggs, K.A., Smith, A., and Klinge, C.M. The endocrine disruptors cadmium chloride and sodium arsenate activate estrogen receptor-mediated signaling and induce human lung adenocarcinoma cell proliferation. Abstract # 560.4 presented at Experimental Biology, ASBMB meeting in Washington, DC, April 11, 2011.

84. Jala, V.R., Bodduluri, H., Radde, B.N., and Klinge, C.M. The role of GPR30/G-protein coupled estrogen receptor (GPER) in lung cancer development. Abstract # 4548 presented at the 102nd annual meeting of the American Association for Cancer Research, Orlando, FL April 2-6, 2011.

85. Klinge, C.M. (**invited oral presentation**) "Estrogen and Selective Estrogen Receptor Modulator Regulation of MicroRNAs". SYMPOSIUM SESSION: BASIC: microRNAs: No small role in skeletal regulation., Sunday, June 5, 2011 at the 93rd annual meeting of the Endocrine Society, Boston, MA.

86. Luken, K.H., Ivanova, M.M., and Klinge, C.M. Regulation of Nuclear Respiratory Factor 1 by Estradiol and Tamoxifen in Endocrine-Resistant Breast Cancer Cells (Abstract P1-54) Abstracts of the 93rd annual meeting of the Endocrine Society, Boston, MA., June 4, 2011.

87. Litchfield, L.M., Emberts, C.G., and Klinge, C.M. COUP-TFII-Nucleolin Interaction Regulates RAR[beta]2 Expression in Human Breast Cancer Cells (Abstract P2-10) Abstracts of the 93rd annual meeting of the Endocrine Society, Boston, MA., June 4-7, 2011.

88. Manavalan, T.T., Klinge, C.M., Datta, S., and Kalbfleisch, T.S. Differential Expression Of MiRNAs In Antiestrogen-Sensitive MCF-7 *versus* Antiestrogen-Resistant LY2 Breast Cancer Cells. (Abstract P3-68) Abstracts of the 93rd annual meeting of the Endocrine Society, Boston, MA., June 4-7, 2011.

89. Harbrecht, B., Klinge, C.M. 17beta-Estradiol Attenuates Cytokine-induced Nitric Oxide

Production in Rat Hepatocytes. 25th EAST (Eastern Association for the Surgery of Trauma) Annual Scientific Assembly; January 10-14, 2012 in Lake Buena Vista, Florida.

90. Manavalan, T.M. and Klinge, C.M. Loss of MiR-200 family of MicroRNAs confer resistance to Tamoxifen in human breast cancer cells. Abstract # 1096 presented at the 103rd annual meeting of the American Association for Cancer Research, Chicago, IL April 2-6, 2012.

91. Litchfield, L.M. and Klinge, C.M. COUP-TFII suppresses NF κ B activation in endocrine-resistant breast cancer cells. Abstract #2214 presented at the 103rd annual meeting of the American Association for Cancer Research, Chicago, IL April 2-6, 2012

92. Bamji, S.F., Page, R.B., Sanders, A., Patel, D. Alvarez, A.R., Gambrell, C., Naik, K., Raghavan, A.M., Burow, M.E., Coue, S.M., Klinge, C.M., Ivanova, M., and Corbitt, C. Effects of glyceolling on whole transcript expression in the mouse brain. Neuroscience 2012. Society for Neuroscience annual meeting, New Orleans, October 13-17, 2012.

93. Nweze I.C., Smith J.W., Lakshmanan J., Klinge C.M, Zhang B., Harbrecht B.G. Multiple receptors mediate 17β-estradiol attenuation of cytokine-induced nitric oxide production in rat hepatocyte. Shock 2012; 37: S47. 7th Congress of the International Federation of Shock Societies 35th Annual Conference, June 9-13, 2012 Miami Beach, FL.

94. Litchfield, L.M. and Klinge, C.M. COUP-TFII suppresses NFκB activation in endocrine-resistant breast cancer cells. Abstract # P6-04-30 presented at the 2012 CTRC-AACR San Antonio Breast Cancer Symposium, December 4-8, 2012, San Antonio, TX.

95. Teng, Y., Prough, R.A., and Klinge, C.M. DHEA increases miR-21 transcription in HepG2 cells through androgen and estrogen receptors. (Abstract # 2020) Keystone Symposia: Noncoding RNAs in Development and Cancer, January 20-25, 2013; Vancouver, British Columbia, Canada.

96. Soucy, P., Klinge, C.M., Frieboes, H., Gobin, A. An Innovative Approach for Curcumin Delivery for Breast Cancer Using Albumin Nanoparticles. Proceedings of the ASME 2013 2nd Global Congress on NanoEngineering for Medicine and Biology. NEMB2013-93295, Feb. 4-6, 2013, Boston, MA.

97. Bourcy, K., States, J.C., Klinge, C.M, Doll, M.A., and Hein, D.W. The Role of Arylamine N-acetyltransferase 1 in Breast Cancer Progression. Poster presented at Experimental Biology, April 20-24, 2013, Boston, MA. (The FASEB Journal. 27:lb579, 2013)

98. Klinge, C.M., Clark, B.J., and Prough, R.A. Dehydroepiandrosterone Induces Biphasic miR-21 Transcription in HepG2 Cells through GPER/GPR30, Estrogen Receptor β, and Androgen Receptor (Abstract # 13870) Abstracts of the 96th annual meeting of the Endocrine Society, Chicago, IL., June 21-24, 2014.

99. Klinge, C.M., Clark, B.J., and Prough, R.A. Dehydroepiandrosterone Induces Biphasic miR-21 Transcription in HepG2 Cells through GPER/GPR30, Estrogen Receptor β, and Androgen Receptor (PP37-1, **oral presentation)** Abstracts of the 96th annual meeting of the Endocrine Society, Chicago, IL., Monday June 23, 2014.

100. Klinge, C.M., Radde, B.M., Hill, B.G., and Schultz, D.J., Regulation of bioenergetic function in endocrine- sensitive versus resistant breast cancer cells. (Abstract Mon-406) Abstracts of the 99th annual meeting of the Endocrine Society, San Diego, CA March 5-8, 2015.

101. Bamji, S.F., Radde, B.N., Muluhngwi, P., Klinge, C.M., and Corbitt, C. Neuroendocrine characterization of cell lines derived from adult female mouse hypothalamus. Abstract 73.05 presented at the Society for Neuroscience 45th Annual Meeting, Chicago IL, October 17-21, 2015.

102. Klinge, C.M., Radde, B.N., and Hill, B.G. Dysregulation of Mitochondrial Bioenergetics in Tamoxifen-Resistant Breast Cancer. (Abstract FRI 209) Abstracts of the 100th annual meeting of the Endocrine Society, Boston, MA., April 1, 2016.

103. Muluhngwi, P., Napier, J.T., Klinge, C.M. Role of Increased Mir-29b-1 and Mir-29a in Endocrine-Resistant Breast Cancer. (Abstract SUN 096) Abstracts of the 100th annual meeting of the Endocrine Society, Boston, MA., April 3, 2016.

104. Hyzer, J. , Krauss, K.A., Black, A.T., Todd, S.L., Elpers, J.T., Hoerter, J.E., Klinge, C.M., and Huff, M.O. Activation of Membrane Estrogen Receptor: MAPK Signaling by Cadmium Chloride and Sodium Arsenite in Human Lung Adenocarcinoma Cells. Experimental Biology, Abstract C325 644.7, San Diego Convention Center, San Diego, CA. April 5, 2016.

105. Muluhngwi, P. and Klinge, C.M. Tamoxifen differentially regulates miR-29b-1 and miR-29a depending on endocrine-sensitivity in breast cancer (Abstract 3428) 108th annual meeting of the American Association for Cancer Research, Washington, DC., April 1-5, 2017.

106. Jones-Reed, D.Z., Schmidt, M.I., Clark, G.J., Klinge, C., Bare, S. Kimbro K.S., Kidd, L.R. Alteration of miR-186 expression modifies inflammatory markers in normal epithelial and prostate cancer cell models.(Abstract 1483) 108th annual meeting of the American Association for Cancer Research, Washington, DC., April 1-5, 2017.

107. Krishna, A., Vittitow, S. Muluhngwi, P. and Klinge C.M. Role of Mir-29b-1/a in Acquired Endocrine-Resistant Breast Cancer. (Abstract SAT 143). Abstracts of the 99th annual meeting of the Endocrine Society, Orlando FL., April 1, 2017.

108. Klinge, C.M. Alizadeh-Rad, N, Muluhngwi, P., Rouchka, E.C., and Schultz, D.J.. Transcriptomic profiling of anacardic acid-treated breast cancer cells. (Abstract MON 426) Abstracts of the 99th Annual meeting of the Endocrine Society, Orlando FL., April 3, 2017.

109. Clark, B.J., Meier, R.K., Dougherty, S.M., Ding, Y. Hollkamp, K., Hill, B.G., and Klinge C.M. Bile Acid Binding Protein STARD5 Suppresses Doxorubicin-mediated Apoptosis in H1792 Lung Adenocarcinoma Cells. (Abstract B378) Experimental Biology meeting Chicago, IL April 22-26, 2017. FASEB J. 31 Supplement 616.4

110. Klinge, C.M. and Schultz, D.J. Transcriptome of anacardic acid-treated estrogen receptor+ and triple-negative breast cancer cells (Abstract MON 426) Abstracts of the 100th Annual meeting of the Endocrine Society, Chicago, IL., March 18, 2018. (**invited oral presentation**)

111. Carlisle, S.M., Trainor, P.J., Doll, M.A., Stepp, M.W., Klinge, C.M., and Hein, D.J. Deciphering the Role of Human Arylamine N-acetyltransferase 1 (NAT1) in Breast Cancer Cell Metabolism Using a Systems Biology Approach. 14th annual Metabolomics Society Annual Conference, Seattle, WA June 24-28, 2018.

112. Bushau-Sprinkle, A.M., Barati, M.T., Conklin C.A., Gagnon K.B., Siskind, L.J., Doll, M.A., Rane, M., Clark, B.J., Merchant, M., Klinge, C.M., Brier, M.E., Coventry, S., and Lederer, E.D. NHERF1 loss results in metabolic stress and increased susceptibility to cisplatin-induced acute kidney injury. Abstract # 3438, Experimental Biology 2019, ASBMB Annual Meeting, Orlando, FL. April 6-9, 2019.

113. Klinge, C.M. and Rouchka E.C. N(6)-methyladenosine Reader HNRNPA2B1 Regulates Tamoxifen-sensitivity in Breast Cancer Cells. Abstract # SUN-009 of the 101st Annual meeting of the Endocrine Society, New Orleans, LA., March 24, 2019. Journal of the Endocrine Society, Vol. 3, Issue Supplement 1, April-May 2019. https://doi.org/10.1210/js.2019-SUN-009

114. Klinge, C.M., Piell, K.M., Clem, B.F., Petri, B.J. HNRNPA2B1 Mediates Endocrine-Sensitivity and Alters PSAT1 in Breast Cancer Cells. Abstract # OR09-06 of the 102nd Annual meeting of the Endocrine Society. Journal of the Endocrine Society, Vol.4, Issue Supplement 1, April-May 2020 https://doi.org/10.1210/jendso/bvaa046.651

115. Klinge, C.M., Petri, B.J., and Piell, K.M. Epitranscriptomic reader HNRNPA2B1 confers endocrine resistance to breast cancer cells. Abstract 6805 of a poster presented at the 103rd Annual meeting of the Endocrine Society, held virtually March 20, 2021. Journal of the Endocrine Society, Vol. 5, Issue Supplement 1, Pg. A807-A808; April-May 2021. https://doi.org/10.1210/jendso/bvab048.1643

116. Klinge, C.M., Petri, B.J, Piell, K.M., and Clem, B.F. HNRNPA2B1 increases the serine synthesis pathway in endocrine-resistant breast cancer cells. Abstract #1402. American Association for Cancer Research meeting April 2021. Session PO.ET03.04 - Regulation of Gene Expression in Drug Resistance April 10, 2021, 8:30 AM - 11:59 PM;

117. Petri, B.J., Piell, K.M., Wahlang, B., Jin, J., Shi, H., Andreeva, K., Rouchka, E.C., Cave, M.C., and Klinge, C.M. Non-dioxin-like and Dioxin-like PCB-regulated miRNA and mRNA transcriptome impact the proteome in high fat diet-fed mouse liver. Poster Session 1 at the Keystone Live eSymposia: Non-Coding RNAs: Biology and Applications, May 11-14, 2021.

118. Petri, B.J., Piell, K.M., He, L, Zhang, X, Pan, J. Rai, S.N., Andreeva, K. Rouchka, E.C., Wahlang, B., Cave, M.C., and Klinge, C.M. Environmental pollutants modify the hepatic global epitranscriptome in a mouse model of nonalcoholic fatty liver disease. Poster #483, the American Association for the Study of Liver Diseases (AASLD) The Liver Meeting November 12-15, 2021.

119. Petri, B.J., Piell, K.M., Wahlang, B., Jin, J., Shi, H., Andreeva, K., Rouchka, E.C., Cave, M.C., and Klinge, C.M. Multi-'omics analysis elucidates potential roles for environmental pollution-regulated microRNAs in nonalcoholic fatty liver disease. Poster #497, the American Association for the Study of Liver Diseases (AASLD) The Liver Meeting November 12-15, 2021.

120. Petri, B.J., Piell, K.M., Wahlang, B., Andreeva, K., Rouchka, E.C., Jin, J., Hardesty, J.E., Merchant, M., Pan, J., Rai, S.N., Cave, M.C., and Klinge, C.M.. Multi-'omics analysis identifies PCB-regulated pathways in Nonalcoholic Fatty Liver Disease. Abstract # 4405/P403, Society of Toxicology (SOT) Annual Meeting, San Diego, CA. March 30, 2022.

121. Adiele, N.V., Head, K.Z., Gripshover, T.C., Luo, J. Bolatimi O.E., Wilkerson, C. Klinge, C., Petri, B.J., Piell, K.M., Cave, M.C. and Wahlang, B. Effects of long-term exposure to polychlorinated biphenyls on ileal gene expression. Abstract # 37322 at the American Association for the Study of Liver Diseases (AASLD) The Liver Meeting Washington D.C. November 4-8, 2022.

122. Petri, B.J., Piell, K.M., Wahlang, B., Head, K.Z., Andreeva, K., Rouchka, E.C., Cave, M.C., and Klinge, C.M. Polychlorinated biphenyls alter hepatic m6A mRNA methylation in a mouse model of environmental liver disease. Poster #4130 the American Association for the Study of Liver Diseases (AASLD) The Liver Meeting, Washington D.C. November 4-8, 2022.

123. Klinge, C.M., Piell, K.M., Petri, B.J., Head, K.Z., Wahlang, B., He, L. Zhang, X., Pan, J. Rai, S.N., DeSilva, K.M., Chariker, J.H., Rouchka, E.C., Tan, M., Li, Y., and Cave, M.C. Disruption of the Mouse Liver Epitranscriptome by Aroclor 1260 Exposure and Diet. Abstract # 4243. Society of Toxicology (SOT) Annual Meeting, Nashville, TN. March 19-23, 2023.

124. Petri, B.P., Piell, K.M, Wahlang, B., Rouchka, E.C., Park, J.W., Hardesty, J.E., Jin, J., Cave, M.C., and Klinge, C.M. Polychlorinated biphenyls dysregulate hepatic alternative splicing machinery by altering expression of splicing factors in a mouse model of environmental liver disease. Abstract # 4244. SOT Annual Meeting, Nashville, TN. March 19-23, 2023.

ABSTRACTS of presentations at regional meetings:

1. Kaur, K., Bowers, J.L., Swanson, H., and Klinge, C.M. Mechanisms accounting for the antiestrogenic activity of chlorinated and polycyclic aromatic hydrocarbons in estrogen-dependent breast and estrogen-independent endometrial cancer cells. (Abstract of poster presented at the 6th annual Midwest Cytochromes P450 symposium, Purdue University, September 11, 1998.)
2. Klinge, C.M., Kaur, K., Bowers, J.L., and Swanson, H.I. Mechanisms of cross-talk between the aryl hydrocarbon receptor(AHR)/AHR nuclear translocator complex and estrogen receptor α. Poster presented at the 1999 Ohio Valley Society for Toxicology meeting held at the University of Louisville School of Medicine, November 12, 1999.
3. McCarty, M.A., Kulakosky, P.C., and Klinge, C.M. Estrogen response element sequence affects the binding affinity of estrogen receptors α and β. Abstract presented at the Midwest Student Biomedical Research Forum, Omaha, NB., February 19, 2000. **This presentation won the first place award out of 57 posters presented in the medical student competition.
4. Jernigan, S.C. and Klinge, C.M. Estrogen response element sequence impacts estrogen receptor interaction with coregulators in transfected cells. Abstract # P-59 presented at the Midwest Student Biomedical Research Forum, Omaha, NB., February 15, 2001. **This presentation won the first place award out of 77 posters presented in the medical student competition.
5. Jernigan, S.C. and Klinge, C.M. Estrogen response element sequence and cell type impact estrogen receptor interaction with coregulators in transfected cells. Abstract # P-59 presented at the Midwest Student Biomedical Research Forum, Omaha, NB., February 16, 2002. **This presentation won the second place award out of 77 posters presented in the medical student

competition.

6. Risinger, K.E., Beck, V., Jungbauer, A., and Klinge, C.M. Estrogenic activity in white and red wine extracts. Poster presented at the MidWest Molecular Endocrinology meeting at Indiana University, Bloomington, May 31, 2002.
7. Watts, M.B., Risinger, K.E., and Klinge, C.M. Expression of COUP-TFs in tamoxifen-sensitive and tamoxifen-resistant human breast cancer cells. Abstract P-30 presented at the Midwest Student Biomedical Research Forum, Omaha, NB., February 15, 2003. **This presentation won the fourth place award out of 77 posters presented in the medical student competition.
8. Noisin, E.L., Brey, D., Bhatnagar, S., Keynton, R.S., and Klinge, C.M. Impact of shear stress, hypergravity, and vibration on rapid Estrogen-induced Nitric Oxide synthesis in human endothelial cells. (Abstract 14) Great Lakes Nuclear Receptor Conference held at Medical College of Ohio in Toledo, OH. November 15, 2003.
9. Robinson, K.A., Hall, M.N., and Klinge, C.M. COUP-TF expression in Tamoxifen-resistant breast cancer cell lines. (Abstract 20) Great Lakes Nuclear Receptor Conference held at Medical College of Ohio in Toledo, OH. November 15, 2003.
10. Mattingly, K.A., Brady, Candice, and Klinge, C.M. Estrogen receptor interaction with coregulators is influenced by estrogen response element sequence. (Abstract 22) Great Lakes Nuclear Receptor Conference held at Medical College of Ohio in Toledo, OH. November 15, 2003.
11. Blankenship, K.A., Bhatnagar, S., Noisin, E.L., and Klinge, C.M. Rapid activation of MAPK by estradiol and resveratrol in bovine aortic endothelial cells. (Abstract 13) Great Lakes Nuclear Receptor Conference held at Medical College of Ohio in Toledo, OH. November 15, 2003.
12. Bohn, A.R., Dougherty, S.M., Blankenship, K.A., and Klinge, C.M. Role of estrogen receptors alpha and beta in lung cancer. Abstract P-45 presented at the Midwest Student Biomedical Research Forum, Omaha, NB., February 21, 2004. **This presentation won the third place award out of 63 posters presented in the medical student competition.
13. Sumanasekera, W.K., Noisin, E.L., Bray, D.M., Bhatnagar, S., Keynton, R.S., and Klinge, C.M. The effect of sex steroids on hypergravity-induced MAPK signaling and occludin expression in Human Umbilical Vein Endothelial Cells (HUVEC). Presented as an oral presentation at the Mid West Molecular Endocrinology meeting, University of Indiana, Indianapolis, IN. May 20-21, 2004.
14. Blankenship, K.A., Bohn, A.R., Dougherty, S.M., and Klinge, C.M. Role of estrogen receptors alpha and beta in human lung cancer. Poster Abstract 1 at the Mid West Molecular Endocrinology meeting, University of Indiana, Indianapolis, IN. May 20-21, 2004.
15. Mattingly, K.A. and Klinge, C.M. Maximizing expression of Flag-tagged ERβ and development of a dual expression baculoviral system for ERα/ERβ. Poster Abstract 13 at the Mid West Molecular Endocrinology meeting, University of Indiana, Indianapolis, IN. May 20-21, 2004.
16. Robinson, K.A. and Klinge, C.M. COUP-TF expression in tamoxifen-resistant breast cancer cells. Poster Abstract 19 at the Mid West Molecular Endocrinology meeting, University of Indiana, Indianapolis, IN. May 20-21, 2004.
17. Robinson, K.A. and Klinge, C.M. COUP-TF expression in tamoxifen-resistant breast cancer cell lines. Oral Presentation Abstract 4 presented at the Ohio Valley Society of Toxicology annual meeting, University of Kentucky, Lexington, KY. November 5, 2004.
18. Blackmon, J., Sumanasekera, W.K., Dougherty, S.M., and Klinge, C.M. Role of caveolae in cardioprotective activity of the red wine polyphenol resveratrol. Abstract presented at Posters-at-the-Capitol 2006, February 2, 2006, Frankfort, KY.
19. Fenton, F.P., Dougherty, S.M., Klinge, C.M., and Huff, M.O. The Effect of Environmental Estrogens on the Transcription of Estrogen Responsive Genes in Human Lung Adenocarcinoma

Cells. Abstract of poster presented at the 5th Annual University of Evansville Math, Engineering and Science Conference, April 4, 2009.

20. Hockenberry, A.M., Emberts, C.G., and Klinge, C.M. Nucleolin acts as a Coactivator for COUP-TFII regulation of Retinoic Acid Receptor β transcription in T47D Human Breast Cancer Cells. Posters-at-the-Capitol, Frankfort, KY January 22, 2010.
21. Oliver, L.D., Litchfield, L.M., and Klinge, C.M. The effect of COUP-TFII-nucleolin interaction on RAR β 2 expression in human breast cancer cells. Posters-at-the-Capitol. Frankfort, KY, February 10, 2011.
22. Elpers, J.P., Klinge, C.M., and Huff, M.O. Defining the cell pathway of environmental estrogens found in cigarette smoke, cadmium chloride and sodium arsenate, in human lung adenocarcinoma cells. University of Evansville's MESCON (Math, Engineering and Science Conference), March 26, 2011, Evansville, IN.
23. Bell, J., Teng, Y, Manavalan, T, Kareparembil, S, and Klinge, C.M. DHEA Stimulates miR-21 Expression in Breast Cancer Cells. Posters-at-the-Capitol, Frankfort, KY January 26, 2011.
24. Murphy, R., Todd, S., Elpers, J., Radde, B.M., Klinge, C.M., and Huff, M.O. The endocrine disruptors cadmium chloride and sodium arsenate induce human lung adenocarcinoma cell proliferation by activating the estrogen receptor-mediated signaling pathway. University of Evansville's MESCON (Math, Engineering and Science Conference), March 24, 2012, Evansville, IN.
25. Osen, A., Smith, A., Klinge, C.M., and Huff, M.O. Defining the Signaling Pathway Induced by the Endocrine Disruptors Sodium Arsenate and Cadmium Chloride in Human Lung Adenocarcinoma Cells. University of Evansville's MESCON (Math, Engineering and Science Conference), March 23, 2013, Evansville, IN.

ABSTRACTS of presentations at local meetings:

1. Klinge, C.M. and Silver, B.F. COUP-TF interacts with estrogen receptor, binds to estrogen response elements and single estrogen response element half-sites, and inhibits estradiol-induced gene expression. (Abstract #29). Presented at the 1997 Research! Louisville Poster Competition, Nov. 19-21, 1997. This work was awarded 2nd prize in the "originality" category.
2. Noisin, E.L., Kulakosky, P.C., and Klinge, C.M. Estrogen response element sequence and half-site spacing requirements for estrogen receptor α and COUP-TF binding. (Abstract #SM16 presented at the 24th annual Student Research Day at the University of Louisville Health Sciences Center, October 27, 1998). *This presentation won an "honorable mention" award (= 3rd place out of 21 posters presented by sophomore medical students).
3. Klinge, C.M., Kaur, K., Bowers, J.L., and Swanson, H.I. Mechanisms of cross-talk between the aryl hydrocarbon receptor(AHR)/AHR nuclear translocator complex and estrogen receptor □. (Abstract #F26). Presented at the 1999 Research! Louisville Poster Competition, November 17, 1999.
4. McCarty, M.A., Kulakosky, P.C., and Klinge, C.M. Estrogen response element sequence affects the binding affinity of estrogen receptors α and β. (Abstract #FMED8). Presented at the 1999 Research! Louisville Poster Competition, November 15, 1999. **This presentation won the first place award out of 12 posters presented by first year medical students.
5. Kulakosky, P.C. and Klinge, C.M. Cloning and expression of estrogen receptor β in a novel baculovirus vector. (Abstract #PRF11). Presented at the 1999 Research! Louisville Poster Competition, November 18, 1999.
6. Tyulmenkov, V.A. and Klinge, C.M. A fluorescence assay to measure the rate of ligand association with estrogen receptors α and β. (Abstract #PRF21). Presented at the 1999

Research! Louisville Poster Competition, November 18, 1999.

7. Jernigan, S.C., and Klinge, C.M. Estrogen response element sequence impacts estrogen receptor interaction with coregulators in transfected cells. (Abstract # FMED3) Presented at Research!Louisville Student Research Poster Competition, October 30, 2000. **This presentation won the first place award in the freshman medical student competition.
8. Neale, J.R, Kulakosky, P.C., Tyulmenkov, V.V., Waite, L., Taylor, K.G., Klinge, C.M., and Pierce, W.M., Jr. Selectivity for estrogen receptor alpha as a prediction of bone selectivity. (Abstract GR15) Presented at Research!Louisville Student Research Poster Competition, October 30, 2000.
9. Ramsey, T.L., Jernigan, S.C., Tyulmenkov, V.V., and Klinge, C.M. DNA sequence modulates estrogen receptor α conformation and activity. (Abstract GR21) Presented at Research!Louisville Student Research Poster Competition, October 30, 2000.
10. Kulakosky, P.C., Jernigan, S.C., and Klinge, C.M. Estrogen response element repeat length, half site spacing and 3'-flanking sequences modulate ER alpha and beta binding affinity in vitro, and transcriptional response in transient transfection assays. (Abstract PRF15) Presented Research!Louisville Post-doctoral Research Poster Competition, October 31, 2000.
11. Tyulmenkov, V.V., Sims, R.L., and Klinge, C.M. Spacing of direct repeats of estrogen response element half-sites may be critical for estrogen receptor subtype-selective gene transactivation. (Abstract PRF33) Presented Research!Louisville Post-doctoral Research Poster Competition, October 31, 2000.
12. Klinge, C.M., Smith, S.L. Bowers, J.L., and Jernigan, S.C. Estrogen response element sequence impacts the conformation of estrogen receptor α and transcriptional activity in transfected cells. (Abstract F18) Presented Research!Louisville Faculty Research Poster Competition, November 1, 2000.
13. Jernigan, S.C. and Klinge, C.M. Estrogen response element sequence and cell type impact estrogen receptor interaction with coregulators in transfected cells. (Abstract SMED11) Research!Louisville, 2001. **This presentation won the first place award in the sophomore medical student competition of 27 posters presented.
14. Klinge, C.M., Jernigan, S.C., and Risinger, K.E. The agonist activity of tamoxifen is inhibited by the SHP orphan nuclear receptor in human endometrial cancer cells. (Abstract F-26) Research! Louisville, 2001
15. Lefta, A., Risinger, K.E., and Klinge, C.M. Non-genomic activity of estradiol and resveratrol in MAPK signaling in bovine aortic endothelial cells. Poster Presented at Summer Research Day, July 31, 2002 at the University of Louisville.
16. Lefta, M., Mattingly, K.A., and Klinge, C.M. Time course of baculovirus-expressed estrogen receptor beta production in Sf21cells. Poster Presented at Summer Research Day, July 31, 2002 at the University of Louisville.
17. Watts, M.B., Risinger, K.E., and Klinge, C.M. Expression of COUP-TFs in tamoxifen-sensitive and tamoxifen-resistant human breast cancer cells. (Abstract FMED12) Research!Louisville, 2002. **This presentation won the first place award in the freshman medical student competition of 14 posters presented.
18. Condra, J.A. and Klinge, C.M. Comparison of the transcriptional properties of tagged versus non-tagged estrogen receptors alpha and beta in transfected cells. (Abstract GR14) Research!Louisville, 2002.
19. Mattingly, K.A. and Klinge, C.M. Optimizing production of full-length, recombinant human estrogen receptor beta (ERβ) in Sf21 insect cells using a baculovirus expression system. (Abstract GR39) Research!Louisville, 2002.
20. Kulakosky, P.C. and Klinge, C.M. Maximizing production of estrogen receptor beta in

Spodoptera frugiperda and Trichoplusia Ni cells. (Abstract F25) Research!Louisville, 2002.

21. Okonny, E.A., Noisin, E.L., Bhatnagar, S., Risinger, K.E., and Klinge, C.M. Mechanisms of estrogen and resveratrol in cardioprotective function. Poster Presented at Summer Research Day, July 30, 2003 at the University of Louisville.
22. Brady, C.R., Mattingly, K.A., and Klinge, C.M. Role of DNA sequence on estrogen receptor-coactivator interaction in vitro. Poster Presented at Summer Research Day, July 30, 2003 at the University of Louisville.
23. Hall, M.N., Robinson, K.A., and Klinge, C.M. The role of COUP-TF in tamoxifen resistant breast cancer cell proliferation. Poster Presented at Summer Research Day, July 30, 2003 at the University of Louisville.
24. Bohn, A.R., Dougherty, S.M., Blankenship, K.A., and Klinge, C.M. Role of estrogen receptors alpha and beta in lung cancer. (Abstract SMED3) Research!Louisville, 2003. **This presentation won the second place award in the sophomore medical student competition of 25 posters presented.
25. Mattingly, K.A., Brady, Candice, and Klinge, C.M. Estrogen receptor interaction with coregulators is influenced by estrogen response element sequence. (Abstract GR40) Research!Louisville, 2003.
26. Robinson, K.A., Hall, M.N., and Klinge, C.M. COUP-TF expression in Tamoxifen-resistant breast cancer cell lines. (Abstract GR51) Research!Louisville, 2003.
27. Blankenship, K.A., Bhatnagar, S., Noisin, E.L., and Klinge, C.M. Rapid activation of MAPK by estradiol and resveratrol in bovine aortic endothelial cells. (Abstract PRF17) Research!Louisville, 2003.
28. Michael, K.K., Klinge, C.M., Ripp, S.L., and Prough, R.A. DHEA and metabolites activate estrogen receptor β. (Abstract GR42). Research!Louisville, 2003.
29. Klinge, C.M., Jernigan, S.C., and Risinger, K.E. Allosteric regulation of estrogen receptors alpha and beta interaction with coactivators, corepressors, and co-integrators by estrogen response element sequence. (Abstract F36). Research!Louisville, 2003.
30. Mattingly, K.A., Jernigan, S.C., Risinger, K.E., and Klinge, C.M. Estrogen receptor interaction with coregulators is influenced by estrogen response element sequence (Abstract 43) Third Annual Retreat of the James Graham Brown Cancer Center, University of Louisville School of Medicine, September 23, 2004.
31. Mazhawidza, W., Dougherty, S.M., Blankenship, K.A., and Klinge, C.M. Differences in the expression and activity of estrogen receptors alpha and beta between female and male human lung cancer cells. (Abstract 44) Third Annual Retreat of the James Graham Brown Cancer Center, University of Louisville School of Medicine, September 23, 2004.
32. Robinson, K.A., Wickramasinghe, N.S., and Klinge, C.M. COUP-TF expression in tamoxifen-sensitive versus tamoxifen-resistant breast cancer cell lines (Abstract 58) Third Annual Retreat of the James Graham Brown Cancer Center, University of Louisville School of Medicine, September 23, 2004
33. Johnston, B.J., Sumanasekera, W.K., Blankenship, K.A., Zhao, L., Keynton, R.S., Kizu, R. and Klinge, C.M. Effect of Diesel Exhaust Particulate Extracts (DEPE) on Endothelial Cell Function (Abstract SMED21) Research!Louisville, 2004. **This presentation won the second place Engineering Collaboration Award.
34. Mattingly, K.A. and Klinge, C.M. Maximizing expression of Flag-tagged ERβ and development of a dual expression baculoviral system for ERα/ERβ. (Abstract GR65) Research!Louisville, 2004.
35. Robinson, K.A., Wickramasinghe, N.S., and Klinge, C.M. COUP-TF expression in tamoxifen-sensitive *versus* tamoxifen-resistant breast cancer cell lines. (Abstract GR83)

Research!Louisville, 2004.

36. Mazhawidza, W., Dougherty, S.M., Blankenship, K.A., and Klinge, C.M. Differences in the expression and activity of estrogen receptors alpha and beta between female and male human lung cancer cells. (Abstract GR66) Research!Louisville, 2004.
37. Sumanasekera, W.K. Noisin, E.L., Bhatnagar, S., Zhao, L., Brey, D.M., Morgan, D.D., Kenton, R.S., and Klinge, C.M. Estradiol protects endothelial cells from inhibition of MAPK signaling under low hypergravity exposure mimicking what astronauts experience during lift-off. (Abstract PRF-43) Research!Louisville, 2004.
38. Wickramasinghe, N.S., Robinson, K.A., and Klinge, C.M. COUP-TF expression and p38-MAPK activity in tamoxifen-sensitive versus tamoxifen-resistant breast cancer cell lines. (Abstract PRF-50) Research!Louisville, 2004.
39. Sumanasekera, W.K. Zhao, L., Morgan, D.D., Noisin, E.L., Brey, D.M., Kenton, R.S., and Klinge, C.M. Effect of sex steroids on hypergravity-induced MAPK signaling and occludin expression in human umbilical vein endothelial cells (HUVEC). (Abstract 7) IMD^3 Symposium, March 22, 2005 in Louisville, KY.
40. Robinson, K.A., Wickramasinghe, N.S., and Klinge, C.M. COUP-TF expression in tamoxifen-sensitive and -resistant breast cancer cell lines. (Abstract 13) IMD^3 Symposium, March 22, 2005 in Louisville, KY. *This poster was awarded the third place prize in the poster competition.
41. Mattingly, K.A., Risinger, K.E. and Klinge, C.M. Estrogen receptor interaction with coregulators is influenced by estrogen response element sequence. (Abstract 19) IMD^3 Symposium, March 22, 2005 in Louisville, KY.
42. Mazhawidza, W., Dougherty, S.M., Bohn, A.R., Blankenship, K.A., McGregor, W.G., and Klinge, C.M. Comparison of the expression and activity of estrogen receptors alpha and beta in human lung cancer cells. (Abstract 25) IMD^3 Symposium, March 22, 2005 in Louisville, KY.
43. Wickramasinghe, N.S., Robinson, K.A., and Klinge, C.M. COUP-TF expression and p38-MAPK activity in tamoxifen-sensitive *versus* tamoxifen-resistant breast cancer cell lines. (Abstract 28) IMD^3 Symposium, March 22, 2005 in Louisville, KY.
44. Robinson, K.A., Wickramasinghe, N.S., and Klinge, C.M. COUP-TF expression in tamoxifen-sensitive and resistant breast cancer cell lines. (Abstract 66) Fourth Annual Retreat of the James Graham Brown Cancer Center, University of Louisville School of Medicine, September 14, 2005.
45. Wickramasinghe, N.S., Cochrum, R.K., Robinson, K.A., and Klinge, C.M. Expression and activities of COUP-TF, progesterone receptor ,and estrogen receptor in tamoxifen- sensitive and -resistant breast cancer cell lines. (Abstract 85) Fourth Annual Retreat of the James Graham Brown Cancer Center, University of Louisville School of Medicine, September 14, 2005.
46. Mazhawidza, W., Dougherty, S.M., McGregor, W.G., and Klinge, C.M. Gender-dependent differences in the activity of estrogen receptors alpha and beta between human lung adenocarcinoma cell lines from females and males. (Abstract 51) Fourth Annual Retreat of the James Graham Brown Cancer Center, University of Louisville School of Medicine, September 14, 2005.
47. Mangus, B.D., Robinson, K.A., Wickramasinghe, N.S., Cochrum, R.K., and Klinge, C.M. Regulation of COUP-TF, estrogen receptors alpha and beta, and progesterone receptor expression in Tamoxifen- sensitive and -resistant Breast Cancer Cells. (Abstract SMED30) Research!Louisville, November 1, 2005.
48. Robinson, K.A., Wickramasinghe, N.S., and Klinge, C.M. COUP-TF expression in tamoxifen-sensitive and resistant breast cancer cell lines. (Abstract GRD46) Research!Louisville, October 31, 2005.
49. Mazhawidza, W., Dougherty, S.M., McGregor, W.G., and Klinge, C.M. Gender-dependent

differences in the activity of estrogen receptors alpha and beta between human lung adenocarcinoma cell lines from females and males. (Abstract GRD35) Research!Louisville, October 31, 2005.

50. Sumanasekera, W.K., Zhao, L., Ivanova, M., Morgan, D.D., Keynton, R.S. and Klinge, C.M. Effect of estradiol and dihydrotestosterone on hypergravity-induced inhibition of MAPK signaling and occludin expression in human umbilical vein endothelial cells. (Abstract PRF35) Research!Louisville, November 2, 2005.
51. Wickramasinghe, N.S., Riggs, K.A., and Klinge, C.M. COUP-TF expression in tamoxifen-sensitive and resistant breast cancer cell lines. (Abstract PRF46) Research!Louisville, November 2, 2005.
52. Clark, B.J., Corbitt, C., Klinge, C.M., Lei, Z., and States, J.C. Decreased serum testosterone levels in adult male mice exposed prenatally to arsenite. (Abstract F9) Research!Louisville, November 3, 2005.
53. Dean, W.L., Klinge, C.M., Lominadze, Z. Mechanism of Inhibition of Platelet Activation by Estrogen Receptor Ligands. (Abstract F12) Research!Louisville, November 3, 2005.
54. McConda, D.B., Riggs, K.A., and Klinge, C.M. Role of Estrogen Receptor alpha isoform hERα46 in tamoxifen-resistant breast cancer. (Abstract FMED 13) Research!Louisville University of Louisville School of Medicine, Louisville, KY, October 10, 2006. *First place out of 24 posters in the first year MD student competition.
55. Visanescu, K.B., Mattingly, K.A., Dougherty, S.M., and Klinge, C.M. Regulation of nuclear respiratory factor 1 (NRF-1) expression by estradiol and diesel exhaust particulate extracts (DEPE). (Abstract FMED 22) Research!Louisville University of Louisville School of Medicine, Louisville, KY, October 10, 2006.
56. Mattingly, K.A., Ivanova, M.M., and Klinge C.M. Regulation of nuclear respiratory factor 1 expression by 17β-estradiol: A new mechanism for coordinating mitochondrial gene expression. (Abstract GRD 48) Research!Louisville University of Louisville School of Medicine, Louisville, KY, October 10, 2006.
57. Mazhawidza, W., Dougherty, S.M., McGregor, W.G., and Klinge, C.M. Gender-specific differences in estrogen receptor and nuclear receptor coregulator expression and activity in lung adenocarcinoma cells. (Abstract GRD 49) Research!Louisville University of Louisville School of Medicine, Louisville, KY, October 10, 2006.
58. Riggs, K.A., Wickramasinghe, N.S., and Klinge, C.M. Decreased COUP-TFII expression in tamoxifen resistant breast cancer. (Abstract GRD 61) Research!Louisville University of Louisville School of Medicine, Louisville, KY, October 10, 2006.
59. Ivanova, M.M. and Klinge C.M. Estrogen receptor beta yield from baculovirus lytic infection is higher than from stably-transformed Sf21 cells. (Abstract PRF36) Research!Louisville University of Louisville School of Medicine, Louisville, KY, October 12, 2006.)
60. Wickramasinghe, N.S., Dougherty, S.M., Schier, L., Schultz, D.J., and Klinge, C.M. Anacardic acid inhibits DNA synthesis and induces apoptosis in MCF-7 breast and NCI-H1944 lung cancer cell lines. (Abstract RA71) Research!Louisville University of Louisville School of Medicine, Louisville, KY, October 12, 2006.) *This poster presentation was awarded Second Place out of 75 posters in the post-doctoral/research associate competition.
61. Riggs, K.A., Wickramasinghe, N.S., and Klinge, C.M. Decreased COUP-TFII expression in tamoxifen resistant breast cancer. (Abstract #83) presented at the J.G. Brown Cancer Center Retreat, University of Louisville School of Medicine, Louisville, KY, November 29, 2006.
62. Wickramasinghe, N.S., Schier, L., Dougherty, S. M., Schultz, D.J., and Klinge, C.M. Anacardic acid inhibits DNA synthesis and induces apoptosis in MCF-7 breast and NCI-H1944 lung cancer cell lines. (Abstract #104) presented at the J.G. Brown Cancer Center Retreat, University of

Louisville School of Medicine, Louisville, KY, November 29, 2006.

63. Mattingly, K.A. and Klinge, C.M. Regulation of Nuclear Respiratory Factor-1 Expression by 17-β-Estradiol and 4-Hydroxytamoxifen: A New Level of Mitochondrial Gene Expression Coordination. (Abstract # 63) presented at the J.G. Brown Cancer Center Retreat, University of Louisville School of Medicine, Louisville, KY, November 29, 2006.
64. Mazhawidza, W., Dougherty, S.M., and Klinge, C.M. Gender-specific differences in estrogen receptor and nuclear receptor coregulator expression and activity in lung adenocarcinoma cells. (Abstract #64) presented at the J.G. Brown Cancer Center Retreat, University of Louisville School of Medicine, Louisville, KY, November 29, 2006.
65. Zhang, X., Barker, D.F., Doll, M.A., Martin, R.C., States, J.C., Klinge, C.M., and Hein, D.W. Effect of estrogen on NAT1 expression in breast tumor cells. (Abstract #64) presented at the J.G. Brown Cancer Center Retreat, University of Louisville School of Medicine, Louisville, KY, November 29, 2006.
66. Riggs, K.A., Wickramasinghe, N.S., Cochrum R.K., and Klinge, C.M. Decreased COUP-TFII in Tamoxifen Resistant Human Breast Cancer Cells. Abstract of poster presented at the annual IMD3 Symposium, University of Louisville, March 6, 2007. This poster was awarded first place in the poster competition.
67. Mattingly, K.A., Ivanova, M.M., and Klinge, C.M. Regulation of Nuclear Respiratory Factor 1 by 17β -Estradiol. Abstract of poster presented at the annual IMD^3 Symposium, University of Louisville,March 6, 2007.
68. McConda, D.B., Riggs, K.A., Pierce, W.M., Jr., and Klinge, C.M. Identification of COUP-TFII interacting proteins in tamoxifen-sensitive human breast cancer cells. (Abstract SMED 42) Research!Louisville University of Louisville School of Medicine, Louisville, KY, October 16, 2007.
69. Pilkington, M., Ivanova, M.M., Riggs, K.A., Pierce, W.M., Jr., and Klinge, C.M. Identification of estrogen receptor beta interacting proteins in lung adenocarcinoma. (Abstract SMED 48) Research!Louisville University of Louisville School of Medicine, Louisville, KY, October 16, 2007.
70. Riggs, K.A., McConda, D.B., Pierce, W.M., Jr., and Klinge, C.M. Identification of COUP-TFII interacting proteins in tamoxifen-sensitive human breast cancer cells. (Abstract GRD 43) Research!Louisville University of Louisville School of Medicine, Louisville, KY, October 18, 2007. This poster was awarded third place in the Graduate Student poster competition (3rd of 56 posters).
71. Ivanova, M.M., Mattingly, K.A., Riggs, K.A., and Klinge, C.M. Estradiol and 4-hydroxytamoxifen regulate mitochondrial function by stimulating nuclear respiratory factor 1 (NRF-1) gene transcription in MCF-7 human breast cancer cells in an estrogen-receptor (ER) subtype specific manner. (Abstract PRF-36) Research!Louisville University of Louisville School of Medicine, Louisville, KY, October 18, 2007.
72. Wickramasinghe, N.S., Dougherty, S.M., Riggs, K.A., and Klinge, C.M. Physiologically relevant concentrations of resveratrol and estradiol rapidly increase estrogen receptor alpha-caveolin-1-Src-eNOS interaction and induce NO production in human umbilical vein epithelial cells. (Abstract RA-75) Research!Louisville University of Louisville School of Medicine, Louisville, KY, October 18, 2007.
73. Zhang, X., Barker, D.F., Doll, M.A., Martin, R.C., States, J.C., Klinge, C.M., and Hein, D.W. Increased transcription of N-acetyltransferase 1 (NAT1) is associated with estrogen receptor in breast cancer (Abstract GRD-54) Research!Louisville University of Louisville School of Medicine, Louisville, KY, October 18, 2007.
74. Klinge, C.M., Wickramasinghe, N.S., Riggs, K.A., and Li, Y. Estradiol regulates miRNA

expression and Mir-21 downstream gene targets in MCF-7 breast cancer cells (Abstract F-42) Research!Louisville University of Louisville School of Medicine, Louisville, KY, October 18, 2007.

75. Ivanova, M.M., Mattingly, K.A., Riggs, K.A., and Klinge, C.M. Estradiol and 4-hydroxytamoxifen regulate mitochondrial function by stimulating nuclear respiratory factor 1 (NRF-1) gene transcription. (Abstract# 45) 6th annual Brown Cancer Center Retreat, November 28, 2007.
76. Riggs, K.A., McConda, D.B., Pierce, W.M., Jr., and Klinge, C.M. Identification of COUP-TFII interacting proteins in tamoxifen-sensitive MCF-7 human breast cancer cells. (Abstract # 84) 6th annual Brown Cancer Center Retreat, November 28, 2007.
77. Wickramasinghe, N.S., Riggs, K.A., Li, Y., and Klinge, C.M. Estradiol regulates miRNA expression and Mir-21 downstream gene targets in MCF-7 breast cancer cells. (Abstract # 104) 6th annual Brown Cancer Center Retreat, November 28, 2007.
78. Zhang, X., Barker, D.F., Doll, M.A., Martin, R.C., States, J.C., Klinge, C.M., and Hein, D.W. Investigation of the mechanism of increased N-acetyltransferase 1 (NAT1) expression in estrogen receptor positive breast cancer. (Abstract # 114) 6th annual Brown Cancer Center Retreat, November 28, 2007.
79. Sumanasekera, W.K., Klinge, C.M., Williams, M., and Sumanasekera, G. Single Wall Carbon Nanotubes affect the Viability of Human Breast Cancer (MCF-7) and Embryonic Kidney (HEK293) cells when combined with Estradiol, Tamoxifen, and Faslodex. Abstract of oral presentation at Sullivan University Nanotechnology Symposium: Advances in Nanotechnology and Applications, Louisville, KY. October 3 - 4, 2008.
80. Barry, P., Riggs, K.A., Manavalan, T.T., Patel, N.S., and Klinge, C.M. Role of estrogen receptor alpha isoform hER α 46 in tamoxifen resistant breast cancer. (Abstract SMED 2) Research!Louisville University of Louisville School of Medicine, Louisville, KY, October 21, 2008.
81. Abner, S.M.., Ivanova, M.M., Imbert, Y., Pierce, W.M., Jr., and Klinge, C.M. Identification and characterization of gender-specific differences in estrogen receptor beta-interacting proteins in lung adenocarcinoma cells (Abstract SMED 1) Research Louisville! University of Louisville School of Medicine, Louisville, KY, October 21, 2008.
82. Manavalan, T.T., Wickramasinghe, N.S., Li, Y., and Klinge, C.M. Regulation of miRNA expression by 4-hydroxytamoxifen in MCF-7 breast cancer cells. (Abstract GRD-30) Research! Louisville University of Louisville School of Medicine, Louisville, KY, October 21, 2008.
83. Wickramasinghe, N.S., Manavalan, T.T., Riggs, K.A., Li, Y., and Klinge, C.M. Estradiol regulates miR-21 and its targets via ERalpha in MCF-7 breast cancer cells. (Abstract RA-53) Research!Louisville University of Louisville School of Medicine, Louisville, KY, October 22, 2008. *This poster was awarded third place in the Postdoctoral Fellow/Research Associate poster competition (3rd of 70 posters).
84. Wickramasinghe, N.S., Riggs, K.A., Li, Y., and Klinge, C.M. Estradiol regulates miRNA expression and miR-21 downstream gene targets in MCF-7 breast cancer cells. (Abstract # 89) 7th annual Brown Cancer Center Retreat, October 29, 2008.
85. Manavalan, T.T., Wickramasinghe, N.S., Li, Y., and Klinge, C.M. Regulation of miRNA expression by 4-hydroxytamoxifen in MCF-7 breast cancer cells. (Abstract# 49) 7th annual Brown Cancer Center Retreat, October 29, 2008. *This poster was awarded third place in the Graduate Student poster competition (3rd of 82 posters).
86. Klinge, C.M., Ivanova, M.M., Abner, S.M., Imbert, Y., and Pierce, W.M., Jr. Identification and characterization of gender-specific differences in estrogen receptor beta-interacting proteins in lung adenocarcinoma cells. Poster presented at the Translational Biomarkers Symposium,

Center for Environmental Genomics and Integrative Biology (CEGIB), University of Louisville, February 12, 2009.

87. Wickramasinghe, N.S., Manavalan T.T., Dougherty, S. M., Yong Li, and Klinge, C.M. Estradiol regulates miR-21 and its targets via ER-alpha in MCF-7 breast cancer cells. (Abstract # 10) 11th annual Institute for Molecular Diversity and Drug Design (IMD^3) Symposium, March 10, 2009. *This poster was awarded the first place in the poster competition (1st of 24 posters).
88. Wickramasinghe, N.S., Schier, L., Harbour, J.S., Magnusen, J.E., Wickramasinghe, A.K., Krishnasamy, A., Dougherty, S. M., Suriyampola, P.S., Schultz, D.J. and Klinge, C.M. Anacardic acid induces apoptosis and inhibits DNA synthesis and invasion in breast cancer cell lines independent of estrogen receptor status. Abstract of poster presented at the Plant-Based Therapeutics Symposium, Sullivan University, College of Pharmacy, July 15-16, 2009.
89. Manavalan T.T., Wickramasinghe, N.S., Datta, S., Kalbfleisch, T., and Klinge, C.M. Differential expression of microRNAs in tamoxifen-resistant versus-sensitive human breast cancer cells. Abstract #13 presented as a poster at the 2009 Colloquium in Biochemistry and Molecular Biology (BMB), University of Louisville School of Medicine, August 21, 2009. (Honorable Mention (2nd of 17 posters selected for presentation by the BMB Research Committee)
90. Zimmer, A.S., Ivanova, M.M., and Klinge, C.M. Nuclear Respiratory Factor-1 in breast cancer. (Abstract MED-61) Research!Louisville University of Louisville School of Medicine, Louisville, KY, October 14, 2009.
91. Fox, J.M., Litchfield, L.M., Emberts, C.G., Clark, B.J., and Klinge, C.M. Characterization of the impact of nucleolin on COUP-TFII–mediated regulation of ER α , ER β , RAR β and StAR transcription in MCF-7 Human Breast Cancer Cells. (Abstract MED-19) Research!Louisville University of Louisville School of Medicine, Louisville, KY, October 14, 2009.
92. Manavalan, T.T., Wickramasinghe, N.S., Datta, S., Kalbfleisch, T., Li, Y., and Klinge, C.M. Differential expression of microRNAs in tamoxifen-sensitive versus - resistant human breast cancer cell lines. (Abstract GRD-54) Research!Louisville University of Louisville School of Medicine, Louisville, KY, October 15, 2009.
93. Wickramasinghe, N.S., Schier, L., Harbour, J.S., Magnusen, J.E., Wickramasinghe, A.K., Krishnasamy, A., Dougherty, S. M., Suriyampola, P.S., Schultz, D.J. and Klinge, C.M. Anacardic acid induces apoptosis and inhibits DNA synthesis and invasion in breast cancer cell lines independent of estrogen receptor status. (Abstract RA-71) Research!Louisville University of Louisville School of Medicine, Louisville, KY, October 15, 2009.
94. Hollkamp, K.M., Meier, R.K., Dougherty, S.M., Klinge, C.M., and Clark, B.J. STARD5 expression is elevated in chemoresistant lung adenocarcinoma cells. (Abstract #36) 8th annual Brown Cancer Center Retreat, November 6, 2009.
95. Ivanova, M.M., Zimmer, A.S., Luken, K.N., Dougherty, S.M., Kollenberg, T.J., and Klinge, C.M. Tamoxifen stimulates Nuclear Respiratory Factor-1 expression in MCF-7 breast cancer cells. (Abstract# 37) 8th annual Brown Cancer Center Retreat, November 6, 2009.
96. Manavalan, T.T., Wickramasinghe, N.S., Datta, S., Kalbfleisch, T., Li, Y.and Klinge, C.M. Differential expression of microRNAs in tamoxifen-sensitive versus - resistant human breast cancer cell lines. (Abstract#54) 8th annual James Graham Brown Cancer Center Retreat, University of Louisville School of Medicine, November 6, 2009.
97. Wickramasinghe, N.S., Schier, L., Harbour, J.S., Magnusen, J.E., Wickramasinghe, A.K., Krishnasamy, A., Dougherty, S. M., Suriyampola, P.S., Schultz, D.J. and Klinge, C.M. Anacardic acid induces apoptosis and inhibits DNA synthesis and invasion in breast cancer cell lines independent of estrogen receptor status. (Abstract# 96) 8th annual Brown Cancer Center Retreat, November 6, 2009.

98. Manavalan, T.T., Wickramasinghe, N.S., Datta, S., Kalbfleisch, T., Li, Y.and Klinge, C.M. Differential expression of microRNAs in tamoxifen-sensitive versus - resistant human breast cancer cell lines. (Abstract #18) 12th annual Institute for Molecular Diversity and Drug Design (IMD3) Symposium, IMD^3 Symposium, March 9, 2010. *Awarded second place in the poster competition of 32 posters.
99. Ivanova, M.M., Zimmer, A.S., Luken, K.N., Dougherty, S.M., Kollenberg, T.J., and Klinge, C.M. Tamoxifen stimulates Nuclear Respiratory Factor-1 expression in MCF-7 breast cancer cells. (Abstract#) 12th annual Institute for Molecular Diversity and Drug Design (IMD^3) Symposium, IMD3 Symposium, March 9, 2010.
100. Hockenberry, A.M., Emberts, C.G., and Klinge, C.M. Nucleolin acts as a Coactivator for COUP-TFII regulation of Retinoic Acid Receptor b transcription in T47D Human Breast Cancer Cells. University of Louisville Undergraduate Research Symposium, Louisville, KY, April 13, 2010.
101. Oliver, L.D., Litchfield, L.M., and Klinge, C.M. The effect of COUP-TFII-nucleolin interaction on RARβ2 expression in human breast cancer cells. SROP poster presentation. University of Louisville School of Medicine, Louisville, KY, August 1, 2010.
102. Smith, R.J., Ivanova, M.M. and Klinge, C.M. NRF-1 expression and phosphorylation in tamoxifen- sensitive and resistant breast cancer cells. (Abstract MED-54) Research Louisville! University of Louisville School of Medicine, Louisville, KY, October 13, 2010.
103. Manavalan, T.M., Teng, Y., Datta, S., Kalbfleisch, T.S., Li, Y. and Klinge, C.M. Differential expression of miRNAs in antiestrogen-sensitive MCF-7 *versus* antiestrogen-resistant LY2 breast cancer cells. (Abstract GRD-42) Research Louisville! University of Louisville School of Medicine, Louisville, KY, October 13, 2010.
104. Luken, K.H., Ivanova, M.M., and Klinge, C.M. Tamoxifen increases Nuclear Respiratory Factor 1 transcription through estrogen receptor beta and AP-1 interaction at adjacent sites in the promoter region. (Abstract GRD-41) Research!Louisville University of Louisville School of Medicine, Louisville, KY, October 13, 2010.
105. Litchfield, L.M., Emberts, C.G.. and Klinge, C.M. The effect of COUP-TFII-nucleolin interaction on RAR β 2 expression in human breast cancer cells. (Abstract GRD-40) Research!Louisville University of Louisville School of Medicine, Louisville, KY, October 13, 2010.
106. Imbert-Fernandez, Y., Radde, B.N. and Klinge, C.M. MUC1 Splice Variants Differentially Regulates Inflammatory Responses in Transfected COS-7 Cells. (Abstract GRD-33) Research Louisville! University of Louisville School of Medicine, Louisville, KY, October 13, 2010.
107. Radde, B.N., Imbert-Fernandez, Y., and Klinge, C.M. MUC1-estrogen Receptor Interaction in Lung Adenocarcinoma Cells. (Abstract RS-104) Research!Louisville University of Louisville School of Medicine, Louisville, KY, October 13, 2010.
108. Luken, K.H., Ivanova, M.M., and Klinge, C.M. Tamoxifen increases Nuclear Respiratory Factor 1 transcription through estrogen receptor beta and AP-1 interaction at adjacent sites in the promoter region. (Abstract #63) 9th annual Brown Cancer Center Retreat, Louisville, KY. November 5. 2010.
109. Ivanova, M.M., Abner, S., Cai, J., Pierce, W.M., Jr. and Klinge, C.M. Identification of estrogen receptor β interacting proteins in lung adenocarcinoma cells. (Abstract #45) 9th annual Brown Cancer Center Retreat, Louisville, KY. November 5. 2010.
110. Manavalan, T.M., Teng, Y., Datta, S., Kalbfleisch, T.S., Li, Y. and Klinge, C.M. Differential expression of miRNAs in antiestrogen-sensitive MCF-7 *versus* antiestrogen-resistant LY2 breast cancer cells. (Abstract # 67) 9th annual Brown Cancer Center Retreat, Louisville, KY. November 5. 2010.

111. Luken, K.H., Ivanova, M.M., and Klinge, C.M. Tamoxifen increases Nuclear Respiratory Factor 1 transcription through estrogen receptor beta and AP-1 interaction at adjacent sites in the promoter region. Abstract presented at the 13th annual Institute for Molecular Diversity and Drug Design (IMD^3) Symposium, March 8, 2011. *Ms. Luken's poster received 2nd place honors out of 31 posters.
112. Manavalan, T.M., Teng, Y., Datta, S., Kalbfleisch, T.S., Li, Y. and Klinge, C.M. Differential expression of miRNAs in antiestrogen-sensitive MCF-7 versus antiestrogen-resistant LY2 breast cancer cells. Abstract presented at the 13th annual Institute for Molecular Diversity and Drug Design (IMD^3) Symposium, March 8, 2011. *Ms. Manavalan's poster received 3rd place honors out of 31 posters.
113. Litchfield, L.M., Emberts, C.G., and Klinge, C.M. The effect of COUP-TFII-nucleolin interaction on RAR β 2 expression in human breast cancer cells. Abstract presented at the 13th annual Institute for Molecular Diversity and Drug Design (IMD^3) Symposium, March 8, 2011.
114. Ivanova, M.M., Abner, S., Cai, J., Pierce, W.M., Jr. and Klinge, C.M. Identification of estrogen receptor β interacting proteins in lung adenocarcinoma cells. (Abstract presented at the13th annual Institute for Molecular Diversity and Drug Design (IMD^3) Symposium, March 8, 2011.
115. Harris, V. C., Ivanova, M.M., and Klinge, C.M. The Effects of Selective Estrogen Receptor Modulators on ATP production in breast cancer cells. (Abstract MED-37) Research!Louisville University of Louisville School of Medicine, Louisville, KY, October 10, 2011. *This poster received an Honorable Mention citation.
116. Litchfield, L.M., Emberts, C.G., and Klinge, C.M. COUP-TFII-nucleolin interaction regulates RAR β 2 expression in human breast cancer cells. (Abstract GRD-52) Research!Louisville University of Louisville School of Medicine, Louisville, KY, October 10, 2011.
117. Manavalan, T.M., Teng, Y., Datta, S., Kalbfleisch, T.S., Li, Y. and Klinge, C.M. Differential expression of miRNAs in antiestrogen-sensitive MCF-7 versus antiestrogen-resistant LY2 breast cancer cells. (Abstract GRD-53) Research!Louisville University of Louisville School of Medicine, Louisville, KY, October 10, 2011.
118. Jala, Venkatakrishana R., Bodduluri, H, Trent, J.O., Radde, B., Klinge, C.M. The role of GPR30/G-protien coupled estrogen receptor (GPER) in lung cancer development. (Abstract #52) 10th annual Brown Cancer Center Retreat, Louisville, KY. October 28, 2011.
119. Litchfield, L.M., Emberts, C.G., and Klinge, C.M. COUP-TFII-nucleolin interaction regulates RAR β 2 expression in human breast cancer cells. (Abstract #76) 10th annual Brown Cancer Center Retreat, Louisville, KY. October 28, 2011.
120. Lohr, M., Kruer, L., Radde, B.M., Ivanova, M.M., and Klinge, C.M. Estradiol and Tamoxifen regulation of Nuclear Respiratory Factor-1 in Mouse Tissues. (Abstract #79) 10th annual Brown Cancer Center Retreat, Louisville, KY. October 28, 2011.
121. Manavalan, T.M., Teng, Y., Datta, S., Kalbfleisch, T.S., Li, Y. and Klinge, C.M. Differential expression of miRNAs in antiestrogen-sensitive MCF-7 versus antiestrogen-resistant LY2 breast cancer cells. (Abstract #84) 10th annual Brown Cancer Center Retreat, Louisville, KY. October 28, 2011. *Ms. Manavalan's poster received 2nd place honors out of 127 posters.
122. Meier, R.K., Klinge, C.M., Hill, G.G., and Clark, B.J. STARD5 alters mitochondrial function in H1792 lung adenocarcinoma cells (Abstract #86) 10th annual Brown Cancer Center Retreat, Louisville, KY. October 28, 2011.
123. Litchfield, L.M., Emberts, C.G., and Klinge, C.M. COUP-TFII-nucleolin interaction regulates RAR β 2 expression in human breast cancer cells. Abstract presented at the 15th annual Institute for Molecular Diversity and Drug Design (IMD^3) Symposium, March 12, 2012.
124. Bamji, S., Page, R.B., Alvarez, A., Gambrell, C. Naik, K. Patel, D. Raghavan, A., Sanders, A. Klinge C.M., Ivanova, M., and Corbitt, C. Preliminary Study on the Effects of Glyceollins on

Whole Transcript Expression in the Mouse Brain. (Abstract) Society for Neuroscience, Louisville Chapter, Neuroscience Day 2012, Louisville, KY April 19, 2012.

125. Mott, M.D., Ivanova, M.M., and Klinge, C.M. Estradiol, Selective Estrogen Receptor Modulators, and 3β-Adiol regulate NRF-1 expression in endocrine-resistant breast cancer cells. (Abstract #MED-64) Research Research!Louisville University of Louisville School of Medicine, Louisville, KY, September 18, 2012.
126. Litchfield, L.M. and Klinge, C.M. COUP-TFII suppresses NFκB activation in endocrine-resistant breast cancer cells (Abstract #GRD-56) Research!Louisville University of Louisville School of Medicine, Louisville, KY, September 18, 2012. * Received 1st prize (1 of 71) for Doctoral Student research at Research!Louisville.
127. Jafaar, Z., AL-Rayyan, N., Ivanova, M.M., and Klinge, C.M. Anti-proliferative activity of b-D glucan in breast cancer cells 11th annual Brown Cancer Center Retreat, Louisville, KY. October 26, 2012.
128. Litchfield, L.M. and Klinge, C.M. COUP-TFII suppresses NFκB activation in endocrine-resistant breast cancer cells. 11th annual Brown Cancer Center Retreat, Louisville, KY. October 26, 2012.
129. Ivanova, M.M., Radde, B.N., and Klinge, C.M., Estradiol and Tamoxifen Differentially Regulate Nuclear Respiratory Factor-1, Coregulators, Target Genes, and Mitochondrial Biogenesis in Mouse Mammary Gland and Uterus. 11th annual Brown Cancer Center Retreat, Louisville, KY. October 26, 2012.
130. Litchfield, L.M. and Klinge, C.M. COUP-TFII suppresses NFκB activation in endocrine-resistant breast cancer cells.. Abstract # 11 presented at the 15th annual Institute for Molecular Diversity and Drug Design (IMD^3) Symposium, March 12, 2013.
131. Ivanova, M.M., Radde, B.N., and Klinge, C.M. Estradiol and Tamoxifen Differentially Regulate Nuclear Respiratory Factor-1, Coregulators, Target Genes, and Mitochondrial Biogenesis in Mouse Mammary Gland and Uterus. Abstract # 15 presented at the 15th annual Institute for Molecular Diversity and Drug Design (IMD^3) Symposium, March 12, 2013.
132. Muluhngwi P., Teng, Y., and Klinge, C.M.. Upregulation of miR-29b-1 and miR-29a in endocrine-resistant breast cancer cells. (Abstract 15) 5th Biochemistry & Molecular Genetics Research Retreat, University of Louisville, August 23, 2013.
133. Muluhngwi, P., Teng, Y., and Klinge, C.M. Differential expression of miRNAs in antiestrogen-sensitive MCF-7 versus antiestrogen-resistant LY2 breast cancer cells. (Abstract GRD-25) Research!Louisville University of Louisville School of Medicine, Louisville, KY, September 24, 2013.
134. Mai, H., Ivanova, M. M., Radde, B.N., and Klinge, C.M. Effects of E2 and 4-OHT on Bioenergetics of MCF-7 and T47D Breast Cancer Cells (Abstract MED-55) Research!Louisville University of Louisville School of Medicine, Louisville, KY, September 24, 2013.
135. Muluhngwi, P., Teng, Y., and Klinge, C.M. Upregulation of miR-29b-1 and miR-29a in endocrine-resistant breast cancer cells. (Abstract 76) 12th annual Brown Cancer Center Retreat, Louisville, KY. October 25, 2013.
136. Williams, R.A., Radde, B.N., Schultz, D.A., and Klinge, C.M. Anacardic acid as a nuclear receptor alternative site modulator (Abstract 77) 12th annual Brown Cancer Center Retreat, Louisville, KY. October 25, 2013.
137. Muluhngwi, P., Teng, Y., and Klinge, C.M. Role of tamoxifen-induced miR-29b-1/a in endocrine-resistant breast cancer. (Abstract GRD-66) Research!Louisville University of Louisville School of Medicine, Louisville, KY, September 16, 2014.
138. Patterson, D.R, Angstadt, A.Y., and Klinge, C.M. Muluhngwi, P., Teng, Y., and Klinge, C.M. Isolating miRNAs and their mRNA Targets in lung adenocarcinoma tumors versus normal

adjacent lung tissue. (Abstract MED-58) Research!Louisville University of Louisville School of Medicine, Louisville, KY, September 16, 2014.

139. Angstadt, A.Y., Patterson, D.R. and Klinge, C.M. Muluhngwi, P., Teng, Y., and Klinge, C.M. Isolating miRNAs and their mRNA Targets in lung adenocarcinoma tumors versus normal adjacent lung tissue. (Abstract) 13th annual Brown Cancer Center Retreat, Louisville, KY. October 17, 2014.
140. Muluhngwi, P., Teng, Y., and Klinge, C.M. Role of tamoxifen-induced miR-29b-1/a in endocrine-resistant breast cancer. (Abstract) 13th annual Brown Cancer Center Retreat, Louisville, KY. October 17, 2014.
141. Muluhngwi, P., Napier, J.T., and Klinge, C.M. Role of increased miR-29b-1 and miR-29a in endocrine-resistant breast cancer. (Abstract #4) 2015 Colloquium in Biochemistry and Molecular Genetics, Louisville, KY. August 21, 2014 *One of three selected for oral presentation from 25*
142. Metcalf, S., Kruer, T., Klinge C., and Clem, B. Rutative role of phosphoserine aminotransferase (PSAT1) in metastatic potential of human breast cancer. (Abstract GRD-65) Research!Louisville University of Louisville School of Medicine, Louisville, KY, October 27, 2015.
143. Muluhngwi, P. and Klinge, C.M. Role of increased miR-29b-1 and miR-29a in endocrine-resistant breast cancer. (Abstract GRD-70) Research!Louisville University of Louisville School of Medicine, Louisville, KY, October 27, 2015.
144. Napier, J., Muluhngwi, P., and Klinge, C.M. Role of increased miR-29b-1 and miR-29a in endocrine-resistant breast cancer. (Abstract MED-73) Research!Louisville University of Louisville School of Medicine, Louisville, KY, October 27, 2015.
145. Krishna, A., Vittitow, S., Muluhngwi, P., and Klinge, C.M. Role of miR-29b-1/a in acquired endocrine-resistant breast cancer. (Abstract MED-9) Research!Louisville University of Louisville School of Medicine, Louisville, KY, October 11, 2016. **Received first place (of 65) Greater Louisville Medical Society's Women in Medical Sciences Award for her Poster presentation at Research!Louisville, 10/11/16.
146. Carlisle, S.M., Klinge, C.M., and Hein, D.W. Bioenergetics evaluation of MDA-MB-231 breast cancer cells expressing parental, increased, and knockout levels of human arylamine N-acetyltransferase. (Abstract GRD-6) Research!Louisville University of Louisville School of Medicine, Louisville, KY, October 11, 2016.
147. Muluhngwi, P., Krishna, A., Vittitow, S., and Klinge, C.M. Role of miR-29b-1/a in acquired endocrine-resistant breast cancer. (Abstract GRD-35) Research!Louisville University of Louisville School of Medicine, Louisville, KY, October 11, 2016. **Received second place (of 52) for his poster presentation at Research!Louisville, 10/11/16.
148. Metcalf, S., Kruer, Klinge, C., and Clem B. Phosphoserine Aminotransferase (PSAT1) Promotes Metastatic Characteristics in Human Breast Cancer (Abstract GRD-32) Research!Louisville University of Louisville School of Medicine, Louisville, KY, October 11, 2016
149. Sherwood, A., Khundmiri, S., Klinge, C., Conklin, C. Barati, M., Gagnon, K. Bushau-Sprinkle, A., Merchant, M., and Lederer E. Mass Spectrometry And Cellular Bioenergetics Analysis Reveals Altered Mitochondrial Function In The Kidneys of Na-H Exchanger Regulatory Factor Isoform 1 (NHERF1) Deficient Mice (Abstract PRF-17) Research!Louisville University of Louisville School of Medicine, Louisville, KY, October 12, 2016.
150. Metcalf, S., Kruer, Klinge, C., Wittliff, J. and Clem B. Investigation of Phosphoserine Aminotransferase 1 and its Role in Breast Cancer Progression (Abstract GRD-35) Research!Louisville University of Louisville School of Medicine, Louisville, KY, September 12, 2017.

151. Suman, S., Jones, D. Clark G. Kidd, L. Schmit, M.L., Hobbing, K. Barve, S. Gobejishvili, L, Brock, G., Klinge, C., Rai, S. Inhibition of miR-186 Supresses Cellular Invasion, pAkt and B-catenin in Metastatic Prostate Cancer Cell Lines. (Abstract RS-19) Research!Louisville University of Louisville School of Medicine, Louisville, KY, September 12, 2017.
152. Muluhngwi, P., Alizadeh-Rad, N., Vittitow, S. and Klinge, C.M. The miR-29 transcriptome in endocrine-sensitive and resistant breast cancer cells. (Abstract CRF-3) Research!Louisville University of Louisville School of Medicine, Louisville, KY, September 13, 2017.
153. Whitt, G.C.S, Piell, K.M., and Klinge, C.M. Knockdown of HNRNPA2B1 Restores Tamoxifen's and Fulvestrant's Inhibition of Cell Proliferation in Endocrine-Resistant Breast Cancer Cells (Abstract MED-64) Research!Louisville University of Louisville School of Medicine, Louisville, KY, September 10, 2019.
154. Petri, B.J., Whitt, G.C.S, Piell, K.M., and Klinge, C.M. HNRNPA2B1 expression regulates endocrine therapy responses in human breast cancer cells (Abstract GRD-47) Research!Louisville University of Louisville School of Medicine, Louisville, KY, September 10, 2019
155. Wahlang, B., Hardesty, J. Head, K. Jin, J. Falkner, K.C., Prough, R., Klinge, C., Bhatnagar, A., Beier, J., and Cave, M.C. Hepatic injury caused by the environmental toxicant vinyl chloride is sex-dependent. (Abstract PRF-13) Research!Louisville University of Louisville School of Medicine, Louisville, KY, September 11, 2019.
156. Metcalf, S. Petri, B., Wittliff, J. Klinge, C.M. and Clem, B.F. Targeting serine synthesis in endocrine resistant ER+ breast cancer. Twisted Pink Annual Metastatic Breast Cancer Symposia. James Graham Brown Cancer Center, University of Louisville School of Medicine, Louisville, KY., June 25, 2021
157. Petri, B.J., Piell, K.M., Clem, B.F., and Klinge, C.M. HNRNPA2B1 increases the serine synthesis pathway in endocrine-resistant breast cancer cells. Poster presented at the Twisted Pink Metastatic Breast Cancer Symposium, James Graham Brown Cancer Center, University of Louisville School of Medicine, Louisville, KY., June 25, 2021
158. Poulton, C., Piell, K.M., Schultz, D.J., and Klinge C.M. Metabolomics of anacardic acid-treated triple negative breast cancer cells. (UCE-14) Research!Louisville University of Louisville School of Medicine, Louisville, KY, October 24,2021
159. Petri, B.J., Piell, K.M., Wahlang, B., Jin, J., Shi, H., Andreeva, K., Rouchka, E.C., Cave, M.C., and Klinge, C.M. Mult-'omics analysis elucidates potential roles for environmental pollution-regulated microRNAs in nonalcoholic fatty liver disease. (GRD-19) Research!Louisville University of Louisville School of Medicine, Louisville, KY, October 26, 2021
160. Wilt, A.J., Petri, B.J., Piell, K.M., Klinge, C.M. RNA binding protein HNRNPA2B1 regulates endocrine therapy sensitivity and miRNAs targeting the serine synthesis pathway in Luminal A breast cancer cells. (MED-36) Research!Louisville University of Louisville School of Medicine, Louisville, KY, October 26, 2021.
161. Kutumbaka, S., Petri, B. Piell, K. Klinge, C, and Clem, B. miRNAs Regulate PSAT1 and PHGDH Protein Expression in Endocrine Resistant Breast Cancer Cells. (HSS-2) Research!Louisville University of Louisville School of Medicine, Louisville, KY, September 19, 2022.
162. Adiele, N., Head, K., Petri, B., Piell, K., Luo, J., Gripshover, T., Cave, M.C. and Wahlang, B. Effects of long-term exposure to polychlorinated biphenyls on ileal gene expression. (GRD-2) Research!Louisville University of Louisville School of Medicine, Louisville, KY, September 20, 2022.
163. Petri, B.J., Piell, K.M., Wahlang, B., Jin, J., Shi, H., Andreeva, K., Rouchka, E.C., Cave, M.C., and Klinge, C.M. Integrating multi-omics identified PCB-specific differences in pathwyas in

environmental liver disease in high fat diet-fed mice. GRD-21) Research!Louisville University of Louisville School of Medicine, Louisville, KY, September 19, 2022.

164. Howser, A., Petri, B.J., Piell, K.M., Klinge, C.M. Regulation of the serine synthesis pathway by miRNAs in endocrine-resistant breast cancer cells. (MED- DT-21) Research!Louisville University of Louisville School of Medicine, Louisville, KY, September 20, 2022.
165. Travers, Sydney, Piell, Kellianne, Dela Cerna, Mark, Klinge, C.M., Clark, B.J. Is STARD5 a Polychorinated Biphenyl (PCB) Binding Protein? (MED-DT-48) Research!Louisville University of Louisville School of Medicine, Louisville, KY, September 20, 2022.

INVITED ORAL SEMINAR PRESENTATIONS

1. "Estrogen Receptor Binding to Nuclei from Normal and Neoplastic Rat Mammary Tissues *In Vitro*." Department of Biology, Grand Valley State College, Grand Rapids, MI. February 11, 1987.

2. "Estrogen Receptor Interaction with Chromatin and DNA." Department of Biology, West Chester University, March 16, 1987.

3. "Estrogen Receptor Interaction with Chromatin and DNA." Department of Biology, Monroe Community College, Rochester, NY, July 20, 1987.

4. "Estrogen Receptor Binding to Nuclei from Normal and Neoplastic Rat Mammary Tissues *In Vitro*." Department of Biochemistry Seminar, University of Rochester School of Medicine, February 19, 1988.

5. "Estrogen Receptor Binding to Nuclei from Normal and Neoplastic Rat Mammary Tissues *In Vitro*." Bristol-Myers, Buffalo, NY, September 26, 1988.

6. "Estrogen Receptor Binding to Nuclei from Normal and Neoplastic Rat Mammary Tissues *In Vitro*." Wyeth Ayerst, Rouses Point, NY, October 3, 1988.

7. "Estrogen Receptor Interaction with Chromatin and DNA." *Chi Beta Phi* (national scientific honor fraternity) invited seminar, Natural Sciences Division, Keuka College, November 12, 1988.

8. "Estrogen Receptor Interaction with Chromatin and DNA." Department of Biology, Slippery Rock State College, December 5, 1988.

9. "Estrogen Receptor Interaction with Chromatin and DNA." Department of Biology, Allegheny College January 11, 1989.

10. "Estrogen Receptor Interaction with Chromatin and DNA." Department of Biology, Millersville University February 15, 1989.

11. "Estrogen Receptor Interaction with Chromatin and DNA." Bristol Myers, Wallingford, CT., April 12, 1989.

12. "Estrogen Receptor Interaction with Chromatin and DNA." Proctor and Gamble, Cincinnati, OH., May 31, 1989.

13. "Nuclease sensitivity of estradiol-charged estrogen receptor binding sites in nuclei isolated from normal and neoplastic rat mammary tissues." Proctor and Gamble, Cincinnati, OH. September 19, 1989.

14. "Estrogen Receptor Interaction with Chromatin and DNA." Department of Biology, Keuka College, June 5, 1990.

15. "An Introduction to the Biology of Breast Cancer." Natural Sciences Division, Keuka College, October 6, 1990.

16. "How Do Antiestrogens Work?" University of Rochester School of Medicine, Cancer Center Grand Rounds, February 4, 1993.

17. "How Do Antiestrogens Work?" Natural Sciences Division Alumnae/i Symposium, Keuka College October 2, 1993.

18. "What Happens to the Estrogen Receptor Ligand When the Receptor Binds to the Estrogen Response Element?", Pfizer Central Research, Groton, CT., February 16, 1994.

19. "How do Antiestrogens Work?" Women's Health Research Institute, Wyeth-Ayerst Research, Radnor, Pennsylvania. June 7, 1994.

20. "What Happens to the Estrogen Receptor Ligand When the Receptor Binds to the Estrogen Response Element?" Department of Pharmacology, University of Kentucky School of Medicine, September 15, 1994.

21. "What Happens to the Estrogen Receptor Ligand When the Receptor Binds to the Estrogen Response Element" Endocrine/Metabolism Unit of the Division of Medicine, University of Rochester School of Medicine, November 15, 1994.

22. "What Happens to the Estrogen Receptor Ligand When the Receptor Binds t the Estrogen Response Element?" Keynote address 8th Annual Research Forum, The College of Medicine, The Milton S. Hershey Medical Center of the Pennsylvania State University, October 15, 1994.

23. "What Happens to the Estrogen Receptor Ligand When the Receptor Binds to the Estrogen Response Element?" Department of Biochemistry, the University of Louisville School of Medicine, November 9, 1995.

24. "Estrogen Receptor-Estrogen Response Element Interaction: Role of Ligand, DNA Sequence, Flanking Sequence and ER-Associated Proteins on Receptor-DNA Binding" Helios Pharmaceuticals March 6, 1997.

25. "What is the Role of the Chicken Ovalbumin Upstream promoter Transcription Factor (COUP-TF) in Modulating Estrogen Target Gene Expression?" Molecular Endocrinology Group, University of Louisville School of Medicine, August 6, 1998.

26. "Role of estrogen receptor ligand, ER-associated proteins, and estrogen response element sequences in the regulation of estrogen target gene transcription." Mid-Tenure Career Review Seminar,

Department of Biochemistry and Molecular Biology, University of Louisville School of Medicine, August 19, 1998.

27. "What is the Role of the Chicken Ovalbumin Upstream promoter Transcription Factor (COUP-TF) in Modulating Estrogen Target Gene Expression?" Department of Pharmacology, University of Kentucky School of Medicine, September 3, 1998.

28. "What are the mechanisms accounting for the antiestrogenic activity of chlorinated and polycyclic aromatic hydrocarbons in estrogen-responsive or estrogen-independent human breast and endometrial cancer cells?" 1998 Midwest Cytochrome P450 Symposium at Purdue University, September 11, 1998.

29. "What is the Role of the Chicken Ovalbumin Upstream promoter Transcription Factor (COUP-TF) in Modulating Estrogen Target Gene Expression?" Department of Biology, Morehead State University, Morehead, Ky., March 10, 1999.

30. "What is the Role of the Chicken Ovalbumin Upstream promoter Transcription Factor (COUP-TF) in Modulating Estrogen Target Gene Expression?" Department of Biology, Western Kentucky University, Bowling Green, Ky., April 9, 1999.

31. "What is the Role of the Chicken Ovalbumin Upstream promoter Transcription Factor (COUP-TF) in Modulating Estrogen Target Gene Expression?" Department of Biochemistry, University of Indiana School of Medicine, Evansville, Indiana, November 12, 1999.

32. "Role of Estrogen Receptor alpha Ligand and Estrogen Response Element Sequence on Interaction with the orphan nuclear receptor COUP-TF." Department of Biochemistry, Marshall University School of Medicine, Huntington, WV., February 28, 2000.

33. "Cross-talk between estrogenic and polyaromatic hydrocarbon signaling pathways." Department of Toxicology, Environmental and Occupational Health Sciences Institute, Robert Woods Johnson School of Medicine, Rutgers University, Piscataway, NJ., March 2, 2000.

34. "Role of Estrogen Receptor alpha Ligand and Estrogen Response Element Sequence on Interaction with the orphan nuclear receptor COUP-TF." Department of Biochemistry, University of Indiana School of Medicine, Gary, Indiana, March 8, 2000.

35. "Cross-talk between estrogenic and polyaromatic hydrocarbon signaling pathways." Department of Molecular, Cellular, and Craniofacial Biology, University of Louisville School of Dentistry, April 11, 2000.

36. "Role of DNA sequence, ligand, and coregulators on the activities of estrogen receptors alpha and beta." Promotion/Tenure Review Seminar, Department of Biochemistry and Molecular Biology, University of Louisville School of Medicine, August 9, 2000.

37. "Cross-talk between estrogenic and polyaromatic hydrocarbon signaling pathways." National Institutes for Environmental Health and Sciences, Raleigh-Durham, NC., December 18, 2000.

38. "Estrogen action in breast cancer" Dept. of Natural Sciences at Central State University in Wilberforce, Ohio, March 1, 2001.

39. "DNA is an allosteric modulator of the activities of estrogen receptors α and β." Molecular Endocrinology Conference, Univ. of Louisville School of Medicine, April 9, 2002.

40. "DNA is an allosteric modulator of the activities of estrogen receptors α and β." Department of Chemistry, Bowling Green State University, Bowling Green, Ohio, November 6, 2002.

41. "Role of DNA sequences bound by estrogen receptors α and β as an allosteric modulator of estrogen receptor action." Department of Biochemistry and the Cancer Center, University of Vermont School of Medicine, January 23, 2003.

42. "Estrogen as a genomic and non-genomic signal molecule: many roles for a small steroid hormone" Department of Biochemistry, University of Vermont School of Medicine, January 24, 2003.

43. "Beyond transcriptional regulation: New non-genomic roles for estradiol and resveratrol in cardioprotective function." Department of Biochemistry & Molecular Biology, University of Louisville School of Medicine, February 5, 2003.

44. "Genomic and non-genomic activities of estrogen receptor ligands" Multidisciplinary Endocrine Conference, Univ. of Louisville School of Medicine, March 26, 2003.

45. "Introduction to hormones and a practical application of biochemistry: Measuring protein-DNA interaction *in vitro*" Department of Biology, Keuka College, Keuka Park, N.Y., April 11, 2003.

46. "Regulation of gene transcription by Selective Estrogen Receptor Modulators: Mechanisms of tamoxifen action in breast cancer therapy" Department of Biology, Keuka College, Keuka Park, N.Y., April 11, 2003.

47. "Molecular mechanisms for estrogens and estrogen receptor ligands in health and disease: Beyond the 'female sex steroid hormone'" Natural Sciences Division, Keuka College, Keuka Park, N.Y., April 12, 2003.

48. "Genomic and non-genomic activities of estrogen receptor ligands" Center for Genetics and Molecular Medicine, Rudd Heart and Lung Center, Jewish Hospital, Louisville, KY. September 9, 2003

49. "The ever-expanding role of estrogens in human health and disease" M.D.-Ph.D. training program seminar series, Brown Cancer Center, University of Louisville School of Medicine, September 16. 2003.

50. "Effect of hypergravity on endothelial cell responses" NASA Cell Science meeting, Palo Alto, CA., February 26, 2004.

51. "Interaction of carcinogens with estrogen receptor beta signaling in lung cancer" Kentucky Lung Cancer Research Program 2004 Scientists Seminar, Lexington, KY. May 12, 2004.

"Rapid activation of intracellular signaling pathways by estrogen receptor ligands in endothelial cells" Multidisciplinary Endocrine Conference, Univ. of Louisville School of Medicine, May 25, 2004.

52. "Role of DNA sequence as an allosteric modulator of estrogen receptor interaction with co-regulatory proteins." Gordon Research Conference on Mechanisms of Toxicity, Colby College, Waterville, ME. July 25-30, 2004.

53. "Estrogen Action in Breast Cancer." River Valley Health Information Management Association, Louisville, KY. September 17, 2004.

54. "Nuclear- and membrane- initiated effects of estradiol and other estrogen receptor ligands: the ever-expanding role of estrogens in human health and disease" Department of Biology, University of Louisville, September 24, 2004.

55. "Expression and activities of estrogen receptors alpha and beta in human lung adenocarcinoma" James Graham Brown Cancer Center, September 28, 2004.

56. "Rapid non-genomic estrogen and resveratrol signaling in endothelial cells" Cardiovascular Research Institute, Morehouse School of Medicine, Atlanta, GA. October 5, 2004.

57. "Mechanisms of membrane-initiated resveratrol and estradiol activation of MAPK and eNOS activity in endothelial cells" Research Conference, Department of Biochemistry and Molecular Biology, University of Louisville School of Medicine, November 10, 2004.

58. "Mechanisms of rapid membrane-initiated resveratrol and estradiol signaling in endothelial cells" Research Conference, Dept. of Cardiology, University of Louisville School of Medicine, December 20, 2004.

59. "Estrogen response element DNA sequences as allosteric modulators of estrogen receptor interaction with co-regulatory proteins." Dept. of Pharmacology & Therapeutics, Roswell Park Cancer Institute, Buffalo, NY., January 24, 2005.

60. "Regulation of estrogen receptor activity by estrogen response element sequence." Dept. of Biochemistry and Molecular Biology, Georgetown University School of Medicine, Washington, DC, March 8, 2005.

61. "Estrogen Receptors: New roles for ancient nuclear receptors" Faculty Research Seminar, Dept. of Biochemistry and Molecular Biology, University of Louisville School of Medicine, March 18, 2005.

62. "Estrogen receptor expression and activity in lung adenocarcinoma" Multidisciplinary Endocrine Conference, Univ. of Louisville School of Medicine, March 23, 2005.

63. "Gender-dependent differences in estrogen receptor activity in lung adenocarcinoma" Dept. of Pharmacology, University of Kentucky College of Medicine, Nov. 17, 2005.

64. "Gender-dependent differences in estrogen receptor activity in lung adenocarcinoma" Endocrine Conference Seminar, University of Louisville School of Medicine, Louisville, KY, June 21, 2006.

65. “Genomic and non-genomic estrogen action in normal and neoplastic cells” Center for Genetics and Molecular Medicine, University of Louisville School of Medicine, Louisville, KY. September 19, 2006.

66. “Decreased COUP-TFII expression in ERα-positive, tamoxifen-resistant breast cancer cells” University of Alabama School of Medicine, Dept. of Pathology, November 30, 2006.

67. “Expression of the orphan nuclear receptor COUP-TFII is decreased in estrogen receptor α-positive, tamoxifen-resistant breast cancer cells”, Endocrine Conference Seminar, University of Louisville School of Medicine, January 24, 2007.

68. “The ever-expanding role of estrogen in normal and cancer cells: Lessons from studies in breast and lung cancer and the vascular endothelium.” Keuka College, April 26, 2007.

69. “Mechanisms of antiestrogen resistance in breast cancer: Role of COUP-TFII in maintaining estrogen and antiestrogen responses.” Molecular Targets Seminar, James Graham Brown Cancer Center, University of Louisville School of Medicine, June 28, 2007.

70. “The ever expanding roles by which estrogens and ligands for the estrogen receptors α and β regulate human health and disease” Phi Delta Epsilon Medical Fraternity, University of Louisville, February 5, 2008.

71. “A mechanism for estrogen action in regulating mitochondrial function: estradiol and SERM regulated NRF-1 expression and downstream activities in cancer cells” Endocrine Conference Seminar, University of Louisville School of Medicine, Louisville, KY, February 27, 2008.

72. “Gender-dependent differences in estrogen receptor activity in lung adenocarcinoma” Cancer Prevention & Control Seminar, James Graham Brown Cancer Center, University of Louisville School of Medicine, August 26, 2008.

73. “Endocrine resistance in breast cancer: Role of COUP-TFII in maintaining antiestrogenic responses” Molecular Targets Seminar, James Graham Brown Cancer Center, University of Louisville School of Medicine, November 20, 2008.

74. “Regulation of microRNA miR-21 expression by estradiol in breast cancer cells: Mechanisms and Consequences” Endocrine Conference Seminar, University of Louisville School of Medicine, Louisville, KY, April 1, 2009.

75. "Endocrine resistance in breast cancer: Role of COUP-TFII in maintaining antiestrogenic responses”. Sullivan University, May 8, 2009.

76. “Estrogenic regulation of gene expression and intracellular signaling in breast and lung cancer” Seminar for M.D./Ph.D. students, James Graham Brown Cancer Center, University of Louisville School of Medicine, June 23, 2009.

77. "Estrogen action in breast and lung cancer" Seminar for Alpha Epsilon Delta, pre-health sciences honor fraternity, Dept. of Biology, University of Louisville College of Arts and Sciences, September 16, 2009.

78. "Tamoxifen increases Nuclear Respiratory Factor-1 expression by a mechanism involving ERβ-cJun binding to adjacent ERE and AP-1 sites in the NRF-1 promoter." Endocrine Conference Seminar, University of Louisville School of Medicine, Louisville, KY, January 27, 2010.

79. "Identification of roles for COUP-TFII interacting proteins in maintaining endocrine responses in breast cancer" Molecular Targets Seminar, James Graham Brown Cancer Center, University of Louisville School of Medicine, June 10, 2010.

80. "Mechanisms of estrogen and selective estrogen receptor modular action in breast and lung cancer." Biophysical and Structural Biology Seminar, James Graham Brown Cancer Center, University of Louisville School of Medicine, July 13, 2010.

81. "Identification of COUP-TFII- interacting proteins and their roles in maintaining endocrine-sensitivity in breast cancer" University of North Texas Health Science Center, Fort Worth, Texas, November 30, 2010.

82. "Regulation of microRNA expression in breast cancer cells: Mechanisms and Consequences" Endocrine Conference Seminar, University of Louisville School of Medicine, Louisville, KY, January 26, 2011.

83. "Regulation of COUP-TFII transcriptional activity by interaction with nucleolin in human breast cancer cells", Molecular Targets Seminar, James Graham Brown Cancer Center, University of Louisville School of Medicine, April 28, 2011.

84. "Estrogen regulation of mitochondrial function by increasing Nuclear Respiratory Factor-1" Endocrine Conference Seminar, University of Louisville School of Medicine, Louisville, KY, January 25, 2012.

85. "Mechanisms of estrogen action in breast & lung cancer" seminar for Alpha Epsilon Delta Pre-health Honor Society, Department of Biology, University of Louisville, April 16, 2012.

86. "Identification and Characterization of Nucleolin as a COUP-TFII Coactivator of Retinoic Acid Receptor β Transcription in Breast Cancer Cells", Department of Biochemistry and Molecular Biology seminar, University of Louisville School of Medicine, June 11, 2012.

87. "How do estrogens stimulate breast cancer and what can we do to prevent and treat this disease?" Natural Sciences Division, Keuka College, Keuka Park, NY, September 27, 2012.

88. "Role of COUP-TFII in maintaining endocrine-sensitivity in breast cancer" Department of Pathology, Feinberg School of Medicine, Northwestern University, Chicago, IL. October 8, 2012.

89. "DHEA increases miR-21 transcription and promotes human hepatocellular carcinoma cell proliferation via membrane and nuclear estrogen & androgen receptors" Endocrine Conference Seminar, University of Louisville School of Medicine, Louisville, KY, January 30, 2013.

90. "Is COUP-TFII an epigenetic target in endocrine-resistant breast cancer?" Medical Sciences Biomedical Colloquium, Indiana University School of Medicine, Bloomington, IN, September 16, 2013.

91. "Why is COUP-TFII a good indicator for endocrine-resistant breast cancer patients?" Natural Sciences Division, Keuka College, Keuka Park, NY, September 26, 2013.

92. "COUP-TFII is downregulated by epigenetic modifications in endocrine-resistant in breast cancer" Endocrine Conference Seminar, University of Louisville School of Medicine, Louisville, KY, January 29, 2014.

93. "DHEA activation of GPER and nuclear estrogen & androgen receptors increases miR-21 transcription and human hepatocellular carcinoma cell proliferation" Brown Cancer Center, University of Louisville School of Medicine, Louisville, KY, May 14, 2014.

94. "Recent history, current funding and research plans to continue work addressing estrogen action in breast and lung adenocarcinomas", Dept. Biochemistry and Molecular Biology, University of Louisville School of Medicine, Louisville, KY, June 6, 2014.

95. "Role of miRNAs in endocrine-resistant breast cancer –not a mirage" Natural Sciences Division, Keuka College, Keuka Park, NY, October 23, 2014.

96. "Gender differences in hepatocellular carcinoma: Does DHEA play a role?" Endocrine Conference Seminar, University of Louisville School of Medicine, Louisville, KY, January 28, 2015.

97. "Bioenergetic differences in endocrine-sensitive *versus* endocrine-resistant breast cancer cells." Brown Cancer Center, University of Louisville School of Medicine, Louisville, KY, May 13, 2015.

98. "Arsenic-induced changes in mitochondrial bioenergetics: linking retrograde signaling to endocrine-resistance in breast cancer", Dept. Biochemistry and Molecular Genetics Retreat, Louisville, KY, August 21, 2015.

99. "miRNAs in tamoxifen-resistant breast cancer cells" Scandinavian Breast Cancer Research Meeting, Sola Strand Hotel, Stavanger University, Stavanger, Norway November 17-19, 2015.

100. "Dysregulation of estrogenic mitochondrial bioenergetic function in endocrine-resistant breast cancer cells" Endocrine Conference Seminar, University of Louisville School of Medicine, Louisville, KY, January 6, 2016.

101. "Mechanisms of endocrine-resistance in breast cancer". Atlanta ProBe CaRe Meeting, Emory University, Atlanta, April 13, 2016.

102. "Identifying mechanisms of endocrine-resistance in breast cancer" Dept. Biochemistry and Molecular Genetics, University of Louisville School of Medicine, Louisville, KY, October 24, 2016

103. "Nuclear respiratory factor-1 and bioenergetics in tamoxifen-resistant breast cancer cells" Brown Cancer Center, University of Louisville School of Medicine, Louisville, KY, October 26, 2016.

104. "Nuclear Respiratory Factor-1, Bioenergetics, and miR-29b-1/a in Breast Cancer Cells" Endocrine Conference Seminar, University of Louisville School of Medicine, Louisville, KY, January 18, 2017.

105. "Regulation of the miR-29b-1/a transcriptome and endocrine resistance in breast cancer cells." Brown Cancer Center, University of Louisville School of Medicine, Louisville, KY, October 25, 2017.

106. "miR-29 Regulates Targets in Energy Metabolism in Breast Cancer Cells and Plays a Role in Type 2 Diabetes" Endocrine Conference Seminar, University of Louisville School of Medicine, Louisville, KY, January 24, 2018.

107. "MicroRNAs as Research Tools: miR-29 Regulates Targets in Mitochondrial Energy Production in Breast Cancer Cells", Gerontology Research Center and Faculty of Sport and Health Sciences, University of Jyväskylä, Jyväskylä, Finland, February 15, 2018.

108. "miR-29 Regulates Targets in Mitochondrial Energy Production in Breast Cancer Cells", Markey Cancer Center, University of Lexington College of Medicine, Lexington, KY, May 15, 2018.

109. "HNRNPA2B1 as a Reader of RNA methylation in Breast Cancer" Department of Clinical Epidemiology, Aarhus University, Aarhus, Denmark, September 17, 2018.

110. "RNA methylation reader HNRNPA2B1 regulates miRNA expression in breast cancer cells." Endocrine Conference Seminar, University of Louisville School of Medicine, Louisville, KY, January 23, 2019.

111. "Regulation of miRNA in breast cancer by methylation reader HNRNPA2B1" Center for Molecular Oncology, University of Connecticut School of Medicine, Farmington, CT., February 27, 2019.

112. "RNA methylation mark reader HNRNPA2B1 regulates miRNA expression and endocrine-sensitivity in breast cancer cells". Dept. of Oral Immunology and Infectious Diseases, University of Louisville School of Dentistry, Louisville, KY, October 25, 2019

113. "m6A reader HNRNPA2B1 regulates miRNA processing and tamoxifen-sensitivity in breast cancer cells." Environmental Health Science, University of Louisville School of Medicine, Louisville, KY, December 5, 2019.

114. "RNA Methylation Reader HNRNPA2B1 Contributes to Endocrine-sensitivity in Breast Cancer Cells" Endocrine Conference Seminar, University of Louisville School of Medicine, February 19, 2020.

115. "Epitranscriptomics in Endocrine-Resistant Breast Cancer and Toxicant-Associated Steatohepatitis" Center for Integrative Environmental Health Sciences (CIEHS) University of Louisville School of Medicine, January 7, 2021.

116. "RNA Binding Protein HNRNPA2B1 Regulates Endocrine-Sensitivity in Breast Cancer Cells" Endocrine Conference Seminar, University of Louisville School of Medicine, February 24, 2021.

117. "RNA Binding Protein HNRNPA2B1 Promotes Endocrine-Resistance in Breast Cancer Cells" Seminar, The University of Kansas Medical Center, via zoom, April 6, 2021.

118. "Epitranscriptomic Reader RNA Binding Protein HNRNPA2B1 Promotes Endocrine-Resistance in Breast Cancer Cells" Seminar, Department of Cell and Molecular Biology, The University of Mississippi Medical Center, August 23, 2021.

119. "Polychlorinated biphenyls and high fat diet modify the global epitranscriptomic landscape in male C57Bl/6J mouse liver" Center for Integrative Environmental Health Sciences seminar at Research!Louisville, October 26, 2021.

120. "Epitranscriptomic Reader HNRNPA2B1 Promotes Endocrine-Resistance in Breast Cancer Cells" Endocrine Conference Seminar, University of Louisville School of Medicine, January 26, 2022.

121. "Epitranscriptomics and NAFLD in mouse models" Cancer Research Interest Group, CIEHS, University of Louisville School of Medicine, March 10, 2022.

122. "Epitranscriptomic Reader HNRNPA2B1 Promotes Endocrine-Resistance in Breast Cancer Cells" The Bernard B. Brodie Lectureship in Pharmacology, the Milton S. Hershey College of Medicine of the Pennsylvania State University, Hershey, PA. September 8, 2022.

123. "Polychlorinated biphenyls and diet modify the global epitranscriptomic landscape in male C57Bl/6J mouse liver" CIEHS Research Symposium at Research!Louisville, September 22, 2022.

124. "Epitranscriptomic Reader HNRNPA2B1 Promotes Endocrine-Resistance in Breast Cancer Cells" Endocrine Conference Seminar, University of Louisville School of Medicine, January 26, 2022.

125. "Polychlorinated biphenyls and diet modify the mouse liver epitranscriptome" Endocrine Conference Seminar, University of Louisville School of Medicine, March 1, 2023.

126. "Polychlorinated biphenyls and diet modify the mouse liver epitranscriptome" GI-Liver Cytokine Seminar, University of Louisville School of Medicine, March 6, 2023.

127.

GRANT SUPPORT

Completed support

1. Principal Investigator: University of Louisville Center for Environmental Health Studies New Investigator Award ($18,000, 8/01/96-7/31/98)
2. Principal Investigator: University of Louisville Research Initiation Grant: "Role of DNA sequence on estrogen versus nuclear receptor activity" ($4,000, direct: 1/1/97-12/31/97)
3. Principal Investigator: Cancer Research Foundation of America: "Inhibition of environmental-estrogen-dependent breast cancer cell proliferation by retinoids and resveratrol". ($28,000 direct: 10/1/97-9/30/98).
4. NIH R01 DK053220-13: "DNA sequences impact estrogen and antiestrogen activity" Principal Investigator: Klinge, Carolyn M. 01/01/1998-7/31/2012). CMK 25% effort.
5. Principal Investigator: Susan G. Komen Breast Cancer Foundation: "The role of environmental estrogens on breast cancer cell replication" ($19,000 in direct: 5/01/98-12/31/98)

6. Principal Investigator: University of Louisville Research Initiation Grant: "Role of Chicken Ovalbumin Upstream Promoter-Transcription Factor (COUP-TF) in Ligand-Dependent Estrogen Receptor Action." ($15,000 for one year: 1/1/99-12/31/99).
7. Veterans Administration Center for the Study of Environmental Hazards to Reproductive Health Grant 0006, Dept. of Veterans Affairs Medical Center, Louisville, KY. (F. Hendler, M.D., Ph.D., P.I.) My project (Klinge, C.M., PI on that project) was entitled "Mechanism of endocrine disruptors on estrogen action." ($48,000/yr.in direct costs for three years: 1/1/97-3/31/00)
8. Principal Investigator: Summer Research Opportunity Program (SROP) internship for Stacey Lynn Smith, a junior biology major at Centre College: ($2,000 stipend for 10 weeks, 6/1/99-8/6/99).
9. Principal Investigator: University of Louisville Research on Women Grant: "Role of estrogen response element in distinguishing estrogen receptors α and β action." ($4,000, 7/1/99-6/30/00).
10. Principal Investigator: Summer Research Opportunity Program (SROP) internship for Jennie Elizabeth Lee, a senior biology major at Centre College: ($2,000 stipend for 10 weeks, 6/5/00-8/4/00).
11. Post-doctoral fellowship ($25,000/year) from the University of Louisville Research Committee to support Dr. Valentyn V. Tyulmenkov (7/1/00-6/30/02).
12. Principal Investigator: University of Louisville Research on Women Grant: "Role of COUP-TF in tamoxifen resistance." ($4,000, 1/1/02-6/30/02).
13. Principal Investigator: Klinge, Carolyn M. AHA Identification Number: 0150818B: "Mechanisms of Resveratrol in Cardioprotective Function" This is a Grant-In-Aid award from American Heart Association Ohio Valley Affiliate. CMK 20% effort. ($55,000 in direct + indirect cost/ year for 2 yrs. plus a 1 year no-cost extension) Funded period: 7/1/01-6/30/04.
14. Principal Investigator: Klinge, Carolyn M. University of Louisville Research on Women Grant: "Role of COUP-TF in tamoxifen resistance." ($4,000, 7/1/03-6/30/04).
15. American Heart Association Ohio Valley Affiliate 315087B Pre-doctoral fellowship to Kathleen A. Mattingly (Klinge, C.M., mentor, 5% effort): "Estrogen receptor heterodimers" 7/1/03-6/30/05.
16. NASA Program Project Grant NAG2-1647 "Biosignature Roadmaps for Host & Age-Dependent Responses to Simulated Space Travel Stresses" (total direct cost = $1.5 million). Wang, Eugenia (PI); Klinge, C.M. (PI on Project 4 (10% effort)) and Keynton, R.S. (Co-PI, 10%) "Impact of host genotype on ground-simulated space travel stressors in endothelial cells." ($144,000 in direct costs/year) (10/1/03-9/30/04, no cost extension 9/30/05).
17. Wang, Eugenia (PI) NASA Program Project Grant NAG5-12874, "Shared Functional Genomics Between Space Flight and Aging" (total direct cost = $1.5 million). Klinge, C.M. (PI on Project 4 (12% effort)) and Keynton, R.S. (Co-PI, 12%) "Effect of hypergravity, vibration, and shear stress on endothelial cell response." ($144,000 in direct costs/year) (2/1/03-1/31/06).
18. Susan G. Komen Breast Cancer Foundation BCTR0201438: "Role of COUP-TF in breast cancer". Klinge, Carolyn M. (PI, 20% effort) was funded for 2 years for $250,000 from 5/01/03-4/30/05 and was granted a 1 year no cost extension 5/1/05-4/30/06.
19. University of Louisville Research on Women Grant: "Regulation of miRNA expression by estradiol in breast cancer cells" PI: Klinge, C.M., Co-PI Young Li; ($4,000, 1/1/06-12/30/06)
20. American Heart Association Ohio Valley Affiliate 0425431B Post-doctoral fellowship to Wasana K. Sumanasekera, Ph.D. (Klinge, C.M., Sponsor, 5% effort). "Modulation of shear stress induced endothelial cell responses by sex steroids". (6/1/04-5/31/06)
21. Principal Investigator: Klinge, Carolyn M. (PI, 10% effort): "Interaction of carcinogens with estrogen receptor beta signaling in lung cancer". Funded 7/1/02-6/30/05 and then I was awarded an 18 month no-cost-extension through 12/30/06 by the Commonwealth of Kentucky Lung Cancer Research Program @ $75,000 per year.

22. University of Louisville Research Incentive Grant: "Anacardic Acid as a selective COX-2 inhibitor in breast and lung adenocarcinoma" PI: David J. Schultz; Co-PI: Carolyn M. Klinge ($4,000, 1/1/07-12/31/07)
23. American Heart Association Ohio Valley Affiliate AHA 0555270B "Mechanisms of Resveratrol and Estrogen Receptor Modulators in Cardioprotective Function" Klinge, C.M. (PI at 10% effort). July 1, 2005-June 30, 2007. Annual direct costs: $55,000. Total Project Award: $110,000.
24. T32 ES11564 Training Grant: "UofL Environmental Health Sciences Training Program" PI/CoI: David W. Hein / Russell A. Prough; Funding Agency/Award Number: NIH/NIEHS (T32 ES011564) Project Period: July 1, 2004 to June 30, 2009 Annual direct costs: $133,000-$134,000 Total Project Award: $697,188; Krista A. Riggs (nee Robinson) (C.M. Klinge mentor) was one of four graduate students supported by this award (1/1/05-12/31/07).
25. Brown Cancer Center Pilot Grant Klinge, C.M. (PI) "COUP-TFII in antiestrogen -sensitive and -resistant breast cancer" This grant was for $50k for 2/1/07-2/28/08. Klinge, C.M. (PI at 5% effort)
26. University of Louisville Research on Women Grant: "Anticancer activity of anacardic acid in breast and lung cancer cells." (Klinge, Carolyn M. PI, grant = $4,000, 1/1/08-12/31/08).
27. Joan's Legacy Lung Cancer Foundation grant "Estrogen receptor beta interacting proteins in lung adenocarcinoma." This grant provides 2 years of funding @ $50k/year. Klinge, C.M. PI (5% effort) and Dr. William M. Pierce, Jr. Co-PI (5% effort). Jan. 1, 2007- June 30, 2009.
28. Joan's Legacy Lung Cancer Foundation grant "MUC1 Splice Variants and Estrogen Receptors in Lung Adenocarcinoma" This grant provides 2 years of funding @ $50k/year. Young, W.W. PI in year 1 with Klinge CM as co-investigator; Klinge, C.M. PI in year 2 (5% effort). Jan. 1, 2007- June 30, 2009.
29. University of Louisville Intramural Research Incentive Research on Women Grant "MUC1-estrogen receptor interaction in lung cancer cells". Funded 6/1/09-5/31/10 for $4,000 (Klinge, C.M., PI).
30. 3 R21 CA124811-02S1: Klinge, C.M. PI Administrative Supplement for the support of 1 hs student and 1 undergraduate summer student for Summer 2009. $16,631 total costs. UofL nomenclature OGMB071075S1
31. American Heart Association, Scientist Development Grant # AHA 0635023N: Gobin, Andrea S. (PI), C Klinge (Co-PI at 5% effort) "Guided endothelial cell morphogenesis, organization and vessel formation in instructional hydrogels" $260,000, 7/1/2006-6/30/2010. UofL nomenclature GB060686 A, B, & C
32. NIH R21 CA124811 "Regulation of miRNA expression in breast cancer" (150k in year 1 and 125k in year 2; 6/1/07-5/31/10, includes 1 yr. no-cost extension) and total costs of $406k. C.M. Klinge (PI at 10% effort); and Yong Li, Ph.D., also in Biochemistry & Molecular Biology, as Co-PI at 10%. UofL nomenclature GB070475
33. Kentucky Lung Cancer Research Program: Klinge, C.M. (PI); Co-Investigators W. Zacharias (UofL), K-B Kim and H. Swanson (UK) "Mechanisms for gender differences in lung adenocarcinoma" (9/1/07-8/31/10). UofL nomenclature GB071003
34. American Institute for Cancer Research (AICR grant 09A123) post-doctoral fellowship to Dr. Harini Aiyer "Prevention of tamoxifen resistance by green tea polyphenols". Funded 1/1/2010-12/31/2011. C.M. Klinge as Mentor at 5%. Dr. Aiyer moved to Georgetown University with her fellowship for a 9/1/10 start date.
35. 3 R01 DK053220-02S1: Administrative Supplement for the support of 1 hs student, 1 hs science teacher, and 1 undergraduate summer student for Summer 2009 and Summer 2010: $43,850 in direct total costs. UofL nomenclature OGMB081034S1
36. 1F 31 EY017275-01A1 NRSA Minority Predoctoral Fellowship to Yoannis Imbert, Ph.D. candidate in Biochemistry and Molecular Biology: "MUC1 variants in dry eye disease". Funded 1/1/2006-

11/30/2010 when Ms. Imbert-Fernandez successfully completed her Ph.D. dissertation. (Klinge, C.M., Sponsor, 5% effort). UofL nomenclature OGMB061167

37. Center for Environmental Genomics and Integrative Biology Pilot Project Grant: "Rational selection of chemical probes to find breast cancer microRNA biomarkers" Albert R. Cunningham PI (10% effort), Klinge, C.M. as Co-PI at 5% effort; Wolfgang Zacharias Co-PI (5%). Funded 5/1/09-4/30/10 for $30,000.

38. Department of Defense (DOD) Breast Cancer Research Program (BCRP) DOD FY10 BCRP Predoctoral Traineeship Award BC100782 entitled "Nuclear Respiratory Factor-1 and Tamoxifen Resistance". Kristen H. Luken (graduate student) is PI and C.M. Klinge is mentor (5%). (1/1/2011-12/31/2014) UofL nomenclature OGMB101149, Ms. Luken quit the Ph.D. program for personal reasons as of 8-01-11. She wanted to pursue a career in teaching high school science.

39. Kentucky Lung Cancer Research Program: Jala, Harikrishna (PI), Co-Investigator: Klinge, C.M. "Role of GPR30, a novel estrogen receptor, in the development of lung cancer" (Funded: 12/1/09-11/30/11).

40. Kentucky Lung Cancer Research Program: Clark, B.J. (PI); Co-Investigator: Klinge, C.M. "STARD5 expression and chemoresistance in lung adenocarcinoma cells (Funded: 12/1/09-11/30/11).

41. Exiqon $4000 grant: Klinge, CM (PI): "Dehydroepiandrosterone regulates microRNA expression in breast cancer cells" (3/1/12-6/30/12)

42. Susan G. Komen for the Cure Breast Cancer Research Foundation: KG080365 "Role of COUP-TFII in endocrine -responsive and -resistant breast cancer" Klinge, C.M. (PI, 10% effort), Powell, D.W. (Collaborator, 5%), Kulesza, P. (Collaborator at UAB, 5%). Direct costs $160,000/year for 3 years. (8/1/08-4/30/12, NCE 12/20/12). UofL nomenclature GB080536A

43. 1 R01 CA138410: "Regulation of miRNA expression in breast cancer" Funded 1/1/10-12/31/13. NCE 12/31/14 Klinge, C.M. PI 20% effort; Collaborators: Susmitta Datta, Ted Kalbfleisch, & Yong Li at UofL SOM; Piotr Kulesza, M.D. at Northwestern Univ. UofL nomenclature GB091009

44. 1 R03 CA164831 "Targeting endocrine resistant breast cancer with anacardic acid". C.M. Klinge (corresponding PI) and David J. Schultz (Biology) as PIs (multiple PI mechanism each at 5% effort, 0.6 calendar months); funded 7/10/12- 6/30/14; NCE 6/30/15. $150,000 in total costs. This grant tests whether anacardic acid is a Receptor Alternative Site Modulator specifically for estrogen receptor in cells and in a carcinogen-induced rat mammary tumor model. Specific Aim1 Determine the specificity of anacardic acid as an NRAM for ER; Specific 2: Determine if dietary anacardic acid prevents mammary tumorigenesis in N-methyl-N-nitrosourea (NMU)-treated female Sprague Dawley (SD) rats. UofL designation OGMB111018

45. Kentucky Lung Cancer Research Program "Regulation of microRNAs in lung adenocarcinomas" **Klinge, C.M. (PI**), (Collaborators: Roman, Jesse; Bousamara, Michael; Kalbfleisch, Ted. Funded 3/1/13-2/28/15 for $75,000/year (NCE 8/31/16). This study examined differential expression patterns in miRNAs and mRNAs using high-throughput sequencing together with UV-crosslinking and immunoprecipitation (HITS-CLIP) via RNA-Sequencing (RNA-Seq) to identify active miRNA-mRNA ternary complexes by immunoprecipitation of cross-linked Argonaut (Ago)-miRNA-mRNA complexes in human lung adenocarcinoma cells.

46. University of Louisville School of Medicine "Regulation of miRNA expression in breast cancer". Award # E0566 for $40,000 4/01/15-3/31/16.

47. KBRIN Pilot Project Grant 10/17-9/18 "Identification of HNRNPA2B1-regulated miRNA targets in breast cancer cells"
48. University of Louisville EVPRI Internal Research Grant Program $3000 1/1/16-12/31/16
49. University of Louisville EVPRI Internal Research Grant Program $3000 1/1/17-12/31/17
50. University of Louisville EVPRI Internal Research Grant Program $3000 1/1/19-12/31/19
51. University of Louisville EVPRI Internal Research Grant Program $3000 6/1/19-5/31/20
52. NIH R21 CA219252 NCI "HNRNPA2B1 as a reader of RNA methylation in breast cancer" C.M. Klinge, PI-initiating (20% effort), C.E. Schaner Tooley, co-PI (Univ. at Buffalo, SUNY); Subcontract for IHC of HNRNPA2B1 to Dr. Dierdre Cronin-Fenton, Aarhus University, Denmark. (4/2/18-3/31/21 (1 year NCE) UofL nomenclature OGMB180027
53. University of Louisville EVPRI Internal Research Grant Program $3,000 1/1/20-3/30/21: ": G-protein-coupled receptor P2RY10 activation by anacardic acid"
54. James Graham Brown Cancer Center BCC Directed Gift Pilot Project Program: C.M. Klinge, PI-initiating (1 %) and David J. Schultz (PI) (1%). "Anacardic acid as an inhibitor of lipid desaturation in triple negative breast cancer" The research goal is to determine the connection between anacardic acid (AnAc)-inhibition of cell proliferation and SCD, generation of MUFA, and cancer stem cell (CSC) biogenesis in six different triple negative breast cancer cell lines. . Total $25k for 1.5 year (1/1/20-6/30/21).
55. CIEHS P30 Voucher "Epitranscriptome in a murine model of TASH" for $5,000. C.M. Klinge, PI February 26, 2021– March 31, 2021.
56. CIEHS P30 Voucher "Epitranscriptome in a murine model of diet and PCB-induced HCC" for $5,000. C.M. Klinge, PI, January 12, 2022 – March 31, 2022
57. CIEHS P30 Voucher "STARD5 and lipid dysregulation with ER stress" for $5,000 to B.J. Clark (CMK co-investigator) to define the transcriptome for wild type vs Stard5-/- mouse liver after tunicamycin-induced endoplasmic-reticulum (ER) stress. December 15, 2021 – March 31, 2022.
58. Jewish Heritage Fund for Excellence Research Enhancement Grant Program at the University of Louisville, School of Medicine, Research Enhancement Grant: "Direct RNA sequencing to identify epitranscriptomic marks"- $75,000 for a period of June 15, 2022 – June 14, 2023

Current active grant support

1. 5 T35 DK072923 NIH-NIDDK: "Summer Endocrine Research Training Program" This grant funds a training program to support 6 summer research stipends for second yr. medical students, **Klinge, C.M. (PI** at 5% effort), 5/01/06-4/30/26), Dr. Jon Klein and Michael Merchant as Coinvestigators. UofL nomenclature OGMB201008
2. NIH 1 R21 ES031510-01 "m6A Epitranscriptomics in Toxicant Associated Steatohepatitis" **C.M. Klinge, PI-initiating** (15% effort) with Matthew Cave, PI MPI (5% effort); 7/20/20-12/31/22. Two Specific Aims: 1) Identify the m6A-mediated liver epitranscriptome changes associated with PCB-induced TASH' 2) Elucidate the mechanisms responsible for the m6A-mediated liver epitranscriptome changes observed in PCB-induced TASH. TOTAL cost: $462,000. UofL Nomenclature OGMB191055 Speedtype GB19055 iRIS #18 3572

3. 3R21ES031510-01S1 **C.M. Klinge, PI** Supplement to support the training of graduate student Belinda J. Petri. 2/15/21-6/30/22 Total direct $23,365 for year 1 and $54,600 for year 2. UofL Nomenclature OGMB191055S1

4. CIEHS NIEHS P30 Pilot Program Grant: "STARD5 and lipid dysregulation in toxicant-associated steatohepatitis (TASH)" Clark, BJ. PI, **Klinge, C.M. MPI**. Total $50,000 for 5/1/22-4/30/23

5. DOD BCRP GRANT BC220564 for a Breakthrough Award Level 2: "m6A epitranscriptome drivers of endocrine-resistant breast cancer" **Klinge, C.M. PI-initiating** (25% effort) with Brian F. Clem, Partnering PI (25% effort). Two Specific Aims: 1) Determine how the m6A epitranscriptome regulates the transcriptome in human ER+ breast cells modeling endocrine resistance progression *in vitro* and *in vivo*. 2) Determine if epitranscriptomic changes in key regulators and enzymes in the serine biosynthetic pathway contribute to metabolic outcomes and ET-sensitivity in breast cancer cells, tumor xenografts, and metastatic lesions. Total direct $846,463 for three years. Total requested: $1,324,714. Submitted 5/16/22 (start 10/1/22-9/30/26) UofL nomenclature = OGMB220940 **FUNDED 10/5/22**

Grant applications submitted:

1. NIH 1 R01 CA270059-01 for PAR-18-830 060321 "Epitranscriptomic Regulation of Endocrine Resistance in Breast Cancer" **Klinge, C.M. PI-initiating** (20% effort) with Brian F. Clem, PI MPI (20% effort) Three Specific Aims. 1. Determine how the m6A epitranscriptome regulates the transcriptome in human ER+ breast cells modeling endocrine resistance progression *in vitro* and *in vivo*. 2: Identify changes in the global epitranscriptome human ER+ breast cells modeling endocrine resistance progression *in vitro* and *in vivo*. 3. Determine if epitranscriptomic changes in key regulators and enzymes in the serine biosynthetic pathway contribute to metabolic outcomes and ET-sensitivity in breast cancer cells, tumor xenografts, and metastatic lesions. $3,148,520.00 requested (non-modular budget) for 5 years. UofL nomenclature OGMB210911 / iRIS212526
2. NIH 1R21ES034483-01A1 "STARD5 and the impact of environmental PCBs on TASH development". Clark, B.J. PI-initiating (20%) and **Klinge, C.M. PI-MPI** (10% effort). Two Specific Aims: 1) Determine the role of STARD5 in HFD- and HFD+Aroclor-induced steatohepatitis. 2) Define the liver transcriptome for the HFD- and HFD+Aroclor 1260-induced liver injury in Stard5-/- mice. Total requested $430,375.00Submitted 10/5/21, UofL nomenclature iRIS 223185. Grants.gov Tracking # GRANT13485612; Reviewed by HBPP in February 2022 and scored 28th percentile. A1 submitted 7/26/22 and will be reviewed 10/27/22.
3. NIH 1 R01 ES034759-01A1 "Epitranscriptomic drivers of toxicant-associated steatohepatitis" **Klinge, C.M. PI** (25% effort). Three Specific Aims: 1) Determine how gene- specific m6A marks regulate the hepatic transcriptome in diet and PCB-induced NASH. 2) Determine the impact of gene-specific m6A-peaks on protein abundance using targeted proteomics in diet and PCB-induced NASH. 3) Determine if diet and PCB-driven changes in microbiome metabolites correlate with changes in m6A in liver transcripts and S-adenosylmethionine (SAM) generation. Total requested $3,899,226.00; Total direct cost requested: $2,500,000. Submitted 11/3/22. Proposed start date 9/1/22- end date 8/31/27. Triaged 6/30/22
4. Breast Cancer Research Alliance 2023 Exceptional Project Grant application "Epitranscriptomic Drivers of Endocrine Resistance in Breast Cancer" **Klinge, C.M. PI** (10 % effort). Two Specific Aims: 1. Determine how the m6A epitranscriptome regulates the transcriptome in human estrogen receptor α positive (ER+) breast cells modeling endocrine resistance progression. 2. Identify pathways altered by

m6A transcript modification and associated with changes in transcript abundance in endocrine-resistant breast cancer. Total requested: $100,000. Submitted 7/8/22; withdrawn 10/10/22 due to funding of DOD BCRP grant.