

CURRICULUM VITAE

Mark R. Kelley, Ph.D.

Betty and Earl Herr Chair in Pediatric Oncology Research and
Professor, Departments of Biochemistry and Molecular Biology and
Pharmacology and Toxicology
Professor, Department of Ophthalmology
Adjunct Professor, Eugene and Marilyn Glick Eye Institute
Associate Director, Basic Science Research, IU Simon Cancer Center
Member, Eugene and Marilyn Glick Eye Institute
Director, Program in Molecular Oncology and Experimental Therapeutics
Co-Director, Cancer Drug Discovery and Development, IUSCCC
Bantz-Petrino Translating Research into Practice Scholar
Glenn W. Irwin, Jr., M.D. Research Scholar
AAAS Science Fellow

Herman B Wells Center for Pediatric Research
Indiana University School of Medicine
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Chief Scientific Officer and Co-Founder
Apexian Pharmaceuticals
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Indianapolis, IN 46204

PERSONAL INFORMATION

Home address: 4557 Winterspring Crescent Marital Status: Married, 2 children
Zionsville, IN 46077

Citizenship: United States

EDUCATION

B.A. Zoology, 1975 - 1979
DePauw University, Greencastle, IN

M.S. Zoology, 1979 – 1981
Louisiana State University, Baton Rouge, LA
Director: William R. Lee, Ph.D.

Ph.D. Genetics, 1981 - 1984
Louisiana State University, Baton Rouge, LA
Director: William R. Lee, Ph.D.

Postdoctorate, 1984 – 1987
The Rockefeller University, New York, NY

Mark R. Kelley, Ph.D.

Director: Michael W. Young, Ph.D.
2017 Nobel Prize Winner in Physiology or Medicine

HONORS

Malpas Trust Scholarship	1975 -- 1979
McClure Research Fellowship	1979
National Sigma XI Research Grant	1982 -- 1983
American Cancer Society Postdoctoral Fellowship	1984 -- 1987
Schweppe Career Development Award	1989/1992
Jonathan and Jennifer Simmons Professor of Pediatrics	2001-- 2008
Betty and Earl Herr Chair in Pediatric Oncology Research	2008 – Present
Innovation to Enterprise Commercialization Award, IUSM	2015
Bantz-Petronio Translating Research Into Practice Award	2017
Education Board Member, American Health Council	2017
Glenn W. Irwin, Jr., M.D. Research Scholar Award	2018
AAAS Science Fellow	2022

JOURNAL REVIEWER

Molecular Cancer Therapeutics, Molecular Oncology, Molecular Oncogenesis, Oncotarget, Pharmacological Research, Nature Scientific Reports, J Cellular Molecular Medicine, Cancer Research, Analytical Biochemistry, J. Cancer Res. and Clinical Oncology, Proc. Natl. Acad. Science, Radiation Research, Carcinogenesis, Environmental & Molecular Mutagenesis, J. of Cellular Biochemistry, Gene, Biochemistry, BioTechniques, Blood, Oncogene, Clinical Cancer Research, Journal of Pharmacology and Experimental Therapeutics, Cancer Detection and Prevention, Nature Reviews Cancer, Current Cancer Drug Topics, Journal of Biomedicine and Biotechnology, Drug Profiles, Current Molecular Pharmacology, Gynecologic Oncology, Cancer Genetics, NeuroMolecular Medicine, Chemical Research in Toxicology, PLOSONe, DNA Repair, J of Cellular Physiology, J Pharmacology and Clinical Toxicology

EDITORIAL BOARDS:

<i>Frontiers in Bioscience</i>	1995 -- present
<i>Journal of Pharmacology and Experimental Therapeutics</i>	1999 -- present
<i>Mutation Research: Molecular and Fundamental Mechanisms, Assoc. Editor</i>	2002 -- present
<i>Current Molecular Pharmacology</i>	2007 -- present
<i>World Journal of Clinical Oncology</i>	2010 – present
<i>Journal of Molecular Oncology Research</i>	2016 – present
<i>Nature Scientific Reports</i>	2019 -- present

CONSULTING & SCIENTIFIC BOARDS

Novus Biologicals, Littleton, CO	1997 – 2018
Pangene, Fremont, CA	2003 – 2004
Semafore Pharmaceuticals, Inc.	2004 – 2006
Scientific Advisory Board, RetinoRX	2011 -- 2014
Chief Scientific Founder and Officer, Apexian Pharmaceuticals	2008 – present
Apexian Pharmaceuticals Board Member	2008 -- present
Ocuphire Pharmaceuticals, Member Medical Advisory Board (Back of Eye)	2019 -- present
Ocuphire Pharmaceuticals, Scientific Consultant	2019 -- present

MEMBERSHIPS

American Association for Cancer Research
American Association for the Advancement of Science
American Society for Pharmacology and Experimental Therapeutics
Society for Pediatric Research
Alliance of Distinguished Rank Professors
American Society of Clinical Oncology
Association for Research in Vision and Ophthalmology

RESEARCH INTERESTS

The inherent chemical instability of DNA, the production of reactive oxygen species during normal cellular metabolism, and the continuous exposure to environmental mutagens and extraneous agents, such as during cancer therapy, all represent a potential threat to the integrity of the DNA of cells. Recently, we have focused more specifically on the role of the major apurinic endonuclease DNA repair enzyme, APE1/Ref-1, in cancer both as a diagnostic and therapeutic factor and are studying the role of DNA BER and specifically APE1/Ref-1 as both a DNA repair and redox signaling factor for normal and cancer cells. We and others have shown that the Ape1/Ref-1 protein is significantly and dramatically elevated in pediatric and adult brain tumors, osteosarcomas and rhabdomyosarcomas, ALL, pancreatic cancer, ovarian, prostate, cervical and germ cell tumors. We are currently trying to understand APE1/Ref-1's role in these cancers and others, and determining how to modulate its activity for therapeutic applications (small molecule inhibitors). Our primary focus is currently directed toward pediatric and adult gliomas, pediatric leukemia/neuroblastoma, and pancreatic cancer.

- Molecular and cellular biology, biochemistry and translational applications of eukaryotic DNA base excision repair (BER).
- Regulation and function of AP endonuclease (Ape1/Ref-1) in normal and cancer cells. The multifunctional mammalian APE1 is responsible for the repair of AP (abasic) sites in DNA.
- APE1/Ref-1 is a multifunctional protein that has also been shown to function as a redox factor facilitating the DNA-binding capability of numerous transcription factors (Fos, Jun, HIF-1, PAX, NFkB, STAT3) as well as p53.
- Studies of DNA repair genes involved in repairing base damage that occurs from oxidative and alkylation events in normal and tumor cells.
- Studies relating to DNA damage and repair of neuronal cells resulting in chemotherapy induced peripheral neuropathy (CIPN); peripheral neuropathy and cognitive dysfunction ("chemobrain")
- Cross-talk between the BER and the NER DNA repair pathways in peripheral neurons.
- Redox signaling in mammalian cells.
- Anti-angiogenesis therapeutics in cancer and non-cancer systems including macular degeneration and neo-vascularization.
- Identification and development of small molecule inhibitor's of both APE1/Ref-1's redox signaling and DNA repair functions.
- Continued development of APX3330, and analogues that blocks APE1/Ref-1's redox function for Phase I and eventual Phase II trials in ocular as well as other indications – IBD, cancer.
- Phase I trials for APX3330: NCT03375086 - A Study of APX3330 in Patients With Advanced Solid Tumors (APX3330)- completed 2019.
- A phase II trial using APX3330 in diabetic retinopathy (DR) and diabetic macular edema (DME) recently began accruing patients (NCT04692688): April, 2021.

RESEARCH AND PROFESSIONAL EXPERIENCE

1979 - 1981 M.S. graduate student and teaching assistant, Zoology Department, Louisiana State

University, Baton Rouge, LA under the direction of Dr. William R. Lee. Mutagenesis in oocytes of *Drosophila* in DNA repair competent and deficient strains.

- 1981 - 1984 Ph.D. graduate student and research assistant, Genetics Program, Louisiana State University, Baton Rouge, LA under the direction of Dr. William R. Lee. Molecular analysis of xray mutations at the *Adh* locus in *Drosophila*.
- 1984 - 1987 American Cancer Society Postdoctoral Fellow, The Rockefeller University, New York, NY. Postdoctoral study in the laboratory of Dr. Michael W. Young. Molecular analysis of the developmentally regulated neurogenic *Notch* gene in *Drosophila*.
- 1987 - 1993 Assistant Professor, Department of Molecular and Cellular Biochemistry, Loyola University Medical School, Maywood, IL 60153
- 1992 - 1993 Assistant Professor of Medicine, Loyola University Medical School, Maywood, IL 60153
- 1993 - 1998 Associate Professor, Department of Pediatrics, Section of Pediatric Endocrinology, and Department of Biochemistry & Molecular Biology, Indiana University School of Medicine, Indianapolis, IN 46202
- 1994 – Present Indiana University Simon Cancer Center (IUSCC) member
- 1995 - 2017 Associate Director, Herman B Wells Center for Pediatric Research, Riley Hospital for Children, Indiana University School of Medicine, Indianapolis, IN 46202
- 1998 - 1999 Associate Professor, Department of Pediatrics, Section of Hematology/Oncology, and Department of Biochemistry & Molecular Biology, Indiana University School of Medicine, Indianapolis, IN 46202
- 1999 – Present Professor, Department of Pediatrics, Section of Hematology/Oncology, and Department of Biochemistry & Molecular Biology, Indiana University School of Medicine, Indianapolis, IN 46202
- 2000 – 2001 Co-Program Leader, Pediatric Oncology Research Program, IU Simon Cancer Center, Indiana University School of Medicine, Indianapolis, IN 46202 (Program disbanded for reorganization in 2001).
- 2001 – 2005 Co-Program Leader, Experimental Therapeutics Research Program, IU Simon Cancer Center, Indiana University School of Medicine, Indianapolis, IN 46202
- 2001 – 2008 Jonathan and Jennifer Simmons Professor of Pediatrics, Department of Pediatrics, Indiana University School of Medicine, Indianapolis, IN 46202
- 2003 – Present Professor, Department of Pharmacology and Toxicology, Indiana University School of Medicine, Indianapolis, IN 46202
- 2005 – Present Associate Director of Basic Science Research, IU Simon Cancer Center
- 2008 – Present Director, Program in Molecular Oncology and Experimental Therapeutics, Department of Pediatrics, Indiana University School of Medicine
- 2008 – 2012 Chair, Indiana CTSI Preclinical Project Development Team (TRAC1)

- 2008 – Present Betty and Earl Herr Chair in Pediatric Oncology Research
Indiana University School of Medicine, Indianapolis, IN 46202
- 2010 – 2013 NCI Initial Review Group, Subcommittee F Manpower and Training
- 2010 – 2014 Chair, Scientific Advisory Board, RetinoRX (RRX)
- 2012 – 2017 Co-Director, Chemical Biology and Drug Development
- 2008 – Present Chief Scientific Officer and Founder, Apexian Pharmaceuticals, Inc., Indianapolis, IN
- 2017 Education Board Member, American Health Council
- 2017 - 2018 Member, Basic Mechanisms of Cancer Therapeutics (BMCT) Study Section, NIH
- 2018 – 2019 Member, Mechanisms of Cancer Therapeutics (MCT – reorganization of BMCT) Study Section, NIH
- 2020 –present Member, Eugene and Marilyn Glick Eye Institute, Professor of Ophthalmology
- 2004-- present >75 NIH study section review panels over 15 years.
- 2019 – 2022 Interim co-leader Experimental and Developmental Therapeutics Program, IUSCCC
- 2020—present Member, Indiana University Ventures Investment Committee
- 2020 – present co-Director, Cancer Drug Discovery and Development program, IUSCCC
- 2021—present Member, CTSI Preclinical Innovation “Think-Tank” Program, IUSM
- 2022—present AAAS Science Fellow

PATENTS

1. US 6,190,661 B1 Issued: February 20, 2001
Title: Methods and Compositions for use of Apurinic/Apyridimic Endonucleases
2. US 6,406, 917 B1 Issued: June 18, 2002
Title: Methods and Compositions for use of Apurinic/Apyridimic Endonucleases
3. US 9,040,505 B2 Issued: May 26, 2015
Title: Benzoquinone derivative E3330 in combination with chemotherapeutic agents for treatment of cancer and angiogenesis
Other countries:

Japan	5646327	Nov. 14, 2014
Australia	2008304619	Jan. 7, 2016
Canada	2,700,365	July 5, 2016
Australia	2015268612	June 8, 2017
France	2203162	Nov. 8, 2017
Germany	2203162	Nov. 8, 2017

United Kingdom	2203162	Nov. 8, 2017
Australia	2017203131	Sept. 22, 2018
Australia	2018256605	June 25, 2020
Europe has a notice of allowance		

4. US 10,058,523 Issued: August 28, 2018
Title: Benzoquinone derivative E3330 in combination with chemotherapeutic agents for treatment of cancer and angiogenesis

5. US 9,089,605 B2 Issued: July 28, 2015
Title: Quinone derivatives, pharmaceutical compositions and uses thereof
Other countries:

Canada	2,700,274	Aug. 22, 2017
Japan	5628674	Oct. 10, 2014
France	22031161	May 9, 2018
Germany	22031161	May 9, 2018
United Kingdom	22031161	May 9, 2018

6. US 9,193,700 Issued: November 24, 2015
Title: Quinone Compounds for Treating APE1 Mediated Diseases
Other countries:

Australia	2012258665	Sept. 7, 2017
Japan	6109821	Mar. 17, 2017
Japan	6277982	Jan. 18, 2018
France	2718255	Feb. 13, 2019
Germany	2718255	Feb. 13, 2019
United Kingdom	2718255	Feb. 13, 2019
China	ZL201280029978.X	Nov. 21, 2013
China	ZL201610481762.7	June 28, 2016
Canada	2,837,307	Aug. 4, 2020
Europe is pending		

7. US 9,877,936 Issued: January 30, 2018
Title: Quinone Compounds for Treating APE1 Mediated Diseases

8. US 10,154,973 Issued December 18, 2018
Title: Quinone Compounds for Treating APE1 Mediated Diseases

9. US 9,315,481 Issued: April 19, 2016
Title: Compounds and Methods for Treating Leukemia
Other Countries:

Australia	2013232208	Aug. 10, 2017
Japan	6424155	Nov 14, 2018
France	2825162	Sept 8, 2014
Germany	2825162	Sept 8, 2014
United Kingdom	2825162	Sept 8, 2014

10. US 10,772,859 Issued: September 15, 2020
Title: Methods of Targeting APE1/Ref1 to Inhibit Hypoxia Signaling Genes (treatment for pancreatic cancer and MPNST)

Other countries:	France	3297623	Oct 20, 2020
	Germany	3297623	Oct 20, 2020
	United Kingdom	3297623	Oct 20, 2020
	Australia	2016262985	July 10, 2021
	Japan	6862355	April 2, 2021
	Canada is pending.		

11. US 11,331,294 Issued: May 17, 2022
Title: Benzoquinone derivative E3330 in combination with chemotherapeutic agents for treatment of bladder cancer
12. US patent 11,160,770 Issued: November 2, 2021
Title: Compounds, Compositions and Methods for Treating Oxidative DNA Damage Disorders
13. US application 16/418,276 Issued May 17, 2022
Title: Benzoquinone derivative E3330 in combination with chemotherapeutic agents for treatment of bladder cancer
14. US application 16/850,436 Issued: June 7, 2022
Title: Prevention and Reversal of Inflammation Induced DNA Damage
Other countries: Canada, Japan and Europe are pending.
15. US application 16/377,442 Submitted April 8, 2019
Title: Benzoquinone derivative E3330 in combination with chemotherapeutic agents for treatment of cancer and angiogenesis
16. US application 17/026,671 Submitted September 21, 2020
Title: Use of APE1/Ref-1 – Inhibitors in combination therapies for treatment of cancer
Other countries: Japan and Canada are pending.
17. US application 16/968,009 Submitted: August 6, 2020
Title: Targeting Ocular Diseases with Novel APE1/REF-1 Inhibitors
Other countries: Canada, China, South Korea, Japan, Europe, Australia and Hong Kong.
18. US application 17/415,065 Submitted: 6/17/21
Title: Treatment of gastrointestinal disorders and symptoms thereof
Other countries: Australia, Canada, Japan Europe, South Korea and China

ACTIVE GRANTS

NIH R01 EY031939 Corson / Kelley (MPIs) 08/01/20 -- 07/31/24
Title: Targeting the Ref-1 signaling node for treating ocular neovascularization
Goal: To dissect the mechanisms of Ref-1 as a mediator of angiogenesis and inflammation in the eye.

R01 CA167291-06 Kelley/Fishel (co-PIs/MPI) 01/01/13-03/31/23 2.4 Calendar Months
NIH \$563,735 total costs per year (\$2,818,675 total 5 years)
Exploiting the Ref-1 node in pancreatic cancer: tailoring new pancreatic cancer

therapy using multi-targeted combinations

Goals: Study the role and interaction of Ref-1 in tumor and stroma of PDAC as well as identifying potential new combination targets affecting the Ref-1 signaling node.

R01 CA254110 Fishel (PI), Kelley (co-I) 06/01/2021-05/31/2026 0.6 Calendar Months
NIH/NCI \$2,181,940 total costs over 5 years

Investigation of novel signaling protein in 3D and in vivo PDAC models using second generation Ref-1 inhibitors

Goals: To evaluate second-generation Ref-1 inhibitors for treatment of PDAC by comparing the mechanisms of Ref-1 inhibition in the tumor and tumor microenvironment.

R01 CA231267 Kelley/Fehrenbacher (co-PIs/MPIs) 09/10/2018 – 08/31/23 1.86 Calendar Months
NIH/NCI \$446,989 total costs per year (\$2,304,070 total 5 years)

(PQ12) Enhancement of DNA repair in neurons via a targeted APE1 small molecule modifier to decrease and reverse chemotherapy-induced peripheral neuropathy (CIPN) using a first-in-class modifier

Goals: To apply the knowledge gained from understanding that DNA damage is critical for the development of neuropathy and advancing the development of a new treatment strategy by pharmacologically modifying APE1-mediated DNA repair.

R01 CA205166 Kelley/Fehrenbacher (co-PIs/MPI) 04/01/17 - 03/31/23 2.7 Calendar Months
NIH/NCI \$521,463 total costs per year (\$2,607,315 total 5 years)

(PQ9) Mechanistic Role of APE1 and BER in chemotherapy-induced peripheral neuropathy

Goals: Determine the mechanistic role of APE1 and BER following platinum therapies and induction or protection from CIPN.

R01HL140961 Kapur (PI) Role: Co-I 04/01/19 – 03/31/24 0.60 Calendar Months
NIH \$586,415

Hyperglycemia mediated myeloproliferative disease

Goals: Role of inflammation and diabetes in induction of myeloproliferative disease

Pediatric Oncology Research Grant 07/01/2016-06/30/2023 0 Calendar Months
Tom Wood Lexus Foundation \$40,000/year

Goals: Research the potential use of APX3330 and second-generation compounds for pediatric tumors and anti-CIPN

IRG-16-192-31 Kelley (PI) 01/01/13-12/31/25 0 Calendar Months
American Cancer Society \$360,000 No Salary Support

IU Simon Cancer Center Institutional Research Grant

Goals: Institutional ACS grant to furnish young investigators with pilot funding

P30 CA082709-14 Lee, K. (PI) 09/01/08-08/31/24 2.40 Calendar Months
NIH/NCI \$1,400,000/\$52,364/year

Cancer Center Support Grant

Goals: Associate Director of Basic Science responsibilities and roles

Role: Associate Director of Basic Science

Apexian Pharmaceuticals Kelley (PI) 07/01/12-06/30/23 0.06 Calendar Months
\$55,882

Testing Apexian compounds for efficacy in cancer models and biomarker discovery

Goals: Testing new Ref-1 redox inhibitors in leukemia models for efficacy

Falk Medical Research Trust -Catalyst Award	Lee, K (PI)	11/30/2021-11/29/2023	0 Calendar Months
Dr. Ralph and Marian Falk Medical Research Trust	\$300,000		Role: Co-I
Targeting PIM2 and it's Regulation of th c-Myc Oncogene in Multiple Myeloma and Other Cancers			
Goals: Developing lead compound for IND enabling studies and clinical trial			
UL1TR002529	Moe (PI)	05/01/08 – 04/30/23	Role: PDT member and Mentor
NCRR			0.6 Calendar Months
Title: Indiana Clinical and Translational Sciences Institute			
Concept to Clinic (CTC) project development team (PDT) member.			
Goals: Evaluate and advise investigators on their projects for external funding and internal pilot projects			
UL1TR002529	Moe (PI)	05/01/08 – 04/30/23	Role: PDT member and Mentor
NCRR			0.6 Calendar Months
Title: Indiana Clinical and Translational Sciences Institute			
Goals: CTSI Preclinical Innovation "Think-Tank" Program to develop novel targets and therapeutics from bench to clinic			
R25CA233429	Zhang (PI)	04/01/20-03/31/25	0.6 Calendar Months
NIH		\$264,623/\$17,294	
Big Data Training for Cancer Research			
Goals: Informatics training course for cancer researchers in big data and bioinformatics			
Role: Co-Investigator			
T32GM077229-11	Mirmira (PI)	07/01/18 – 06/60/23	0 Calendar Months
Indiana Medical Scientist/Engineer Training Program			Role: Mentor
NIH/NIGMS			
Goals: Train the next generation of physician scientists who will become leaders in research and clinical care.			
T32 DK007519-31	Broxmeyer (PI)	07/01/1985 – 06/30/2026	0 Calendar Months
NIH/NIDDK			Role: Mentor
Regulation of Hematopoietic Cell Production			
This is a training grant for Pre- and Post-Doctoral Students			
T32 HL007910-18	Broxmeyer (PI)	07/01/1999 – 11/30/2024	0 Calendar Months
NIH/NHLBI			Role: Mentor
Basic Science Studies on Gene Therapy of Blood Diseases			
This is a training grant for Pre- and Post-Doctoral Students			

PREVIOUSLY FUNDED GRANTS

1. Analysis of a Drosophila DNA repair gene. American Cancer Society; July 1, 1988 to June 30, 1990. Total direct costs = \$116,000. PI.
2. DNA repair in Drosophila and humans: Evolutionary implications. Schweppe Career Development Award. July 1, 1989 to June 30, 1992. Total direct costs = \$45,000. PI.
3. Hypothalamic prolactin mediates estrogen-LHRH interactions in brain. V.A.; Jan. 1, 1991 to Dec. 31, 1993. Total direct costs, \$344,952. PI., Nicholas Emanuele, M.D. Co-PI.
4. Molecular studies of the structure of spectrin repeats. Natl. Amer. Heart Assoc.; July 1, 1991 to June 30, 1994. Total direct costs = \$120,000. PI., Leslie Fung, Ph.D. Co-PI.

5. The effect of EtOH on GHRF-GH axis, puberty to adult. NIH; R01-AA08661, Sept. 1, 1990 to Aug. 31, 1995. Total direct costs, \$409,710. PI., Mary Ann Emanuele, M.D. Co-PI.
6. Molecular characterization of neural genes containing the triplet repeat CAG. BRSR, July 1, 1994 to June 30, 1996. Total direct costs = \$39,848. PI.
7. Cloning and characterization of developmental and neural genes containing CAG repeats. James Whitcomb Riley Memorial Assoc., July 1, 1994 to June 30, 1996. Total direct costs = \$79,696. PI.
8. Oxidative DNA damage and the analysis of 8-oxoguanine by a multifunctional protein. CTR. Jan. 1, 1994 to Dec. 31, 1996. Total direct costs = \$180,000. PI.
9. The effects of ethanol on male rodent reproduction. NIH; R01-AA06755, June 1, 1993 to May 31, 1996. Total direct costs, \$344,952. PI., Mary Ann Emanuele, M.D. Co-PI.
10. Analysis of the structure of spectrin. National Science Foundation, Sept. 1, 1994 to Aug. 31, 1997. Total direct costs, \$300,000. PI, Leslie Fung, Ph.D., Co-PI.
11. Correction of FA-A with the 8-oxoguanine DNA glycosylase DNA repair gene S3. Fanconi Anemia Foundation; June 1, 1996 to Dec. 31, 1997. \$44,815 total direct cost for 1.5 years. PI.
12. Complementation of Fanconi's Anemia Type A with the DNA repair gene S3. March of Dimes; April 1, 1996 to March 31, 1998. \$101,630 total direct costs for two years. PI.
13. Molecular Analysis of *Drosophila* AP Endonucleases. NIH/NCRR; Sept. 30, 1993 to Sept. 29, 1998. \$568,206 total direct costs for 5 years. PI.
14. BRSR. PI; A.R. Evans, 8/1/98-7/31/99. \$25,000. "Role of oxidative DNA damage and DNA repair proteins in neuronal derived cells." Co-PI.
15. Oxidative damage and the role of DNA repair enzymes in Parkinson's disease. National Parkinson Foundation. July 1, 1999 to June 30, 2001. \$80,000 direct costs for 2 years. PI. Declined acceptance due to overlap with other grants.
16. Complementation of FA-A with the *Drosophila* S3 DNA repair gene. NRSA fellowship to Dr. Yi Xu, 9/30/96-9/29/99. Mentor/sponsor.
17. IU Cancer Center Experimental Therapeutics Pilot Program, M. Kelley, P.I., 7/1/99 – 6/30/00; \$15,000. "Elevated expression of the DNA repair/redox enzyme APE/ref-1 in prostate cancer: Diagnostic and therapeutic implications."
18. IU Cancer Center Sarcoma Pilot Proposals, B. Thomson, P.I., 7/1/99 – 6/30/00; \$15,000; "An Immunohistological Evaluation of the Redox and Repair Activities of Apurinic/Apyrimidinic Endonuclease (APE) in Pediatric Sarcomas". Co-PI.
19. Bear Necessities Pediatric Cancer Foundation. B. Thomson, P.I.; 8/1/99-7/31/00. "An Immunohistological evaluation of the redox and repair activities of apurinic/aprimidinic endonuclease/redox factor 1 (APE/ref-1/ref-1) in a chemosensitive malignancy; Pediatric germ cell tumors." \$10,000 total costs. Co-PI.
20. GOG (Gynogologic Oncology Group) D. Moore, P.I. 7/1/99 – 6/30/00; \$40,000; "Expression of the DNA

repair/redox enzyme APE/ref-1 in epithelial ovarian cancers: translational implications for diagnostic and therapeutics". Co-PI. No salary.

21. Lance Armstrong Foundation. Robertson and Kelley. 1/1/2000 – 12/31/00. AP endonuclease in testicular cancer. \$50,000 per year.
22. R43 CA83507. NIH/SBIR program; M. Kelley, PI; 01/06/00 – 01/05/01 "Development of Antibodies to Study Oxidative DNA Damage" \$99,953; Phase I Small Business Innovative Research (SBIR) program application with Novus Biologicals, Inc., Littleton, CA. IU portion of total costs is \$30,000 for one year.
23. BC991226 CDMRP. 7/1/2000 – 6/30/03. Predoctoral training grant to Melissa Limp-Foster, graduate student in my laboratory, DOD. DNA base excision repair (BER) and cancer gene therapy: Use of the human n-methylpurine DNA glycosylase (MPG) to sensitize breast cancer cells to low dose chemotherapy. \$22,000 per year for 3 years. (Mentor; Kelley)
24. Susan G. Komen Breast Cancer Predoctoral Fellowship to Mikael Rinne, graduate student in my laboratory. Fellowship declined due to awarding of similar grant by the DOD.
25. R01 ES07815. PI; W. Deutsch, 8/1/96-7/31/02; 5% effort; NIH, Co-PI (subcontract), \$217,250 (\$80,000 for M. Kelley), "Oxidative DNA damage and the analysis of 8-oxoG repair".
26. R01 CA76643. PI; K. Robertson, 7/1/98-6/30/03; 15% effort; NCI, \$189,027 "APE expression/Leukemia response to chemo/radiotherapy", Co-PI
27. IU Cancer Center Translational Pilot Project Program. 05/01/02-04/30/03. Chemoprotection of human stem and progenitor cells in a lymphoma-xenograft model by repair of alkylator-induced mitochondrial and nuclear DNA damage. PI; Karen E. Pollok, co-PIs; Mark R. Kelley and Kenneth G. Cornetta.
28. OC990085 CDMRP. PI; M.R. Kelley, 7/1/00 – 6/30/03; 20% effort. Direct costs per year; \$99,999. "Expression of the DNA Repair/Redox Enzyme APE/REF-1 in Epithelial Ovarian Cancers: Diagnostic, Mechanistic and Therapeutic Studies"
29. CA75426. Overall PI; D. Williams, 5/11/98-2/28/04; 15% effort; NIH/NCI; Program Project Grant "Dose Intensification by Gene Transduction in Human Cancer", Co-P.I. on Project 1- D. Williams, P.I., \$238,383. Co-P.I. on Project 3- W. Martin, P.I., \$209,235.
30. T32 DK07519 Dr. David C. Caldwell NRSA Trainee on NIH Training grant "Regulation of Hematopoietic Cell Production". 2001-2004.
31. BC011075 CDMRP. 07/01/01 – 06/30/04. Predoctoral training grant to Mikael Rinne, MD/PhD graduate student in my laboratory, DOD. Imbalancing the DNA base excision repair pathway sensitizes breast cancer cells to chemotherapy and modulates nucleotide excision repair: Potential for combination chemotherapy. \$65,993 for 3 years. (Mentor; Kelley)
32. BC991226 CDMRP. 7/1/2000 – 6/30/04. Predoctoral training grant to Tia Harvey, graduate student in my laboratory, DOD. DNA base excision repair (BER) and cancer gene therapy: Use of the human n-methylpurine DNA glycosylase (MPG) to sensitize breast cancer cells to low dose chemotherapy. \$22,000 per year for 3 years. (Mentor; Kelley)
33. OC00113 CDMRP. P.I.; Williams, S. 09/29/01 – 09/28/04. 10% effort. Program Project Grant: DNA Repair and Cell Cycle Therapeutic Targets for Ovarian Cancer. PI of Project 2: "Therapeutic manipulation of the DNA base excision repair pathway for ovarian tumor sensitization". \$1,000,000

total costs for PPG for 3 years. \$78,000 direct costs per year for Project 2.

34. R01 NS38506. PI; M.R. Kelley, 2/14/00- 1/31/05; 30% effort; NIH/NINDS, \$153,271 “Oxidative DNA damage and repair in CNS cells”. Analysis and overexpression of human oxidative DNA repair genes in pre- and postmitotic cells.
35. P30 DK49218 Core Centers of Excellence in Molecular Hematology, NIH/NIDDK; E Srour, PI, 9/1/99-8/31/06; Core leader of the Cell and Molecular Biology Core. 10% Salary support only.
36. ES05865. LeDoux, S., PI; M.R. Kelley PI of subcontract; 07/01/00-06/30/05; \$35,022 direct subcontract costs. 5% effort. “Repair of DNA damage induced by environmental agents”
37. ES03456. Wilson, G., PI; M.R. Kelley PI of subcontract; 7/01/01-6/30/06; \$35,022 direct subcontract costs. 5% effort. Repair of Beta cell toxins: Mechanisms of action
38. Ovar’coming Ovarian Cancer support grant; Nov. 1 2006 –Oct 30, 2007. \$25,000 direct costs for supplies only.
39. R01 CA94025 PI: MR Kelley, 08/01/03 – 7/31/09, 5% effort NIH/NCI 12/6 \$173,817
Therapeutic/Mechanistic Role of APE1 in Germ Cell Tumors
40. R01 CA106298 PI: Kelley 05/1/04 – 04/30/10, \$ 200,183, 15% effort. Imbalancing DNA BER to enhance ovarian tumor sensitivity. Goals: Knocking down the human AP endonuclease APE1 or overexpressing MPG to sensitize tumor cells to chemo or IR.
41. NCI 5T32CA111198 PI : Nakshatri, 04/01/05 – 03/31/11 Role: Trainer, Cancer Biology Training Program
42. R21CA122298 PI: Fishel 05/01/07-04/30/10 \$120,000 Role: Co-investigator 5% effort.
Chemosensitization of Pancreatic Tumors via Inhibition of a DNA Base Excision Repair Enzyme, Ape 1
43. R21 AI073091 PI : Sullivan 07/01/08-06/30/10 \$125,000 Role : Co-investigator, 5% effort
44. NIH/NIAID APEs as novel drug targets in AIDS opportunist Toxoplasma
45. Apexian Pharmaceuticals PI: MR Kelley 07/01/08 – 10/31/09 \$18,940 (No salary support)
Targeting APE1 for cancer therapies
46. Executive Programme of Cooperation in the field of Science and Technology 2008-2010 . Co-PI (Kelley and Tell). Grant for a joint research project between Italy and United States of America, granted by the Italian/US Agency for the Foreign Affairs.
47. R41 EY019784 PI: Haslanger/Kelley/Qiao 09/30/09-09/29/10 \$70,671 10% effort
48. NIH/Apexian Pharmaceuticals, Inc, Redox protein APE1/Ref-1 as a target for age-related macular degeneration
49. NIDDK 5T32DK007519 PI: Broxmeyer 07/01/1985 – 06/30/11, Role: Mentor, Regulation of Hematopoietic Cell Production
50. NIH/NCI R01CA121168 S1 PI: Kelley, 08/01/09-07/31/11 , \$232,959 , no salary support, The Role of Ape1 in Neurotoxicity of Cancer Treatments

51. NIH Apexian Pharmaceuticals Contract PI: Kelley, 09/01/10 – 08/31/11, \$33,027, 1% effort, Testing APE1 DNA Repair inhibitors
52. Purdue University (Jordan-Rieger) PI: Kelley/Howard, 11/01/10-10/31/11, \$46,405, (no salary support), IU/PU Joint Working Group Project-Pancreatic Working Group
53. Simmons Clinical Studies Fund (Kelley) 01/01/12 – 12/31/12, \$15,000, No Salary Support, Novel therapeutic strategy for childhood acute lymphoblastic leukemia (ALL), with focus on relapsed T-cell leukemia, Goals: To determine the therapeutic efficacy of Ref-1 redox blockade in animal models of relapsed childhood ALL using novel Ref-1 inhibitors
54. CTSI Program Project Planning P3 (Kelley/Howard) 10/01/11-04/01/13, \$100,000 No salary support Model for Transformative Science using a Multi-Investigative Team Approach
55. NCI R01 CA114571 Georgiadis (PI) Role: Co-investigator 07/01/06 – 05/31/13, \$155,117, 0.60 calendar months, Mechanism of Redox Regulation by Apel / Ref-1
56. R01CA121168-05 Kelley (PI) 04/01/08-01/31/14 NIH/NCI \$270,282 direct costs per year. The Role of Ape1 in Neurotoxicity of Cancer Treatments Goals: Studying the role of Ape1 in peripheral (DRG) and central (hippocampal) neurons following treatment of primary rat neurons with a variety of chemotherapeutic agents that have been shown to cause peripheral neuropathy or chemobrain (neurocognitive dysfunction).
57. CTSI Kelley/Vasko (co-PIs) 03/01/2012 – 09/30/2013 \$34,555. Treatment of peripheral neuropathy using novel small molecule inhibitors of APE1. Goals: Study impact of small molecule inhibitors of APE1 in peripheral neuropathy
58. IUSCC Kelley/Fishel/Cardoso (co-PIs) 08/15/12-08/14/13 \$54,740 Novel Therapeutics Strategy for Refractory and Relapse Childhood ALL. Goals: Mechanism of APE1 function in ALL models.
59. CTSI Program Project Planning P3 Kelley/Vasko (co-PIs) 01/01/13 – 12/31/14 \$70,000. Chemotherapy Induced Peripheral Neuropathy. Goals: Mechanistic investigation of important DNA repair pathways in the quest to understand chemotherapy-induced peripheral neuropathy (CIPN)
60. Kelley/Korc (co-PIs) 07/01/11-06/30/15 IUPUI Signature Center Initiative \$300,000. IUPUI Pancreatic Cancer Signature Center: Designation and Funding for Pancreatic Cancer Working Group. Goals: Support for pancreatic working group; infrastructure, models, primary panc lines and tissues as well as GEM models.
61. IU Health Strategic Research Initiative in Oncology and Neurobiology 06/15/14-06/14/15 Georgiadis/Kelley (co-PIs) \$50,000 Identification and Characterization of Small Molecule Activators of APE1 to Protect DRGs Against Chemotherapy Induced Neurotoxicities.
62. NIH/NCI 1R43CA171344-01A1 Kelley/Haslanger (co-PI) 04/01/13-03/31/15 \$240,322 Novel Therapeutic Strategy for Refractory and Relapse Childhood Acute Leukemia Goals: Develop newly discovered Ref-1 redox inhibitors for clinical trials
63. Kelley / Cardoso / Batra (co-PIs) 09/01/13 – 12/01/15 \$250,000 Hyundai Hope on Wheels Studies to Support Clinical Translation of a Novel Ref-1-Targeted Therapy for Relapsed Childhood Acute Lymphoblastic Leukemia Goals: Basic and translational mechanisms of Ref-1 in relapsed and refractive ALL

64. Kelley (PI) 07/01/12-06/30/17 Apexian Pharmaceuticals Contract \$50,115 Testing ApeX compounds for efficacy in leukemia models. Goals: Testing new Ref-1 redox inhibitors in leukemia models for efficacy
65. R21NS091667-01 Kelley/Vasko (MPIs) 04/01/2015 – 03/01/2018 NIH \$429,000 DNA damage and repair in inflammation-induced peripheral sensitization. Goals: Mechanistic studies to determine the role of APE1 and DNA repair following inflammation induced DNA damage in DRG neurons.
66. T32GM077229-01A1 Mirmira, R (PI) 07/01/08 – 06/30/23 Role: Trainer NIHT-32 Indiana Medical Scientist/Engineer Training Program. Project: Train engaging physician-scientist who are poised to pursue careers as clinical investigators in hypothesis-driven, investigator-initiated research.
67. 2T32HL007910 Broxmeyer (PI) 07/01/1999 – 08/31/19 Role: Mentor NHLBI Basic Science Studies on Gene Therapy of Blood Diseases. To continue training the next generation of scientists in the clinically-relevant medical area of gene transfer for effective modulation of normal cell growth, and gene therapy
68. W81XWH1910217 Fishel (PI) Role: Co-I 01/01/19 – 05/31/21 US Army RSCH ACQ ACT \$154,047 Exploring a novel signaling node for therapeutic efficacy in MPNST
Goals: to validate a new target (redox factor-1, Ref-1) that is upstream of several pathways known to contribute to driving the disease including HIF1 and STAT3.
69. R01 CA167291-06S1 Kelley/Fishel (co-PIs/MPI) 09/03/18 - 02/28/23 \$227,554 total costs.
Supplement to: Exploiting the Ref-1 node in pancreatic cancer: tailoring new pancreatic cancer therapy using multi-targeted combinations. Goal: Role of Ref-1 in cancer cachexia.

COLLABORATIONS WITH OTHER UNIVERSITIES / INSTITUTIONS

2008 – 2010	University of Udine, Italy. Joint Research project between Italy and USA granted by the Italian/US Agency for Foreign Affairs.
2006 – present	University of Udine, Italy. Exchange program for graduate science students between the University of Udine and IUPUI.
2007 – present	University of Michigan. Provision of drug compound for research.
2008 – 2014	Johns Hopkins University, MD. Provision of drug compound for research.
2009 – 2013	University of Asahikawa Medical School, Japan. Provision of drug compound for research.
2009 – 2013	Ohio State University. Provision of drug compound for research
2010 – 2012	Butler University, Indianapolis, IN. Provision of drug compound for research
2010 – 2012	Tulane University, New Orleans, IN. Provision of drug compound for research
2010 – present	University of Udine, Italy, Dr. Gianluca Tell
2011 – present	Ophthalmology, Henry Ford Health System
2015 – present	Cardiff University, Cardiff, UK. Active collaboration with Dr. Andrew Tee
2015 – present	University of Florence, Florence, Italy. Active collaboration with Dr. Caludiu Supuran
2016 – 2017	Thomas Jefferson University, PA. Collaboration with Dr. Jonathan Brody
2016 – present	Victoria University, Australia, Dr. Kulmira Nurgali (IDB and anti-colon studies)
2017 – present	Glick Eye Center, Dr. Tim Corson, AMD studies with APX cpds
2019 – present	Shigeki Miyamoto, PhD, McArdle Laboratory for Cancer Research, University of Wisconsin-Madison

- 2021 – present Jing Zhang, PhD, McArdle Laboratory for Cancer Research, University of Wisconsin-Madison
- 2021 – present Ravinder K. Gill, PhD, Div of Gastro & Hepatology, UIC, J. Brown VA Medical Center, Chicago, IL

INVITED SEMINARS

- Loyola University Medical School, Molecular Biology Program, Maywood, Illinois; January 20, 1989
- University of Texas System Cancer Center, Experimental Carcinogenesis Department, Smithville, Texas; March 8, 1989.
- University of Texas at Austin, Clayton Foundation Biochemical Institute, Austin, Texas; March 10, 1989
- Oregon State University, Biomedical Sciences Specialized Center of Research, Corvallis, Oregon; March 30, 1989.
- Central Michigan State University, Department of Biology, Mt. Pleasant, Michigan; January 10, 1991.
- Wayne State University, Department of Biological Sciences, Detroit, Michigan; April 15, 1991.
- DePauw University, Department of Biological Sciences, Greencastle, Indiana; Dec. 6, 1991.
- Northern Illinois University, Graduate Student Symposium, DeKalb, Illinois; January 30, 1992.
- Indiana University Medical School, Dept. of Pediatric Endocrinology, Indianapolis, Indiana; January 25, 1993.
- Keystone Symposium on Nucleases, Tamarron, Colorado; February 24, 1993.
- National Institute of Aging (NIA, NIH), Molecular Genetics, Baltimore, MD; March 8, 1993.
- Indiana University Medical School, Wells Institute, Indianapolis, Indiana; March 22, 1993.
- Oregon Health Sciences University, Center for Research on Occupational and Environmental Toxicology, Portland, Oregon; April 9, 1993.
- Indiana University Medical School, Dept. of Biochemistry and Molecular Biology, Indianapolis, Indiana; November 1, 1993.
- University of Colorado Health Sciences University, Denver, Colorado; January 13, 1994.
- Wabash University, Crawfordsville, Indiana; January 19, 1995.
- DePauw University, Greencastle, Indiana; February 17, 1995.
- M.D. Anderson Cancer Center, Science Park Research Center, Smithville, TX; May 12, 1995.
- University of Texas Medical Center, Galveston, TX; May 15, 1995.
- University of Texas Medical School, UT Cancer Center, San Antonio, TX; May 17, 1995.
- Fanconi Anemia Research Foundation Annual Meeting, Boston, MA; Nov. 10, 1995
- University of North Carolina, Chapel Hill, NC; June 12, 1996.
- Emory University, Atlanta, Ga; September 12, 1996.
- Indiana University Gary NW Medical School; March 7, 1997.
- Cornell University, Ithaca, NY; Sept. 30, 1997.
- 4th International Germ Cell Tumor Conference, Leeds, England; Nov. 13-16, 1997.
- Onyx, Inc., Richmond, CA; Feb. 23, 1998.
- Yale University, Dept. of Pediatrics, New Haven, CT; March 25-26, 1998.
- Indiana University Medical School, Department of Pediatrics; February 8, 1999
- Environmental Mutagen Society, Invited Presenter, Washington, D.C., March 27-April 1, 1999
- Indiana University Biochemistry Department Seminar; April 26, 1999
- DePauw University Science Research Fellows Seminar Series, Greencastle, IN; April 30, 1999.
- Children's Hospital of New Orleans, New Orleans, LA; January 9-11, 2000.
- Indiana University Cancer Center Seminar Series; February 23, 2000.
- Midwest DNA Repair Meetings, Invited Presenter, Louisville, KY; May 20-21, 2000.
- OSI Pharmaceuticals, New York; June 9, 2000.
- NCI Pediatric Oncology Division, Bethesda, MD; June 18-19, 2000.
- Gynecologic Oncology Group, St. Louis, MO; July 28-29, 2000.
- Eppley Institute for Research in Cancer, University of Nebraska Cancer Center, Omaha, Nebraska; Jan. 24-26,

2001

University of South Alabama School of Medicine, Mobile, AL; March 28-29, 2001.
Indiana Branch of the American Society of Microbiology Annual Meeting, Boone County National Park; April 6-8, 2001.
University of Illinois at Chicago, Dept. of Pharmacology, Chicago, IL; May 23-24, 2001.
Chicago Cancer Experimental Therapeutics Group, Chicago, IL; May 23, 2001.
AXYS Pharmaceuticals, South San Francisco, CA; July 9-11, 2001.
Rigel Pharmaceuticals, South San Francisco, CA; July 20-22, 2001.
5th International Germ Cell Tumor Conference, Leeds, England; Sept. 12-15, 2001.
American Association of Cancer Research, DNA base excision repair; Mini-symposium speaker and co-chair, April 9, 2002.
Pennington Biomedical Research, Louisiana State University, Baton Rouge, LA; May 2, 2002.
Pediatric Faculty Research Seminar, IU School of Medicine, Indianapolis, IN; May 13, 2002.
Dean's Sponsored Grand Rounds, IU School of Medicine, Indianapolis, IN; Sept. 18, 2002.
Pangene, Fremont, CA; Jan. 14, 2003.
NIH Chemical Pathology Workshop, Ventura, CA; Jan. 18, 2003.
Marian College, Indianapolis, IN; Feb. 4, 2003.
Indiana Univ-Purdue Univ Indianapolis, Indianapolis, IN; Feb 7, 2003.
Seminar at the Redox Biology Center, Univ of Nebraska, Lincoln, NE; March 18, 2003.
Pediatric Grand Rounds, IUSOM, Dept of Pediatrics, Indianapolis, IN; April 30, 2003.
University of Vanderbilt School of Medicine, Oct 23-25, 2003, Nashville, TN.
Leuchemix, April 12, 2004
Semafore, April 13, 2004, Indianapolis, IN
Session organizer and speaker, 36th American Chemical Society Central Regional Meeting, June 2- 4, Indiana University-Purdue University Indianapolis (IUPUI). Biological Chemistry – DNA Repair
Dept of Structural and Cell Biology, Univ of Texas Health Science Center, San Antonio, TX; Nov. 3, 2004
Hematology/Oncology Section, Case Western Cancer Center, Cleveland, OH; Jan. 14, 2005.
Renal Division, Indiana Univ School of Medicine; Jan 26, 2005.
Radiation Oncology, Univ of Maryland School of Medicine; Feb 17, 2005.
Institute of Psychiatric Research, Indiana Univ School of Medicine; May 5, 2005
Dept of Pediatrics, IU School of Medicine, Wells Center; Dec. 8, 2005
C.R.O.E.T., Oregon Health Sciences University; April 24, 2006
Dept of Biochemistry and Molecular Biology, Oregon Health Sciences University; April 25, 2006
Dept of Pharmacology and Toxicology, Indiana Univ School of Medicine; May 23, 2006.
Dept of Pharmacology, Univ of Texas Galveston Medical School; Oct 12-13, 2006.
Dept of Pharmacology, Univ of South Alabama Medical School; Dec. 6-8, 2006.
Speaker, Drug Information Association; 43rd annual meeting; June 20 – 23, 2007
Eli Lilly and Co., Jeremy Graf Group; Feb. 26, 2007.
Purdue University Cancer Center; Sept. 13, 2007.
Oregon Health Science University, Symposium on Environmental exposure and genomic stability; Sept. 20, 2007.
Notre Dame University/Cancer Center; 2007.
Speaker, Gordon Conference, DNA Damage, Mutation and Cancer, March 9-14, 2008, Ventura, CA.
Speaker, University of Kentucky, Dept of Physiology, March 24-25, 2008, Lexington, KY.
University of Illinois, Dept of Molecular and Integrative Physiology, Champaign, IL, April 16-17, 2008.
Speaker, Drug Information Association; 44th annual meeting; June 23 – 24, 2008
Chair, Indiana Health Industry Forum's Cancer Oncology Summit; December 1 – 2, 2008
Techpoint Seminar on Pediatric Oncology and the Wells Center, December 5, 2008
Speaker, University of Chicago, Cancer Research Center, Chicago, IL, March 11 – 12, 2009
Session Chair and Speaker, American Association for Cancer Research Annual Meeting, April 18, 2009
Speaker, University of Southern California, December 4, 2009
IU Purdue Oncology Retreat, Session Leader (Solid Tumors), Carmel, IN, February 27, 2010

MD Anderson Department of Experimental Therapeutics, Houston, TX, August 24 – 25, 2010
MD Anderson Department of Pediatrics – Research, Houston, TX, September 27 – 28, 2010
Butler University Department of Pharmaceutical Sciences, Indianapolis, IN, April 14, 2011
University of Illinois at Chicago Cancer Center, Chicago IL, May 25, 2011.
Speaker, "Long Term Effects of Cancer Therapies: Understanding pathways and developing interventions to reduce the adverse consequences of success". Fred Hutchinson Cancer Research Center, Seattle Washington, June 10, 2011
Winship Cancer Center Grand Rounds Speaker, Emory University, Atlanta GA, September 14, 2011
Herman B Wells Center for Pediatric Research Pediatric Faculty Research Seminar speaker, October 20, 2011
University of Michigan, College of Pharmacy, Ann Arbor, MI, October 24 – 26, 2012.
Karmanos Cancer Institute Grand Rounds Speaker, Wayne State University, Detroit, MI, February 6-7, 2014
Feist-Weiller Cancer Center Grand Rounds Speaker, Louisiana State University, Shreveport, LA, February 10-11, 2014
Penn State Hershey Cancer Institute Grand Rounds Speaker, Penn State University, Hershey, PA, June 12-13, 2014
The University of Texas Health Science Center at San Antonio, Guest Speaker, San Antonio, TX, July 23-24, 2014
Penn State Hershey Cancer Institute Grand Rounds Speaker, Penn State University, Hershey, PA, October 1-2, 2015
Big Ten Cancer Research Consortium Summit 2016 Speaker, Indiana University Melvin and Bren Simon Cancer Center, Indianapolis, IN, September 9, 2016
University of Illinois Chicago, College of Pharmacy, Department of Medicinal Chemistry and Pharmacognosy Seminar Series speaker, Chicago, IL, November 11, 2016
The Next Giant Leap: Making The Cancer Moonshot A Reality, Speaker, Elsevier Cancer Panel, Boston, MA, November 16, 2016
National Institute on Aging Laboratory of Molecular Gerontology, Lecturer, Baltimore, MD, December 20, 2016
Hormel Institute International Cancer Research Conference, Lecturer, Austin, MN, June 19-20, 2017
Mayo Clinic SPORE Seminar Series Lecturer, Rochester, MN, September 27, 2017
IU Fall Showcase for TRIP (Translational Research Into Practice), Indianapolis, IN, November 1, 2017
Bloomington Cancer Biology Seminar Series, Lecturer, November 13, 2017
Molecular Therapeutics of Cancer Research Conference, Sundance, UT, July 22-26, 2018
National Institute of Environmental Health Sciences Seminar Lecturer, Durham, NC October 2-4, 2018
University of North Carolina at Charlotte Seminar Series Lecturer, November 8-9, 2018
Purdue University Bioinformatics Seminar Lecturer, November 19, 2018
American Society of Clinical Oncology (ASCO) Annual Meeting, Chicago, IL, May 31, 2019 - June 4, 2019
4th Annual IU Innovation and Commercialization Conference, Speaker, Indianapolis, IN, September 18, 2019
American Association for Cancer Research (AACR) Therapeutics Annual Meeting, October 26-31, 2019
Wright State University, Seminar Speaker, Dayton, OH, November 5-6, 2019
IU Commercialization Event Panel, Lecturer, Bloomington, IN, November 12, 2019
61st Annual ASH Meeting, Speaker, Orange County Convention Center (OCCC), Orlando FL, December 7-10, 2019
R25 Big Data Training for Cancer Research Workshop online with Purdue University, Speaker June 5-19, 2020
R25 Big Data Training for Cancer Research Workshop online with Purdue University, Speaker June 4-18, 2021
Tumor Biology Guest Speaker Series, "Translating basic science discoveries for patients: Targeting the DNA repair and redox signaling protein APE1/Ref-1 for cancer and other disease treatments" Sylvester Cancer Center, Virtual, December 15, 2021
Cleveland Clinic Lerner Research Institute, Virtual Seminar Speaker, April 1, 2022
45th Annual Macula Society Meeting, Virtual, June 11, 2022

PUBLICATIONS

1. Sega, G.A., **Kelley**, M.R., Owens, J.G. and Carricarte, U.C. (1983) Caffeine enhancement of unscheduled DNA synthesis in spermatids of mice exposed to methyl methanesulfonate. *Mut. Res.* 108:345358. PMID: 6682172
2. **Kelley**, M.R. and Lee, W.R. (1983) Mutagenesis in oocytes of *Drosophila melanogaster*. I. Scheduled synthesis of nuclear and mitochondrial DNA and unscheduled DNA synthesis. *Genetics* 104:279299. PMID: 17246137 PMCID: PMC1202077
3. **Kelley**, M.R., Mims, I.P., Farnet, C.M., Dicharry, S.A., and Lee, W.R. (1985) Molecular analysis of xray induced alcohol dehydrogenase (*Adh*) null mutations in *Drosophila melanogaster*. *Genetics* 109:365377. PMID: 2982699 PMCID: PMC1202492
4. Lee, W.R. and **Kelley**, M.R. (1986) Correction for differences in germ cell stage sensitivity in risk assessment. *Prog. Clin. Biol. Res.* 208:99-102. PMID: 3083428
5. Kidd, S., **Kelley**, M.R. and Young, M.W. (1986) Sequence of the *Notch* locus of *Drosophila*; relation of the encoded protein to mammalian clotting and growth factors. *Mol. Cell. Biol.* 6:30943108. PMID: 3097517 PMCID: PMC367044
6. Russel, M., Kidd, S. and **Kelley**, M.R. (1986) An improved filamentous helper phage for generating singlestranded plasmid DNA. *Gene* 45:333338. PMID: 3026919
7. **Kelley**, M.R., Kidd, S., Berg, R.L. and Young, M.W. (1987) Restriction of P element insertions at the *Notch* locus of *Drosophila melanogaster*. *Mol. Cell. Biol.* 7:15451548. PMID: 3037327 PMCID: PMC365244
8. **Kelley**, M.R., Kidd, S., Deutsch, W.A. and Young, M.W. (1987) Mutations altering the structure of EGF like coding sequences at the *Drosophila Notch* locus. *Cell* 51:539548. PMID: 3119223
9. **Kelley**, M.R., Venugopal, S., Harless, J. and Deutsch, W.A. (1989) Antibody to a human DNA repair protein allows for the cloning of a *Drosophila* cDNA encoding an apurinic endonuclease. *Mol. Cell. Biol.* 9:965973. PMID: 2471063 PMCID: PMC362685
10. **Kelley**, M.R., Emanuele, M.A., Tentler, J. and Emanuele, N.V. (1990). Crossreaction of albumin with polyclonal LH antibody on Western blots. *Endocrine Research* 16(4):477491. PMID: 2102467
11. Azad, N., Emanuele, N.A., Halloran, M., Tentler, J. and **Kelley**, M.R. (1991). Presence of luteinizing hormonereleasing hormone (LHRH) mRNA in rat spleen lymphocytes. *Endocrinology* 128:16791681. PMID: 1999181
12. Emanuele, M.A., Tentler, J., Emanuele, N.V. and **Kelley**, M.R. (1991) *In vivo* effects of acute ETOH on rat alpha and beta luteinizing hormone gene expression. *Alcohol* 8:345-348. PMID: 1724604
13. Grabowski, D., Carney, J. and **Kelley**, M.R. (1991) A *Drosophila* gene containing the *Opa* repetitive element is exclusively expressed in adult male abdomens. *Nucl. Acids Res.* 19(7):17091709. PMID: 1674131 PMCID: PMC333938
14. Guzder, S.N., **Kelley**, M.R. and Deutsch, W.A. (1991) *Drosophila* methyltransferase activity and the repair of alkylated DNA. *Mutation Research* 255:143153. PMID: 1717843
15. Grabowski, D.T., Carney, J.P. and **Kelley**, M.R. (1991) An adult male specific gene in *Drosophila*

containing the repetitive element Opa. *Biochem. Biophys. Acta* 1090:115118. PMID: 1883837

16. Grabowski, D.T., Deutsch, W.A., Derda, D. and **Kelley**, M.R. (1991) *Drosophila* AP3, a presumptive DNA repair protein, is homologous to human ribosomal protein PO. *Nucl. Acids Res.* 19(15):42974297. PMID: 1870984 PMCID: PMC328583
17. Grabowski, D.T., Pieper, R., Futscher, B.W., Deutsch, W.A., Erickson, L. and Kelley, M.R. (1992) Expression of ribosomal phosphoprotein PO is induced by antitumor agents and increased in Mer human tumor cell lines. *Carcinogenesis* 13(2):259-263. PMID: 1740017
18. Emanuele, N.V., Jurgens, J.K., Halloran, M.M., Tentler, J.J., Lawrence, A.M. and **Kelley**, M.R. (1992) The rat prolactin gene is expressed in brain tissue: Detection of normal and alternatively spliced prolactin mRNA. *Molecular Endocrinology* 6:35-42. PMID: 1738369
19. Emanuele, M.A., Emanuele, N.V., Halloran, M.M., Wallack, L. and **Kelley**, M.R. (1992) The effect of acute *in vivo* ethanol exposure on follicle stimulating hormone transcription and translation. *Alcoholism: Clin. Exp. Res.* 16:776-780. PMID: 1530142
20. Emanuele, M.A., Tentler, J.T., Kirsteins, L., Emanuele, N.V., Lawrence, A. and **Kelley**, M.R. (1992) The effect of "binge" ethanol exposure on growth hormone and prolactin gene expression and secretion. *Endocrinology* 131:2077-2082. PMID: 1330488
21. Wilson, D.M., Jurgens, J.K., Emanuele, N.V., Emanuele, M.A. and **Kelley**, M.R. (1992) Adult male rat brain prolactin is identical to pituitary prolactin: PCR cloning and sequencing of hypothalamic prolactin from intact and hypophysectomized adult male rats. *Endocrinology* 131:2488-2490. PMID: 1339346
22. **Kelley**, M.R., Jurgens, J.K., Tentler, J., Emanuele, N.V., Halloran, M.M. and Emanuele, M.A. (1993) Coupled reverse transcription-polymerase chain reaction (RT-PCR) technique is quantitative and rapid: Uses in alcohol research involving low abundance mRNA species. *Alcohol* 10:185-189. PMID: 7685170
23. Azad, N., LaPaglia, N., Abel, K., Jurgens, J., Kirsteins, L., Emanuele, N.V., **Kelley**, M.R., Lawrence, A.M. and Mohaghehpour, N. (1993) Immunoactivation enhances the concentration of luteinizing hormone-releasing hormone peptide and its gene expression in human peripheral T lymphocytes. *Endocrinology* 133:215-223. PMID: 8319570
24. Wilson III, D.M., Deutsch, W.A. and **Kelley**, M.R. (1993) Cloning of the *Drosophila* ribosomal protein S3: Another multifunctional ribosomal protein with AP endonuclease DNA repair activity. *Nucl. Acids Res.* 21(10):2516. PMID: 7685082 PMCID: PMC309559
25. Tentler, J.J., Emanuele, M.A., Paloyan, E., Hoffman, E., Emanuele, N., Lawrence, A.M. and **Kelley**, M.R. (1993) Ethanol affects growth hormone releasing factor (GRF) synthesis *in vivo*, but not *in vitro*. *Endocrine* 1(2):141-146.
26. Morgan, S.E., **Kelley**, M.R. and Pieper, R.O. (1993) The role of the carboxy-terminal tail in human O6-methylguanine DNA methyltransferase substrate specificity and temperature sensitivity. *J. Biol. Chem.* 268:19802-19809. PMID: 8366118
27. Azad, N., Uddin, S., LaPaglia, N., Kirsteins, L., Emanuele, N.V., Lawrence, A.M., and **Kelley**, M.R. (1993) Luteinizing hormone-releasing hormone (LHRH) in rat prostate: Characterization of LHRH peptide, mRNA expression and molecular processing of LHRH in intact and castrated male rats. *Endocrinology* 133:1252-1257. PMID: 8365367

28. Halloran, M.M., Emanuele, M.A., Draski, L., Tentler, J.J., Emanuele, N.V. and **Kelley**, M.R. (1993) Failure of ethanol to induce changes in gonadotropin gene expression in selectively bred ethanol-sensitive rats. *Endocrine Research* 19:317-329. PMID: 8306944
29. Wilson, T.M., Carney, J.P. and **Kelley**, M.R. (1994) Cloning of the multifunctional rat apurinic/apyrimidinic endonuclease (rAPEN)/redox factor from an immature T cell line. *Nucl. Acids Res.* 22:530-531. PMID: 7510394 PMCID: PMC523614
30. Srivastava, C.H., **Kelley**, M.R., Monts, B.S., Wilson, T.M., Breyer, P.R. and Pescovitz, O.H. (1994) Growth hormone-releasing hormone receptor mRNA is present in rat testis. *Endocrine* 2:607-610.
31. Uddin, S., Emanuele, M.A., Emanuele, N.V., Reda, D. and **Kelley**, M.R. (1994) The effect of *in vitro* ethanol exposure on luteinizing hormone and follicle stimulating hormone mRNA levels, content and secretion. *Endocrine Research* 20:201-217. PMID: 8055834
32. Wilson, D.M., III, Tentler, J.T., Carney, J.P., Wilson, T.M. and **Kelley**, M.R. (1994) Acute ethanol exposure suppresses the repair of O6-methylguanine DNA lesions in castrated adult male rats. *Alcoholism: Clin. Exp. Res.* 18:1267-1271. PMID: 7847618
33. Wilson III, D.M., Deutsch, W.A. and **Kelley**, M.R. (1994) *Drosophila* ribosomal protein S3 contains an activity that cleaves DNA at AP sites. *J. Biol. Chem.* 269:25359-25364. PMID: 7929231
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156. Fenil Shah, Nadia Atallah, Michelle Grimard, Chi Zhang, **Mark R. Kelley**, Melissa L. Fishel. Targeting mitochondrial metabolism in PDAC via blockade of the APE1/Ref-1 signaling cascade: using single-cell RNA sequencing and proteomic analyses to identify novel targets for combination drug therapies. Pancreatic Cancer: Advances in Science and Clinical Care Conference, Boston, MA, Sept. 21-24, 2018
157. **Mark R. Kelley** and Richard Messmann. Novel first-in-class small molecule targeting APE1/Ref-1 to prevent and treat chemotherapy-induced peripheral neuropathy (CIPN). Submitted for Palliative and Supportive Care in Oncology Symposium, San Diego, CA, Nov. 16-17, 2018

158. Cai Z, Kotzin JJ, Ramdas B, Chen S, Nelanuthala S, Palam LR, Pandey R, Mali RS, Liu Y, **Kelley MR**, Sandusky G, Mohseni M, Williams A, Henao-Mejia J, Kapur R. 1288 Downregulation of Morrbid in Tet2-Deficient Preleukemic Cells Overcomes Resistance to Inflammatory Stress and Mitigates Clonal Hematopoiesis. Oral Presentation at the 2018 American Society of Hematology Annual Meeting, San Diego, CA, December 1, 2018.
159. Shahda S, Lakhani N, O'Neil B, Rasco D, Wan J, Mosley A, Liu H, **Kelley MR**, Messmann R. A phase I study of the APE1 protein inhibitor APX3330 in patients with advanced solid tumors. 2019 ASCO Annual Meeting, Chicago, IL, June 1, 2019
160. Chu L, Anderson A, Landers M, Wang Y, **Kelley MR**, Messmann R. TC enumeration and characterization as a pharmacodynamic marker in the phase I clinical study of APX3330, an APE1/Ref-1 inhibitor, in patients with advanced solid tumors. 2019 ASCO Annual Meeting, Chicago, IL, June 1, 2019
161. **Kelley MR**, Shahda S, Lakhani N, O'Neil B, Chu L, Anderson A, Wan J, Mosley A, Liu H, Messmann R. A phase I study targeting the APE1/Ref-1 DNA repair-redox signaling protein with the APX3330 inhibitor. AACR-NCI-EORTC International Conference on Molecular Targets and Cancer Therapeutics. Boston, MA, October 26-30, 2019. Molecular Cancer Therapeutics December, 2019; 18(12); PR01. DOI: 10.1158/1535-7163.TARG-19-PR01
162. Fenil Shah, Olivia Babb, Chi Zhang, Silpa Gampala, Emily Zhang, Steven D Rhodes, Andrew R. Tee, Brian Calver, Ellie Rad, Verena Staedtke, Karen E Pollok, D. Wade Clapp, **Mark R. Kelley**, Melissa L. Fishel. Signaling through Ref-1 and STAT3 in soft tissue sarcoma (MPNST) and the effects of perturbing this pathway on tumor cell survival and gene expression. AACR-NCI-EORTC International Conference on Molecular Targets and Cancer Therapeutics. Boston, MA, October 26-30, 2019. Molecular Cancer Therapeutics December, 2019; 18(12); C017. DOI: 10.1158/1535-7163.TARG-19-C017
163. Ramdas B, Palam LR, Mali RS Cai Z, Pandey, R, **Kelley MR**, Zhang C, Kapur R. Combined heterozygous loss of Tet2 and Dnmt3a along with expression of Flt3ITD/WT results in Acute Myeloid Leukemia which responds to a combination of FLT3 inhibitor, APE1 inhibitor and Decitabine. 61st Annual ASH Meeting, Orlando, FL. Dec. 7-10, 2019.
164. Ashok Narasimhan, Xiaoling Zhong, Daenique H. A. Jengolley, Joshua R. Huot, Meijing Wang, Joseph E Rupert, Andrew R Young, Andrea Bonetto, Yunlong Liu, Leonidas G Koniaris, Melissa L. Fishel, **Mark R. Kelley**, Teresa A. Zimmers. Gemcitabine and nab-paclitaxel reduce tumor burden and preserve muscle and cardiac functions in murine model of PDAC cachexia. 2020 Virtual Cancer Cachexia Society Meeting. September 10-11, 2020.
165. Silpa Gampala, Fenil Shah, Xiaoyu Lu, Hye-ran Moon, George E. Sandusky, Emily Hulsey, Amber L. Mosley, Bamsoo Han, Chi Zhang, **Mark R. Kelley**, Melissa L. Fishel. Ref-1 redox function identified as mitochondrial metabolic regulator in pancreatic cancer cells but not in CAFs [abstract]. In: Proceedings of the AACR Virtual Special Conference on the Evolving Tumor Microenvironment in Cancer Progression: Mechanisms and Emerging Therapeutic Opportunities; in association with the Tumor Microenvironment (TME) Working Group; 2021 Jan 11-12. Philadelphia (PA): AACR; Cancer Res 2021;81(5 Suppl):Abstract nr PO025.
166. L Lachi-Silva, RE Stratford, **MR Kelley**, SK Quinney. Bridging population pharmacokinetic and physiologically based pharmacokinetic approaches to evaluate APX3330 disposition. ASCPT 2021 Meeting, Washington D.C. March 10-13, 2021.
167. Rachel A. Caston, Randy Wireman, Lee Armstrong, Silpa Gampala, Olivia Babb, Nayela Chowdhury, Zonera Hassan, Christian Schneeweis, Gunter Schneider, Melissa L. Fishel, **Mark R. Kelley**. Differential

sensitivity of mouse PDAC KrasG12D cells to Ref-1/APE1 redox signalling inhibitors: Role of NFkB as a primary target of Ref-1/APE1 in Kras driven pancreatic ductal adenocarcinoma. 2021 Virtual American Association for Cancer Research Meeting. April 9-14, 2021.

168. Silpa Gampala, Nayela Chowdhury, Olivia Babb, Rachel A. Caston, Randall S. Wireman, Hye-ran Moon, George Sandusky, Emily Hulse, Bumsoo Han, Millie M. Georgiadis, Sara K. Quinney, Andi R. Masters, James H. Wikel, **Mark R. Kelley**, Melissa L. Fishel. Deciphering mechanisms of Ref-1 signaling and its inhibition in aggressive tumor-stroma PDAC models. 2021 Virtual American Association for Cancer Research Meeting. April 9-14, 2021.

169. Larissa Lachi Silva, Nathan Lambert-Cheatham, Robert E. Stratford, Sara K. Quinney, Timothy W. Corson, **Mark R. Kelley**. Oral APX3330 treatment reduces L-CNV lesions in preclinical mouse model and confirms Phase 2 DR/DME clinical dose with sufficient distribution to human retina using PBPK modeling. ARVO 2021 Virtual Annual Meeting. May 1-7, 2021.

170. Michael Allingham, Eliot Lazar, Mitchell Brigell, Curtis J. Heisel, Jonah E. Yousif, Kavon Rahmani, **Mark R. Kelley**. APX3330, an oral drug in trial for DR and DME, demonstrated a favorable safety and tolerability profile in multiple phase 1 and 2 studies. 39th Annual ASRS Meeting. October 8-12, 2021.

171. Michael Allingham, Eliot Lazar, Mitchell Brigell, Curtis J. Heisel, Jonah E. Yousif, Kavon Rahmani, **Mark R. Kelley**. Favorable Safety and Tolerability Profile of Oral APX3330 Drives Dosing Strategy for Ongoing Phase 2 Trial for DR/DME. AAO 2021. November 12-15, 2021

172. Hartman, Gabriella D.; Muniyandi, Anbukkarasi; **Kelley, Mark R**; Corson, Timothy W. APE1/Ref-1 is overexpressed and colocalizes with neovascular tufts and hypoxic regions in the oxygen-induced retinopathy mouse model. ARVO 2022, Denver, Colorado. May 1-4, 2022.

173. Gabriella Alvarez, **Mark R. Kelley**. In Barrett's Epithelial Cells, APE1/Ref-1 is Required for Acidic Bile Salt- Induced VEGF Expression: A Potential Mechanism for Development of Sub- Squamous Intestinal Metaplasia in Barrett's Esophagus. DDW 2022. May 21-24, 2022.

174. Michael J. Allingham, Mitchell Brigell, Barbara Withers, Ajay Kolli, Kavon Rahmani, Mina Sooch, Eliot Lazar, Ronil Patel, **Mark R. Kelley**, Daniel Su, Peter K. Kaiser, David S. Boyer. Masked safety data from ZETA-1, an ongoing 24-week Phase 2 clinical trial of APX3330, an oral therapeutic being developed for the treatment of diabetic retinopathy.

175. Silpa Gampala, Olivia Babb, Nikkitha Umesh Ganesh, Steven D. Rhodes, Reza M. Saadatizadeh, Christine Pratilas, Jing-Ruey, Joannah Yeh, Karen E. Pollok, Wade D. Clapp, **Mark R. Kelley**, Chi Zhang, Melissa L. Fishel. Elucidating the mechanistic effect of targeting Ref-1 redox function on MPNST survival signaling using patient- derived xenografts. In: Proceedings of the American Association for Cancer Research Annual Meeting 2022; 2022 Apr 8-13. Philadelphia (PA): AACR; Cancer Res 2022;82(12_Suppl):Abstract nr 2009.

176. Mahmut Mijiti, Olivia Babb, Silpa Gampala, Randall Wireman, Millie M. Georgiadis, Melissa L. Fishel, **Mark R. Kelley**. Inhibition of Ref-1/APE1 redox activity with APX3330 enhances Ref-1/APE1 protein unfolded confirmation in human PDAC cells. In: Proceedings of the American Association of Cancer Research Annual Meeting 2022; April 8-13, 2022. Philadelphia (PA): AACR; Cancer Res 2022; 82(12_Suppl): Abstract nr 2366.

177. David S. Boyer, Mitch Brigell, Ajay Kolli, Kavon Rahmani, Audrey Lazar, Mina Sooch, Ronil Patel, Eliot Lazar, Jay Stuart Pepose, **Mark R. Kelley**. The safety of APX3330, an oral drug candidate for the treatment of diabetic eye disease, in the ongoing masked 24-week ZETA-1 Phase 2 clinical trial. ARVO 2022 Annual Meeting, Denver, CO. May 1-4, 2022.

178. Anbukkarasi Muniyandi, Gabriella D Hartman, Kristina Day, Xiaoping Qi, Michael Boulton, **Mark R Kelley**, Timothy William Corson. APE1/Ref-1 is highly expressed in murine laser-induced choroidal neovascularization and human neovascular age-related macular degeneration. ARVO 2022 Annual Meeting, Denver, CO. May 1-4, 2022.
179. Gabriella D Hartman, Anbukkarasi Muniyandi, **Mark R Kelley**, Timothy William Corson. APE1/Ref-1 is overexpressed and colocalizes with neovascular tufts and hypoxic regions in the oxygen-induced retinopathy mouse model. ARVO 2022 Annual Meeting, Denver, CO. May 1-4, 2022.
180. David Lally, Mitchell Brigell, Barbara Withers, Ajay Kolli, Kavon Rahmani, Mina Sookh, Eliot Lazar, Ronil Patel, **Mark R. Kelley**, David Boyer, Daniel Su, Peter Kaiser. Masked safety data from ZETA-1, an ongoing 24-week Phase 2 clinical trial of APX3330, an oral therapeutic being developed for the treatment of diabetic retinopathy. Retina World Congress 2022. May 12-15, 2022.
182. David Boyer, Mitchell Brigell, Barbara Withers, Ajay Kolli, Kavon Rahmani, Mina Sookh, Eliot Lazar, Ronil Patel, **Mark R Kelley**, Daniel Su, Peter Kaiser. Masked safety data from ZETA-1, an ongoing 24-week Phase 2 clinical trial of APX3330, an oral therapeutic being developed for the treatment of diabetic retinopathy. The Macula Society 45th Annual Anniversary Meeting. June 8-11, 2022.
183. Michael Allingham, Mitchell Brigell, Barbara Withers, Ajay Kolli, Kavon Rahmani, Mina Sookh, Eliot Lazar, Ronil Patel, **Mark R Kelley**, Daniel Su, Peter Kaiser, David Boyer. Masked safety data from ZETA-1, an ongoing 24-week Phase 2 clinical trial of APX3330, an oral therapeutic being developed for the treatment of diabetic retinopathy. 2022 American Society of Retina Specialists (ASRS) 40th Annual Meeting. July 12-17, 2022.
184. Douglas Devries, Mitch Brigell, Daniel Su, Barbara Withers, Mina Sookh, Ronil Patel, Eliot Lazar, Jay Pepose, **Mark Kelley**, Peter Kaiser, David Boyer. Masked safety of oral drug candidate APX3330 for the treatment of diabetic retinopathy in an ongoing ZETA-1 Phase 2b clinical trial. Academy 2022 San Diego, American Academy of Optometry (AAO). Oct. 26-29, 2022.
185. Jay Pepose, **Mark Kelley**, Ronil Patel, Louis Haddad, Audrey Lazar, Mina Sookh, Mitchell Brigell, Audrey Lazar. Early Intervention for Diabetic Retinopathy (DR); Safety and Efficacy of novel, oral therapeutic APX3330 from ZETA-1 Phase 2 Trial. The Association for Research in Vision and Ophthalmology Annual Meeting (ARVO). April 23-27, 2023.
186. Christina Weng, Mitchell Brigell, Barbara Withers, Mina Sookh, Audrey Lazar, **Mark R Kelley**, Inder Paul Singh, Louis Haddad, Jay Pepose, Daniel Su. Early Intervention for Diabetic Retinopathy (DR); Safety and Efficacy of novel, oral therapeutic APX3330 from ZETA-1 Phase 2 Trial. The American Society of Cataract and Refractive Surgery (ASCRS). May 5-8, 2023.
187. Rhonda Souza, **Mark R. Kelley**. In barrett's epithelial cells, APE1/REF-1 redox function mediates epithelial- mesenchymal transition induced by acidic bile salt solutions: A novel target for preventing sub-squamous intestinal metaplasia development in barrett's esophagus. Digestive Disease Week (DDW) 2023. May 6-9, 2023.

TEACHING AND SERVICE TO STUDENTS

INTERNS/UNDERGRADUATES

Hilary White, Indiana University, summer 2001

Meredith Hass, DePauw University, summer 2002
Cathy Griffith, Ball State University, summer 2003
Tiffany Ballard, DePauw University, summer 2004
Kathryn Hurley, Vanderbilt, summer 2006
Sarita Tony, IUPUI, summer 2007
Amanda Meyer, DePauw University, Jan-Aug 2009
Amy Dreischerf, summer 2010
John Zhang, summer 2011
Aubrie Carroll, Indiana University, summer 2013, 2014
Christopher Below, 2015-16
Robert Berwanger, DePauw University, summer 2018
Emma Arndt, DePauw University, summer 2019
Maya Krishan, MSTP student, summer 2020
Eyram Kepanu, MD student, summer 2021
Megan Boner, Ulster Scholar, September 2021- current

GRADUATE STUDENTS

Graduated:

Dave Grabowski---Graduated June, 1992 (5 years) ----- Ph.D., Mol. & Cell. Biochem., Loyola Univ.

- Schmitt Scholar
- Professor, St. Mary's of the Woods College, Department of Science and Mathematics, Terre Haute, IN.

David M. Wilson III----Graduated August, 1993 (4 years) ----- Ph.D., Mol. Biol. Program, Loyola Univ.

- Schmitt Scholar, post doctorate in Dr. Bruce Demple's laboratory, Harvard University, Boston, MA.
- Professor of Neurosciences at Biomedical Research Institute, Hasselt University, Diepenbeek Belgium

Margaret Halloran----Graduated September, 1993 (4 years) ----- Ph.D, Mol. & Cell. Biochem., Loyola Univ.

- Awarded first ever NIH predoctoral fellow at Loyola

Jim Carney-----Graduated October, 1994 (4 years) ----- Ph.D. Mol. & Cell. Biochem./Pediatrics, Indiana Univ.

- Senior Research Scientist, Battelle-Edgewood Chemical Biological Center , Aberdeen Proving Ground, MD 21010

John Tentler----Graduated November, 1994 (4 years) ----- Ph.D., Mol. & Cell. Biochem., Loyola Univ.

- Associate Professor, University of Colorado Denver, School of Medicine, Division of Medical Oncology

Teresa Wilson----Graduated November, 1995 (4 years) ----- Ph.D., Mol. Biology Program, Loyola University Medical School and Department of Pediatrics, Indiana University Medical School

W. Kent Hansen-----Graduated May, 1999 ----- MD./Ph.D., Dept. of Biochemistry and Molecular Biology, Indiana University School of Medicine

- Currently Radiologist for Northwest Radiology Network, IN and Chariman of Diagnostic Medicine for St. Vincent Hospital and Health Services, Indianapolis, IN

Timothy J. Roth---- Graduated Summer, 2000 ----- M.S., Dept. of Physiology and Biophysics, Indiana University School of Medicine

- Urologist, Comprehensive Urologic Care, Elgin, IL

Melissa Limp-Foster Fishel ----- Graduated March, 2001 ----- Ph.D., Dept. of Biochemistry and Molecular Biology, Indiana University Medical School

Mark R. Kelley, Ph.D.

- Recipient of a DOD breast cancer predoctoral fellowship; March 2000-graduation.
- Postdoctoral Fellow in the laboratory of Dr. Eileen Dolan, University of Chicago
- Assistant Professor, tenure track, Department of Pediatrics, IU School of Medicine

Maria D'Souza ----- Graduated 2002 ---- M.S., Dept. of Physiology and Biophysics, Indiana University School of Medicine

- Internal Medicine physician at Metro Health Medical Center Cleveland, OH

Mikael Rinne----- Graduated 2003, ---- MD/Ph.D., Dept. of Biochemistry and Molecular Biology, Indiana University School of Medicine

- Recipient of a Susan G. Komen predoctoral fellowship; Jan 2001 (declined)
- Recipient of a DOD breast cancer predoctoral fellowship; May 2002- 2003
- Senior Clinical Program Leader, Novartis Institutes for BioMedical Research (NIBR), Cambridge, MA

Tia Harvey---- Graduated 2008, --- Ph.D., Indiana University School of Medicine

Aditi Bapat ---- Graduated 2009 --- Ph.D., Dept of Biochemistry and Molecular Biology, IU School of Medicine

- Assistant Lab Director, Cyrex Laboratories, Scottsdale, AZ

Derek Logsdon – Graduated 2017 ---- Ph.D., Dept of Pharmacology & Toxicology, IU School of Medicine

- Publication Strategy and Execution Consultant, Neuroscience Group at Eli Lilly and Company, Indianapolis, IN

Jack McGeown – Graduated 2018 ---- M.S., Ulster Master Science student

- PhD Student at The University of Edinburgh, Edinburgh, Scotland, United Kingdom

Lee Armstrong – Graduated 2020 --- M.S. Ulster Master Science student

- PhD Researcher, Biomedical Science at Ulster University, Coleraine, Northern Ireland, United Kingdom

Megan Boner – Graduated 2022 --- M.S. Ulster Master Science student

- PhD Researcher, Biomedical Science at Ulster University, Coleraine, Northern Ireland, United Kingdom

Eyram Kepanu – MD student – 2022-2023

- MedStar program – year of research during medical school

POST-DOCTORATES

Dr. Dennis Derda -- postdoctorate, 1988 -1991

Dr. Shahab Uddin -- postdoctorate, 1991 - 1993.

- Research Asst. Professor, Dept. of Oncology, University of Chicago Medical School
- Senior Scientist, King Faisal Specialist Hospital & Research Center, Riyadh Saudi Arabia
- Currently a Senior Scientist and Head of Pathophysiology core at HMC Translational Research Institute, Hamad Medical Corporation, Doha, QA

Dr. Yi Xu -- postdoctorate, 1994 -1999

- NIH postdoctoral fellow, NCRR NIH postdoctorate, 1996--1999 current
- Currently a Senior Research Associate, Maternal-Fetal Immunobiology Unit, Perinatology Research Branch/NICHD, Wayne State University, Detroit, MI

Dr. Meihua Luo – postdoctorate, 2000 – 2005

- Currently a Research Scientist II, Bristol Myers Squibb, Redwood City, California

Dr. Dong Wang – postdoctorate, 2001 – 2003

- Director and Professor, Cancer Center, Daping Hospital, Third Military Medical U., P.R. China

Dr. David Caldwell – postdoctorate, 2001 – 2004

- DWA Healthcare Communications Group, Carmel, IN

Dr. Yanlin Jiang – postdoctorate, 2004 – 2013

- Research Associate V (II), Department of Nephrology, University of Alabama at Birmingham, Birmingham, England

Dr. Hongdi Meng – postdoctorate, 2009 – 2011

- Private business

Dr. Huiwen Cheng – postdoctorate, 2013- 2014

- Software Engineer, Vision Metrology, Intel Corporation

Dr. Fenil Shah – postdoctorate, 2014 – 2019

- Research and Development Scientist, Symvivo Corporation, Burnaby, British Columbia, Canada

David McIlwain – postdoctorate 2017– PhD Dept. Pharmacology & Toxicology, IU School of Medicine

- Publication Strategy and Executive Consultant, Global Scientific Communications

Rachel Caston – postdoctorate, 2019 – 2021

Mahmut Mijit – postdoctorate, 2020- present

FELLOWS

Dr. Ted Kremer -- Pulmonary Fellow, 2002- 2004.

- Director, Pediatric Sleep Medicine, and Chief for Division of Pediatric Pulmonary Medicine, Worcester, MA

Dr. Carlo Vascotto – Fulbright Scholar Fellowship, 2010

- Assistant Professor, Molecular Biology Section, University of Udine, Italy

Dr. Safi Shahda – Hematology / Oncology Fellow, 2011 – 2012

- Oncology physician specialist , Eli Lilly

DISSERTATION COMMITTEES

1988, 6; 1989: 9; 1990, 14; 1991, 18; 1992, 16; 1993, 11; 1994, 7; 1995, 6; 1996, 5; 1997, 5; 1998, 4; 1999, 4; 2000, 4; 2001, 3; 2002, 2; 2003, 2; 2004, 4; 2005, 1; 2006, 1; 2007, 3; 2008, 3; 2009, 5; 2010, 2; 2011, 1; 2012, 2; 2013, 3; 2014, 3; 2015, 3; 2016, 3; 2017, 3; 2018, 3; 2019, 2; 2020, 2; 2021, 2; 2022, 2.

TEACHING-previous

Fundamental Molecular Biology G865 ---- Three lectures on DNA repair. Department of Biochemistry and Molecular Biology; graduate students.

Advanced DNA Repair G837---- Three lectures/discussion sections on DNA base excision repair. Department of Microbiology and Immunology; graduate students

Biochemical and Molecular Gene Expression Techniques---- 3 hours per month for 4 months. Department of Pediatrics, Pediatric Endocrinology, Wells Center for Pediatric Research.

Medical Biochemistry Laboratory B503---- Problem based learning, 4 hrs. per week for 10 weeks for a total of 40 contact hours. Department of Biochemistry and Molecular Biology.

Medical Biochemistry B800----- Two lectures on DNA replication, repair and carcinogenesis. Department of Biochemistry and Molecular Biology; medical students.

SERVICE ACTIVITIES

INSTITUTIONAL SERVICE - Current

Cancer Center Member	1994 -- present
Experimental Developmental Therapeutics	1994 -- present
Associate Director of Basic Science Research, IUSCCC	2005 -- present
IUSCCC ACS Institutional Grant PI	2011 -- present
Institutional Resource Oversight Committee (IROC)	2019 -- present

IUSM/IUSCCC Core Advisory Committees

IUSCCC Angio BioCore, Member	2014 -- present
IUSCCC Cancer Bioinformatics Core, Member	2016 -- present
IUSCCC Clinical Pharmacology Analytical Core, Chair	2006 -- present
IUSCCC Flow Cytometry Advisory Committee, Member	2006 -- present
IUSCCC In Vivo Therapeutics Core, Member	2006 -- present
IUSCCC Multiplex Analysis Core, Member	2014 -- present
IUSCCC Translational Research Core, co-Chair	2019 -- present
IUSM Genomics Core Advisory Committee, Member	2017 -- present
IUSM Proteomics Core, Member	2017 -- present

Centers of Excellence in Molecular Hematology Advisory Committee	2010 -- present
IU School of Medicine Scientific Advisory Board member	2010 -- present
Center for Personalized Medicine, Scientific Advisory Board member	2011 -- present
Concepts to Clinic Project Development Team, CTSI	2013 -- present
PPG Advisory Committee Member; Zimmers PPG on cachexia	2015 -- present
Mentoring Committee: Dr. Tim Lautenschlaeger, Rad Onc	2017 -- present
Mentoring Committee: Dr. Lei Li, Dept Chemistry & Chem Biol	2017 -- present
Indiana University Conflict of Interest Committee, Member	2019 -- present
Indiana University Conflict of Interest Committee, Chair	2020 -- present
co-Director, Cancer Drug Discovery and Development program, IUSCCC	2020 -- present
Member, CTSI Preclinical Innovation "Think-Tank" Program, IUSM	2021 -- present

Completed

Cancer Biology Education and Training Committee	1994 -- 1999
Cancer Biology Education and Training Committee: Subcommittee on implementation of a training program	1994 -- 1999

Associate Director, Wells Center for Pediatric Research	1995 – 2017
Dept of Pediatrics Wells Center Internal Advisory Committee	1995 -- 2015
Dept of Pediatrics Wells Center Faculty Mentor Panel	2000 -- 2015
Dept. of Pediatrics Technology Transfer Liaison	1996 -- 2012
Pediatric/Adult Scientific Review Committee	1996 -- 2011
Bowman Award Committee member	1998
Institutional Biosafety Committee	1995 -- 2002
Chairman, Institutional Biosafety Committee	1999 – 2002
Alternate member of IBC	2002 -- 2012
Co-leader Pediatric Oncology Group; IU Cancer Center	2000 -- 2001
American Cancer Society IU Grant Committee, Member	2000 -- 2006
Search and Screen Committee for Director of Neuroscience Institute, Member	2001 -- 2002
Biomedical Research Committee, Member	2001 – 2003
Search and Screen Committee for Chairman of the Dept of Pharmacology and Toxicology, Member	2001 -- 2002
NIH Chemical Pathology Study Section Member (now called Cancer Etiology)	2002 - 2006
Molecular Medicine in Action (MMIA)	
Co-leader	2002 -- 2009
Director	2002 – 2009
Co-leader Experimental Therapeutics Group; IU Cancer Center	2002 -- 2006
Epidemiology Search Committee, Member	2002 – 2004
Information Resources and Educational Technology Advisory Committee, Member	2002 -- 2010
Salary Grievance Committee, Member	2003
IUPUI Research Affairs Standing Committee, Member	2003 – 2005
IUPUI Internal Grants Proposal Review Committee (IGPRC)	2003 -- 2005
"Cancer" target team of the Central Indiana Life Sciences Initiative (CILSI) (Chair; Gary Nicholson, Oncology Business Director Eli Lilly Co, Co-Chairs, Steve Williams IUCC and Rick Borch, Purdue CC)	2003 -- 2004
IUSOM Core Working Group, Member	2003 -- 2004
Asst Research Prof Advisory Committee; Dr. Karen Pollok	2003 -- 2005
Paul & Carole Stark Neurosciences Research Institute, Member	2003 – 2007
Chair, Pediatrics Hem/Onc Faculty Search Committee	2003 -- 2011
Mentoring committee; Dr. Tony Firulli	2004 – 2009
R4 Wells Expansion Planning Committee	2004 -- 2007
Service Activities Task Force, Member and Chair	2004
NIH Cancer Etiology Study Section Chair	2004 -- 2006
Asst Professor of Pediatrics Advisory Committee; Dr. Karen Pollok	2005 -- 2012
IUSOM Zebrafish Core Advisory Committee, Member	2005 -- 2007
IFC Research Affairs Committee	2006 -- 2010
IUSOM Proteomics Core Advisory Committee, Member	2006 – 2008
IUSOM Core Oversight Committee, Member	2006 – 2010
IUSOM Chemical Genomics Advisory Committee, Chair	2007 – 2009
Mentoring Committee; Dr. Sean Mooney, Bioinformatics	2007 -- 2009
Mentoring committee: Kai-Ming Chou	2007 -- 2010
Mentoring committee; Lindsey Mayo	2008 -- 2013
IUSCC Search Committee for New Director	2008 – 2009
IURTC Board of Directors member and Executive Committee Member	2008 -- 2010

Investigative Toxicology Core Advisory Committee	2009 – 2011
CTSI Core Oversight Committee	2009 – 2011
IUSOM Radiation Oncology Promotion and Tenure Committee, Chair	2009 – 2010
OSU-IU Center for Cancer Systems Biology Advisory Board	2009 -- 2012
IUSOM Hematology / Oncology Chief Search Committee	2010
Myles Brand Chair Search and Screen Committee	2010 -- 2012
IUSCC Lung Cancer Targets and Therapy P01 Steering Committee	2010 -- 2012
IUSOM Director of Computational Biology and Bioinformatics Search and Screen Committee, Member	2010 -- 2012
Breast Cancer Faculty Search and Screen Committee	2011 – 2012
Epidemiology Search Committee	2011 – 2012
Post Audit Review Taskforce	2011 – 2012
IUSOM Chemical Biology Faculty Search Committee	2012
Efroymsen Chair Search	2012 – 2013
Research Support Funds Grant Review Committee, Member	2005 -- 2013
IUSOM Biological Microscopy Advisory Committee, Member	2005 – 2014
External Advisory Board member, P01 grant.	
Winship Cancer Institute of Emory University, Atlanta, Georgia,	2014 – 2016
IUSCC Therapeutic Validation Core Advisory Committee, Member	2010 – 2015
Molecular Medicine in Action (MMIA), Speaker	2010 -- 2017
Molecular Medicine in Action for Teaching Professionals (MMIAII)	2009 – 2017
Associate Director of the IU Pancreatic Cancer Signature Center	2011 -- 2018
Mentoring Committee: Dr. Rajesh Khanna, Department of Pharmacology and Toxicology	2012 – 2016
IUSCC, Equipment Committee, Chair	2012 -- 2015
IUSCC Center for Chemical Biology and Drug Development, Co-chair	2012 – 2016
Member, Search Committee for co-Director of the Harper Cancer Research Institute	2013 -- 2014
IUSM, Cooperative Hematology Specialized Core Center, U54 Internal Advisory Committee, Member	2014 -- 2016
PPG Advisory Committee Member; Roodman and Guise PPG on bone metastasis	2014 -- 2016
Mentoring Committee: Dr. Jesus Delgado-Calle, Anat/Cell Biol	2017 – 2020
IUSM Transgenic and Knockout Mouse Core , Member	2005 – 2020
Mentoring Committee, Dr. Tao Lu, Dept. Pharm & Tox	2011 -- 2022
Co-leader EDT program, IUSCC	2020 – 2022

COMMUNITY SERVICE

Member of the DePauw University Science and Technology Visiting Committee	1999 -- 2001
Member of the DePauw University Science and Technology Board of Advisors	2001 – 2005
Perry Meridian High School Class Tour and presentation, April 27, 2000	
High School Student Class Discussion of Cancer; March 5, 2001	
Presentation for the IUPUI high school student recruitment day; April 27, 2001	
Presentation and tour for High school students; March 22, 2002	
Presentation and tour for high school students; March 26, 2002	
Presentation for the IUPUI high school student recruitment day; April 18, 2002	
Tour and presentation for Diane McKnight senior high school students; Oct. 16, 2003	
Tour of IUSM and Wells Center for MBA students from the Kelley and Krannert schools/Purdue & IU; Oct 22, 2004	
Facility tour and roundtable science discussion for Crawfordsville High School Students, Oct 30, 2008	
Tour of Wells Center for High School Teachers as part of a national conference; February 6, 2009	

Facility tour and roundtable science discussion for Crawfordsville High School Students, Nov 2, 2009
RCF / Wells Center Event presentation for donors, April 27, 2010
RCF / Wells Center Event presentation for major donor, July 22, 2010
RCF / Wells Center presentation to RCF officers, March 8, 2011
RCF / Wells Center presentation to Jeff Gordon Foundation, July 28, 2011
RCF/ Wells Center presentation with Jeff Gordon Foundation, July 27, 2012
RCF A Night of Hope presentation and reception, Fort Wayne, IN, April 25, 2013
Huntington Chamber of Commerce luncheon presentation, Roanoke, IN, April 25, 2013
RCF / Wells Center Research presentation for Senator Joe Donnelly, Riley Hospital, Sept. 5, 2013
American Cancer Society Cancer Action Network presentation for major donors, Sept 7, 2013
RCF / Wells Center Event with Cook Medical Leadership, March 12, 2014
RCF IU Dance Marathon committee lunch presentation, April 11, 2014
ACS PanCan Event presentation for major donors, September 6, 2014
RCF / Kids Caring Sharing (KCS) Board presentation, September 22, 2014
RCF / Wells Center presentation for Purdue Dance Marathon Education Night, November 5, 2014
RCF / Wells Center presentation for Purdue Dance Marathon, November 22, 2014
RCF / Wells Center presentation for Tom and Julie Wood Family Foundation meeting, December 10, 2014
RCF / Wells Center presentation for Fraternal Order of Eagles "Eagle Riders meeting, January 17, 2015
RCF / Wells Center presentation for IU Dance Marathon alumni and advisors meeting, January 24, 2015
RCF / Wells Center presentation for Molecular Medicine In Action symposium, March 8, 2015
American Cancer Society Tom Wood Gala, May 14, 2015
Purdue University Pillars of Excellence in the Life Science grant reviewer, July 30, 2015
RCF / Wells Center presentation for the Riley Society Advisory Committee meeting, August 6, 2015
Research Gives Hope Riley Society Reception presentation, December 9, 2015
RCF Purdue Dance Marathon committee meeting presentation, April 5, 2016
IUSCC Chuck Strong Event presentation, April 21, 2016
ACS Relay for Life Just Imagine interview, April 21, 2016
ACS Relay for Life Volunteer discussion, May 9, 2016
IUSCC Corporate Leadership Breakfast presentation, June 30, 2016
IUSCC Leadership Retreat presentation, August 20, 2016
IUSCC Chuckstrong Sponsor Luncheon presentation, August 25, 2016
RCF / Wells Center St. Baldrick's Foundation Luncheon and Lab Tour, September 29, 2016
RCF/ Wells Center Kids Caring Sharing Board presentation, October 14, 2016
IUSCC Interview with Debby Knox (CBS4), October 24, 2016
RCF/ Wells Center Purdue University Dance Marathon Executive Board Lab Tour, January 14, 2017
RCF/ Wells Center Riley U: Research/Clinical Updates presentation, March 14, 2017
IUSCC Interview with Beth Vaughn (WRTV6), September 7, 2017
RCF/ Wells Center Donor Night, October 12, 2017
RCF/DePauw University Dance Marathon, November 18, 2017
RDF/DePauw University Dance Marathon, December 1, 2018
ACS Presentation to Leadership Conference, February 1, 2020
IU Simon CCC Education Programs – vSRP + vFSP, July 2, 2020

NATIONAL & INTERNATIONAL REVIEW COMMITTEES

Site visit member for a National Cancer Institute (NCI) site visit concerning a program project studying colon cancer treatment. Oct. 22-24, 1995, Case Western Reserve University, Cleveland, OH
Site visit member for a National Cancer Institute (NCI) reverse-site visit, Washington, D.C. Oct. 20-21, 1996.
National VA Medical Grant Reviewer – Sept. 1996.
Univ. of Massachusetts, Worcester, MA External Grant Reviewer – Sept. 1996.
Site visit member for a General Clinical Research Center, Cornell University Medical School, New York, NY

March 25-27, 1997

External Grant Reviewer, NIEHS Center, Univ. of Texas Medical School, Galveston, TX.

Site visit member for a General Clinical Research Center, Cornell University Medical School, New York, NY

March 23-25, 1998

1998 Breast Cancer Research Program Grant Reviewer, United States Army Medical Research and Material Command, Norfolk, VA September 26-28, 1998

NIH Radiation Study Section; Ad hoc reviewer, Oct. 20-22, 1999

National VA Medical Grant Reviewer – Jan., 2000.

External advisor, PPG grant; “Molecular Origin of Cancer: Catechol Estrogen-3,4-Quinones”, Eppley Institute for Research in Cancer, University of Nebraska Cancer Center, Omaha, Nebraska -- 2000 -2005.

National VA Medical Grant Reviewer – Feb., 2001.

Pathology B Study Ad hoc Section Reviewer – March, 2001

Chemical Pathology Ad hoc Study Section Reviewer—June, 2001

Chemical Pathology Study Section Reviewer – February, 2002

Chairperson, Center for Scientific Review Special Emphasis Panel – April 04, 2002.

External reviewer for the Molecular & Cellular Medicine Board Review of the MRC Radiation and Genome Stability Unit (Director: Dr. Dudley Goodhead), Oxford, UK. – April 8, 2002.

Center for Scientific Review Special Emphasis Panel – July 23, 2002.

National Cancer Institute Special Emphasis Panel; Prevention Research and Epidemiology, March 18-20, 2003

AIRC (Associazione Italiana per la Ricerca sul Cancro) grant reviewer; National grant reviews for Italian bioscience; March 2003.

National Cancer Institute Special Emphasis Panel; Prevention Research and Epidemiology, July 28-30, 2003

Chemical Pathology Study Section Member -- July 1, 2002 -- 2003

Cancer Etiology Study Section Member – July 1, 2003 – 2006

Cancer Etiology Study Section Chairperson – July 1, 2004 – 2006

ZRG1 ONC-C (02) Special Emphasis Panel, chairperson – March 9, 2005

ZRG1 ONC Special Emphasis Panel – July 21, 2004

Quinquennial Review of Dr. Tom Lindahl, Cancer Research UK, London Research Institute – Oct, 2005

Cancer Research-UK Clinical Research Training fellowship applications – April, 2006

Future Proposals for the Medical Research Council (MRC) Radiation and Genome Stability Unit (RAGSU)- May 2006

Cancer Etiology Study Section – February 2007.

External reviewer for OHSU CROET (Center for Research on Occupational and Environmental Toxicology) – September 19-21, 2007

NCI cancer center site visit; Minnesota Cancer Center; June 18-20, 2008

NCI Parent Committee; August 7-8, 2008.

NCI review panel for T32 training grant and K99/R00 career development award mechanisms; Sept. 29-Oct.1, 2008

NCI review panel for EDT Competing Revision Grants; August 20, 2009

NCI Molecular Oncology PO1 Grant Review Session, June 3 – 5, 2009

NIH NCI-F Review Meeting, October 4 – 6, 2009

NIH Special Emphasis Panel Grant Review, October 29, 2009.

NCI Discovery and Development, Program Project Grant reviews, Feb 2-3, 2010.

NIH R01 Grant Review Committee, Chair, May 17, 2010

NCI Initial Review Group, Subcommittee F Manpower and Training, July 1, 2010 – June 30, 2013.

NCI Drug Discovery and Imaging Program Project Review, Jan 25 – 26, 2011.

Health Research Board (Ireland) review of Health Research Awards, January 2011.

Training & Career Development Board, Career Establishment Award in Cancer Research (UK) Reviewer, January 2011.

NCI-F Grant Review Committee, February 22-23, Reviewer, 2011

NCI-F Grant Review Committee, June 27-29, Reviewer, 2011

NCI-F Grant Review Special Emphasis Panel (Training Grants I), Chair, November 5, 2012

NCI-F Grant Review Special Emphasis Panel (Training Grants II), Chair, November 5, 2012
NCI-F Grant Review Special Emphasis Panel: Cancer Health Disparities/Diversity in Basic Cancer Research, November 12 – 13, 2012
NCI cancer center site visit; Einstein Cancer Center; January 9-11, 2013
NCI-F Grant Review Special Emphasis Panel: Cancer Health Disparities/Diversity in Basic Cancer Research, March 18-19, 2013
NCI cancer center site visit; Masonic Cancer Center, MN; June 11-13, 2013
NCI cancer center site visit; St Jude Children Cancer Center, June 18-20, 2013
NCI Grant Review Special Emphasis Panel –R33 (RFA-CA-13-002), July 17, 2013
NCI cancer center site visit; UC San Diego Moores Cancer Center, CA; October 29-31, 2013
NCI-R(55) Cancer Health Disparities/Diversity in Basic Cancer Research Study Section – Member, November 18, 2013
NCI Omnibus Initiative Review Committee, March 19-20, 2014
NCI P01 Special Emphasis Panel III, October 2-3, 2014.
NCI R21/R03 Omnibus Study Section, November 11-12, 2014
NIH Cancer Health Disparities/Diversity in Basic Cancer Research Study Section - Member, December 8-9, 2014
NCI R21/R03 Omnibus Study Section, March 16-17, 2015
NIH Cancer Health Disparities/Diversity in Basic Cancer Research Study Section - Member, April 13-14, 2015
NIH/NCI Program Project (P01) Special Emphasis Panel, June 8-10, 2015
NIH/NCI Special Emphasis Panel/Scientific Review Group, November 12-13, 2015
NIH/NCI Special Emphasis Panel/Scientific Review Group- B, November 12-13, 2015
Florida Department of Health's Biomedical Research Programs grant reviewer, December 16, 2015
NIH/NCI Chemo/Dietary Prevention Study Section – Member, February 25, 2016
NIH/NCI R21/R03 Cancer Drug Development, Omnibus SEP-12, March 15, 2016
NIH F31 Workforce Diversity Predoctoral Fellowship Study Section OBT-A, April 5, 2016
NIH F31 Workforce Diversity Predoctoral Fellowship Study Section OBT-J, April 5, 2016
NIH SRO Cancer Health Disparity/Workforce Diversity Review Group, April 11-12, 2016
NIH BMCT Study Section, June 9-10, 2016
NIH R15 Special Emphasis Panel Review Study Section ZRG1 OTC-A (80), July 22, 2016
NIH R15 Special Emphasis Panel Review Study Section ZRG1 OTC-A (80), November 30, 2016
NIH/NCI CDP Panel Review Study Section, February 23-24, 2017
NIH/NCI Provocative Questions R01 and R21 Grant Review, Co-Chair, March 6, 2017
NIH/CSR R15 Special Emphasis Panel Review Study Section ZRG1 OTC-A (80), July 11, 2017
NIH/CSR Basic Mechanisms of Cancer Therapeutics (BMCT) Study Section, September 18-19, 2017
(Permanent member of BMCT: 2017 – 2019)
NIH/CSR Basic Mechanisms of Cancer Therapeutics (BMCT) Study Section, February 5-6, 2018
NIH/CSR Basic Mechanisms of Cancer Therapeutics (BMCT) Study Section, June 11-12, 2018
NIH/CSR Mechanisms of Cancer Therapeutics (MCT1) Study Section, October 11-12, 2018
NIH/CSR A Special Emphasis Panel Review Study Section ZRG1 IFCN-N-02SRO, November 27, 2018
NIH/CSR A Special Emphasis Panel Review Study Section ZRG1 OTC-A (80), November 28, 2018
NIH R15 Special Emphasis Panel Review Study Section ZRG1 OTC-A (80), May 22, 2019
NIH MCT Study Section, June 6-7, 2019
NCI/NCI R21/R03 Clinical and Translational, Omnibus Study Section, July 8-9, 2019
NIH R15 Study Section, November 25, 2019
NCI Review Meeting R21/R03, ZCA1-SRB-1-J1, October 29, 2020
NIH MCT 1 Study Section, November, 2021
NIEHS Internal Site visit review team, April, 2022

