

Lu Cai, M.D., Ph.D.

Baxter I, Rm: 304F
570 South Preston Street
Louisville, KY, 40202

Phone: (502) 852-2214 (O)/852-2631 (Lab)

Fax: (502) 852-5634

lu.cai@louisville.edu or L0cai001@louisville.edu

Website: <https://louisville.edu/medicine/departments/pediatrics/divisions/pri>
<https://louisville.edu/bucksforbrains/faculty/lu-cai.html>

EDUCATION

9/1983 M.D. in General Medicine, Norman Bethune University of Medical Sciences, Changchun, China

9/1986 M.Sc. in Radiation Genetics, Norman Bethune University of Medical Sciences, Changchun,
China

9/1990 Ph.D. in Radiation Medicine, Norman Bethune University of Medical Sciences, Changchun,
China

ACADEMIC APPOINTMENTS

10/1990 – 7/1993 Teaching and Research Associate
Radiation Medicine, Norman Bethune University of Medical Sciences
Changchun, China [It was merged with other six universities to be named as Jilin University
in 2000]

8/1993 – 12/1994 Postdoctoral Fellow
Department of Pathology
University of Western Ontario
London, Canada

1/1995 – 6/1996 Postdoctoral Fellow
Department of Pharmacology and Therapeutics
McGill University
Montreal, Canada

7/1996 – 10/1999 Research Associate
Department of Pathology
University of Western Ontario
London, Canada

11/1999–3/2001 Research Associate
Department of Medicine
University of Louisville
Louisville, USA

4/2001–3/2004 Assistant Professor (Term-track)
Department of Medicine
University of Louisville
Louisville, USA

4/2004 – 6/2007	Assistant Professor (Tenure-track) Department of Medicine University of Louisville Louisville, USA
4/2007 – 12/2008	Associate Professor (Tenure-track) [Primary appointment] Department of Medicine University of Louisville Louisville, USA
4/2007 – 6/2011	Associate Professor (Tenure-track) [Associate appointment] Department of Pharmacology and Toxicology University of Louisville Louisville, USA
4/2007 – 03/2011	Associate Professor (Tenure-track) [Joint] Department of Radiation Oncology University of Louisville Louisville, USA
1/2009 – 03/2011	Associate Professor (Tenure-track) [Primary] Department of Pediatrics University of Louisville Louisville, USA
04/2011 – 06/2013	Associate Professor (Tenured) [Primary] Department of Pediatrics University of Louisville Louisville, USA
04/2011 – 06/2013	Associate Professor (Tenured) [Joint] Department of Radiation Oncology University of Louisville Louisville, USA
04/2011 – 06/2013	Associate Professor (Tenure-track) [Associate] Department of Pharmacology and Toxicology University of Louisville Louisville, USA
05/2013 – 12/2016	Director of Kosair Children’s Hospital Research Institute (KCHRI) Department of Pediatrics, University of Louisville School of Medicine Louisville, USA
01/2017 - Present	Director of Pediatric Research Institute (PRI, renamed from KCHRI) Department of Pediatrics, University of Louisville School of Medicine Louisville, USA
05/2013 – Present	Children’s Hospital Foundation Chair for Pediatric Research University of Louisville School of Medicine

	Louisville, USA
07/2013 – Present	Professor (Tenured) [Primary appointment] Department of Pediatrics University of Louisville Louisville, USA
07/2013 – Present	Professor (Tenured) [Joined] Departments of Radiation Oncology, Pharmacology & Toxicology University of Louisville Louisville, USA
07/2013 – Present	Professor (Tenured) [Associate] Department of Pharmacology and Toxicology University of Louisville Louisville, USA
01/2014 – present	Graduate Research Training Faculty as a Member of the Graduate Faculty of the School of Medicine

OTHER POSITIONS AND EMPLOYMENT (List in chronological order)

1/2004 – 2016	Visiting Professor Hematology, Oncology, and Cardiovascular Centers The First Bethune Hospital Jilin University Changchun, China
7/2006 – 2013	Visiting Professor School of Pharmacy Consultant Director of Chinese-American Research Institute for Diabetic Complications Wenzhou Medical University Wenzhou, China
9/2013 – 2016	Visiting Professor Jiangxi Province Children's Hospital Jiangxi Medical University Changchun, China
10/2014 – 11/2015	Co-Director Chinese-American Pediatric Institute Wenzhou Medical University, the First Affiliated Hospital, Wenzhou, China
04/2014 – 08/2021	Co-Director, The University of Louisville-China (Wenzhou Medical University, Jilin University, and Jiangxi Children Hospital) Pediatric Research Exchange Training Program

CERTIFICATION AND LICENSURE

N/A

PROFESSIONAL MEMBERSHIPS AND ACTIVITIES

1997 – 2000 Member of Society for the Study of Reproduction

1994 – 1998, 2011 - Present	Member of Radiation Research Society
2001 – Present	Member of American Diabetes Association
2002 – Present	Member of Society of Toxicology
2004 – Present	Charter Member of Chinese American Diabetes Association
2004 – Present	Member of American Heart Association, Basic Science Council
2005 – 2007	Member of American Society of Investigative Pathology
2005 – Present	Charter Member of International Society of Dose-Response (formerly Hormesis Society)
2011 – Present	Member of American Physiology Society

HONORS AND AWARDS

Honors or awards to Lu Cai

1995	Excellent Presentation of Poster, Canadian Fertility & Andrology Society.
1996	Excellent Presentation of Poster, American Society of Andrology.
1998	Second place winner of National Scientific-Technological Progress of China
2000	Second place winner of the Potential for Major Clinical Application, Research! Louisville.
2001	First place winner of the Best Abstract, Annual Meeting for Am.-Chinese Toxicology Society
2001	First place winner of the Scientific Importance, Research! Louisville
2002	Junior Faculty Award from American Diabetes Association
2002	First place winner for the Extramural Founding Award, Research! Louisville
2005	Career Development Award, American Diabetes Association
2007 – 2009	Vice President of Chinese American Diabetes Association (CADA)
2008	"Dr. Lu Cai, a Dedicated Researcher in His Own Right" a Volunteer Spotlight article that came out in Diabetes World, reported in the electronic news (July 24, 2008) from American Diabetes Association
2008	The 2000 Outstanding Scientists 2008/2009 from International Biographical Center, Cambridge, England
2008	Outstanding Career Achievement Award from the International Dose-Response Society
2009 – 2011	President of Chinese American Diabetes Association (CADA)
2011	Published an original work for the first time to indicate the induction of gene mutation by hyperglycemia (Zhang Y, et al. High level of glucose increases mutagenesis in human lymphoblastoid cells. Int J Biol Sci. 2007 Sep 4;3(6):375-9), which led to being invited to present an online discussion "Hyperglycemia induces cancer" on March 9, 2011, by Dr. Robert K. Su (BLOG: http://www.carbohydratescankill.com/1680/hyperglycemia-cancer ; and webcast: http://www.carbohydratescankill.com/1666/lu-cai-md-on-cancer-hyperglycemia-ep-39)
2011	Tenured award: April 1, 2011
2011	Presented a webcast for his research "Zinc Supplementation and Diabetic Cardiomyopathy" on YouTube: http://www.youtube.com/watch?v=I3r_T-OrY1s
2011	Outstanding Presentation at the Academy of cardiovascular Research Excellence (ACRE) & the Chinese American Heart Association (CnAHA) Annual Cardiovascular Research Symposium "The Era of Translational Medicine". Orlando, Florida, on November 12, 2011.
2011 – 2012	Councilor of Ohio Valley Society of Toxicology (OVSOT) board
2011 – 2012	Member of National Research Policy Committee for American Diabetes Association
2011 – 2013	Councilor of American Association of Chinese in Toxicology (AACT) board
2013 – 2015	Councilor of the Academy of Cardiovascular Research Excellence (ACRE) board
2016 – 2019	Financial Chair and Treasurer, the Academy of Cardiovascular Research Excellence (ACRE) board

- 6, 2013 Top 4 of the Specially Thanked 2013 reviewers of *Diabetes*, "Editor's Note" in: *Diabetes* 2014, 63 (7): 2187.
- 6, 2014 Top 4 of the Specially Thanked 2014 reviewers of *Diabetes*, "Editor's Note" in: *Diabetes* 2015, 64 (6): 1871.
- 6, 2015 Top 4 of the Specially Thanked 2015 reviewers of *Diabetes*, "Editor's Note" in: *Diabetes* 2016, 65 (6): 1451.
- 1, 2016 An international member of the advisory committee for the project "Planning the long-term strategy of Korea for biological effects research of low dose radiation in radiation safety (1501007)", to be conducted by Korea Institute of Radiological & Medical Science, National Radiation Emergency Medical Center.
- 6, 2017 Achievement Award of Chinese American Diabetes Association (CADA) in recognition and appreciation of the scientific achievement and valuable contributions to CADA, at the 8th Annual Meeting, June 8, 2017, SAN DIEGO, CA
- 2018 – 2019 Vice-President-Elect, Ohio Valley Society of Toxicology (OVSOT) board
- 2019 A great Appreciation for the Excellent Leadership and Devoted Service as the ACRE Board of Directors (2013 -2019), presented by ACRE, November 15, 2019
- Excellent Featured Presentation at 2019 CnAHA/ACRE/CAAC Joint Research Symposium, organized by Chinese American Heart Association, Academy of Cardiovascular Research Excellence, and Chinese American Academy of Cardiology at Philadelphia, PA, on November 15, 2019
- Distinguished Reviewer for *Diabetes Care*, 2019, recognized by the American Diabetes Association, the Associate Editors, and the Editorial Office, for the American Diabetes Association's scholarly journals.
- Distinguished Reviewer for *Diabetes*, 2019, recognized by the American Diabetes Association, the Associate Editors, and the Editorial Office, for the American Diabetes Association's scholarly journals.
- 2019 – 2020 Vice-President, Ohio Valley Society of Toxicology (OVSOT) board
- 2020 AACT Distinguished Chinese Toxicologist Award in 2020. The award will be presented with a plaque and giving the 2020 AACT Distinguished Chinese Toxicologist Lectureship presentation, at the 2020 SOT Annual Meeting, Anaheim, CA, March 14 – 18, 2020.
- CVTS Impact Award for my paper entitled, "Gender differences in cardiac remodeling induced by a high-fat diet and lifelong, low-dose cadmium exposure". This award is to recognizes outstanding contributions of 2019 papers in the area of cardiovascular toxicology, at the 2020 SOT Annual Meeting, Anaheim, CA, March 14 – 18, 2020.
- The 2020 Metal Specialty Section Career Achievement Award, to be presented at the MSS Meeting/Reception in Anaheim, which is scheduled for March 17, 2020 from 6 to 7 pm in Anaheim Marriott at the 2020 SOT Annual Meeting, Anaheim, CA, March 14 – 18, 2020.
- 2020 *Acta Pharmacologia Sinica* (APS) Outstanding Contribution Awards for both publication and ad hoc manuscript reviewer, <http://www.chinaphar.com/announcement/view/151> (Online Announced: 2021-03-03)
- 2020 – 2021 President, Ohio Valley Society of Toxicology (OVSOT), for the Society of Toxicology, effective on May 1, 2020.
- 2021 SOT Reproductive and Developmental Toxicology Specialty Section (RDTSS) Peer-Reviewing committee members for 2021 SOT RDTSS best paper award for published papers in ToxSci in the Year of 2020.
- Past President, Ohio Valley Society of Toxicology (OVSOT, 2021-2022), for the Society of Toxicology, effective on May 1, 2021.

Treasurer of Metals Specialty Section (MSS, 2021- 2022), for the Society of Toxicology, effective on May 1, 2021.

Honors or awards to Lu Cai's trainees

- 2005 Best paper, Annual Meeting for American-Chinese Toxicology Society (Trainee: Ye Song)
Travel Award to Beijing's MT meeting (Trainee: Ye Song)
- 2006 Second place for the Best Abstract, Annual Meeting for Am.-Chinese Toxicology Society (Trainee: Guihua Zhou)
- 2008 First place winner for the Merck Postdoctoral Award for Meritorious Research Presented by the Mechanisms Specialty Section at the 47th Society of Toxicology 47th Annual Meeting, Seattle, WA, March 16-20, 2008 (Trainee: Guihua Zhou)
- First place winner for the Postdoctoral Award presented by Metal Specialty Section, at the 47th Society of Toxicology Annual Meeting, Seattle, WA, March 16-20 (Trainee: Yuehui Wang)
- First place winner for the Best Abstract Award from American Association of Chinese in Toxicology Special Interest Group, at the 47th Society of Toxicology Annual Meeting, Seattle, WA, March 16-20, 2008 (Trainee: Guihua Zhou)
- New Investigator Travel Award, American Heart Association BCVS Conference 2008, at the Keystone Conference Center, in the Keystone, Colorado, July 28-31, 2008 (Trainee: Yuehui Wang)
- 2009 First place winner for the Best Abstract Award from American Association of Chinese in Toxicology Special Interest Group, at the 48th Society of Toxicology Annual Meeting, Baltimore, MD, March 15-19, 2009 (Trainee: Yuehui Wang)
- 2010 Best Postdoctoral Fellow Poster Presentation, at Ohio Valley Society of Toxicology 2010 Annual Meeting, Cincinnati, September 24th, 2010 (Trainee: Yi Tan)
- 2011 Monsanto Company Graduate Travel Award from the Food Safety Specialty Section at the 50th Anniversary Meeting of the Society of Toxicology. March 6-10, 2011 at the Walter E. Washington Convention Center in Washington, DC, USA (Trainee: Yuguang Zhao)
- Honorable mention for the best graduate abstract from Molecular Biology Specialty Section at the 50th Anniversary Meeting of the Society of Toxicology. March 6-10, 2011 at the Walter E. Washington Convention Center in Washington, DC, USA (Trainee: Yuguang Zhao)
- Postdoctoral Student Travel Award from the Mechanisms Specialty Section at the 50th Anniversary Meeting of the Society of Toxicology. March 6-10, 2011 at the Walter E. Washington Convention Center in Washington, DC, USA (Trainee: Yi Tan)
- Impact Award, Cardiovascular Toxicology Specialty Section at the 50th Anniversary Meeting of the Society of Toxicology, March 6-10, 2011 at the Walter E. Washington Convention Center in Washington, D .C., USA (Trainee: Yi Tan)
- Best presentation of graduate student at the 4th CADA annual meeting, June 23-24, 2011, at San Diego, CA (Trainee: Yuguang Zhao)
- Best Platform Presentation Postdoctoral Scientist at the Ohio Valley Society of Toxicology 2011 Annual Meeting, Dayton, OH, September 23rd, 2011 (Trainee: Yi Tan)
- 2012 Travel Award as a representative of Ohio Valley Society of Toxicology (OVSOT) at 51st Annual Meeting of the Society of Toxicology, March 11-15, 2012 at the Moscone Convention Center in San Francisco, CA, USA. (Trainee: Yi Tan)

- ADA-Young Investigator Travel Grant at the American Diabetes Association's 72nd Scientific Sessions, June 8-12, 2012, in Philadelphia, PA (Trainee: Chi Zhang)
- Best Platform Presentation Postdoctoral Scientist at the Ohio Valley Society of Toxicology 2012 Annual Meeting, Nationwide Children's Hospital, Columbus, OH, September 28th, 2012 (Trainee: Chi Zhang)
- Outstanding Presentation at the Academy of Cardiovascular Research Excellence (ACRE) & the Chinese American Heart Association (CnAHA) Annual Cardiovascular Research Symposium "The Era of Translational Medicine". Los Angeles, CA, on November 3rd, 2012 (Trainee: Chi Zhang).
- 2013 Impact Award, Impact award, Occupational & Public Health Specialty Section at the 52nd Annual Meeting of the Society of Toxicology, March 10-14, 2013, the Henry B. Gonzalez Convention Center in San Antonio, Texas, USA (Trainee: Yi Tan)
- The best publication from postdoctoral fellow, Cardiovascular Toxicology Specialty Section at the 52nd Annual Meeting of the Society of Toxicology, March 10-14, 2013, the Henry B. Gonzalez Convention Center in San Antonio, Texas, USA (Trainee: Yi Tan)
- Postdoctoral Fellow Travel Award, Mechanisms Specialty Section at the 52nd Annual Meeting of the Society of Toxicology, March 10-14, 2013, the Henry B. Gonzalez Convention Center in San Antonio, Texas, USA (Trainee: Chi Zhang)
- Ohio Valley RC Masters Student Presentation Award at the 2013 OVSOT annual meeting, Louisville, September 23, 2013 (Trainee: Melissa Skibba).
- Junior Faculty Award at the 2013 Research!Louisville, Louisville, 2013 (Trainee: Dr. Yi Tan, Assistant Professor)
- The First Prize of Oral Presentation at the Academy of Cardiovascular Research Excellence (ACRE) and The Chinese American Heart Association (CnAHA) jointed Annual Meeting, On November 16, 2013, Dallas, TX (Trainee: Ying Xin)
- Winner for receiving a 2013 Travel Stipend to the AHA Scientific Sessions in Dallas, Texas (Trainee: Yuguang Zhao).
- 2014 Postdoctoral Student Travel Award from the Mechanisms Specialty Section at the 53rd Annual Meeting of the Society of Toxicology, March 23 – 27, 2014, the Henry B. Gonzalez Convention Center in Phoenix, AZ, USA (Trainee: Ying Xin)
- Trainee Travel Award from Cardiovascular Toxicology Specialty Section at the 53rd Annual Meeting of the Society of Toxicology, March 23 – 27, 2014, the Henry B. Gonzalez Convention Center in Phoenix, AZ, USA (Trainee: Ying Xin)
- Best Poster Winner from the Graduate Students at the 2nd Annual Meeting of the Kentucky Chapter of the American physiological society, at Delphi Center, University of Louisville Shelby Camps, March 31, 2014 (Poster title: Sulforaphane protection from diabetic kidney is possibly mediated by increasing Nrf2 transcriptional regulation of metallothionein via inhibiting HDAC2). (Trainee: Lili Kong)
- Best PhD Graduate Student Poster Presentation Award at the 2014 Ohio Valley Society of Toxicology Annual Meeting in the Wright State University, Dayton, OH. September 26th 2014 (Poster title: Sulforaphane protection from diabetic kidney is associated with the increased Nrf2 transcriptional regulation of metallothionein via inhibiting HDAC2) (Trainee: Lili Kong)
- 2015 Outstanding Young Investigator Award at the 2nd ACRE/APS Annual Cardiovascular Research Symposium in New Orleans, Louisiana, USA. July 12, 2015 (Presentation title: Fenofibrate prevention of diabetic cardiomyopathy is mediated by FGF21 probably via Sirt1-dependent autophagy modulation) (Trainee: Yanli Cheng)

- 2016 Graduate Student Travel Support Award at the 55th Annual Meeting of the Society of Toxicology in New Orleans, Louisiana, March 13–17, 2016 (Presentation title: Metallothionein as One of Nrf2 Downstream Genes Plays an Important Role in Sulforaphane Prevention of Diabetes-induced Cardiac Remodeling and Pathogenic Damage, abstract number:2600) (Trainee: Yanli Cheng)
- The Second Place of the American Association of Chinese in Toxicology SIG 2 - AACT and Charles River Best Abstract Awards at the 55th Annual Meeting of the Society of Toxicology in New Orleans, Louisiana, March 13–17, 2016 (Trainee: Zheng Xu)
- Graduate Students Travel Award for the Clinical and Translational Toxicology Specialty Section (CTTSS), at the 55th Annual Meeting of the Society of Toxicology in New Orleans, Louisiana, March 13–17, 2016 (Trainee: Zheng Xu)
- The First Place of Graduate Oral Presentation at ACRE/APS, at the Third Annual ACRE-APS Symposium July 17, 2016, Phoenix, Arizona (Trainee: Zheng Xu)
- The Third Place of the Poster Presentation at ACRE/APS, at the Third Annual ACRE-APS Symposium July 17, 2016, Phoenix, Arizona (Trainee: Shudong Wang)
- The First Prize of Poster Presentation at the “China-USA Cardiovascular Symposium” hosted by ACRE-CNAHA Federation (ACF) & Chinese American Academy of Cardiology (CAAC), “Inhibition of HDAC, especially HDAC3, prevents diabetic cardiomyopathy in OVE26 mice via epigenetic inhibition of ERK1/2-DUSP5 pathway”, New Orleans, LA, Nov. 12th 2016 (Trainee: Zheng Xu)
- 2017 Graduate Student Travel Award at the 56th SOT Annual Meeting, March 12-16, 2017, Baltimore, MD (trainee: Zheng Xu)
- The Second place of the Doctoral Basic Science Graduate Student Award: “Protective Effect of Dimethyl Fumarate on T1D-induced Diabetic Cardiomyopathy Probably via Nrf2 pathway”, the 22nd Research!Louisville (R!L) at the Louisville Medical Center, on September 12-15, 2017 (trainee: Xinyue Hu)
- The second place of the Undergraduate Poster Presentation Award at the Ohio Valley Society of Toxicology (OVSOT) Annual Meeting, at the Stewart Center of Purdue University, West Lafayette, Indiana, on December 1, 2017 (Trainee: Xinyue Hu)
- 2018 Graduate Deans Citation, University of Louisville (Trainee: Jamie Young, Pre-doctoral graduate)
- NIEHS T32 Predoctoral Fellowships in Environmental Health Sciences (Trainee: Jamie Yang, Pre-doctoral graduate)
- Student Travel Award for the 10th Conference on Metal Toxicology and Carcinogenesis, Albuquerque New Mexico (Trainee: Jamie Yang, Pre-doctoral graduate)
- 1st Place PhD poster at the Ohio Valley Society of Toxicology, Louisville, KY (Trainee: Jamie Yang, Pre-doctoral graduate)
- 2019 Second place of Graduate Student Award for Metals Specialty at the 58th SOT Annual Meeting and ToxExpo in Baltimore, MD on March 10-14, 2019 (Trainee: Jiqun Wang).
- Elected SOT Graduate Student Leadership Committee Chair at the 58th SOT Annual Meeting and ToxExpo in Baltimore, MD on March 10-14, 2019 (Trainee: Jamie Young);
- Travel Award to 2019 International Congress on Obesity and Metabolic Syndrome & Asia-Oceania Conference on Obesity (ICOMES & AOCO 2019) with the abstract of titled by “PREVENTIVE EFFECT OF SULFORAPHANE ON TYPE 2 DIABETES-INDUCED NEPHROPATHY VIA AMPK-MEDIATED ACTIVATION OF GLUCOSE/LIPID METABOLISM AND NRF2 ANTI-OXIDATIVE PATHWAYS (Ab#: 190088), at the Conrad Hotel, Seoul, Korea, on 29 – 31 August, 2019 (Trainee: Zhuo Li)

Travel Award to 2019 International Congress on Obesity and Metabolic Syndrome & Asia-Oceania Conference on Obesity (ICOMES & AOCO 2019) with the abstract of titled by "PREVENTIVE EFFECT OF SULFORAPHANE ON TYPE 2 DIABETES-INDUCED DIABETIC CARDIOMYOPATHY VIA AMPKA-MEDIATED ACTIVATION OF LIPID METABOLISM AND NRF2 FUNCTION (Ab#: 190090), at the Conrad Hotel, Seoul, Korea, on 29 – 31 August, 2019 (Trainee: Yike Sun)

1st Place Student Presentation at the 13th Conference of the International Society for Trace Element Research in Humans (ISTERH), in Bali, Indonesia, on September 22-26, 2019 (Trainee: Jamie Young);

Appointed Student Representative for Ohio Valley Society of Toxicology, Mason, OH, on October 18, 2019 (Trainee: Jamie Young)

1st Place PhD Platform Presentation Award at the Ohio Valley Society of Toxicology, Mason, OH, on October 18, 2019 (Trainee: Jamie Young);

2020 Graduate Student Travel Award for attending the 59th Annual Society of Toxicology (SOT) Meeting, Anaheim, California, on March 14 – 18, 2020 (Trainee: Jamie Young)

The winner of the 2020 MSS Graduate Student Research Award. this award will be presented at the MSS Meeting/Reception in Anaheim, which is scheduled for March 17, 2020 from 6 to 7 pm in Anaheim Marriott Grand F room, at the 59th Annual Society of Toxicology (SOT) Meeting, Anaheim, California, on March 14 – 18, 2020 (Trainee: Jamie Young)

K.C. Huang Outstanding Graduate Student Award from the Department of Pharmacology and Toxicology (Trainee: Jamie Young)

1st place of 3-min oral presentation for the Tox on the Clock, "Zinc supplementation rescues cadmium-exacerbated, high fat diet-induced NAFLD" 2020 OVSOT Annual meeting Nov. 6, 2020 (Trainee: Jamie Young)

Guy Stevenson Award for Excellence in Graduate Studies (Trainee: Jamie Young)

2021 First place of the Metals Specialty Section Postdoctoral Research Award, at the 60th Annual Society of Toxicology (SOT) Virtual Meeting (Trainee: Jamie Young).

Outstanding Graduate Student Leadership Award, for Jamie's excellent service as PhD graduate representative (2020-2021) of OVSOT, at the 60th Annual Society of Toxicology (SOT) Virtual Meeting (Trainee: Jamie Young).

Judge's Choice, postdoctoral category for the 3MT (3-minute thesis) competition, at the 60th Annual Society of Toxicology (SOT) Virtual Meeting, (Trainee: Jamie Young);

People's Choice, postdoctoral category for the 3MT (3-minute thesis) competition, at the 60th Annual Society of Toxicology (SOT) Virtual Meeting (Trainee: Jamie Young).

COMMITTEE ASSIGNMENTS AND ADMINISTRATIVE SERVICES

University Committees

7, 2013 – 7, 2014	PROMOTION, APPOINTMENT, AND TENURE COMMITTEE, Department of Pediatrics, University of Louisville
7, 2013 – 7, 2014	RESEARCH COMMITTEE, Department of Pediatrics, University of Louisville
5, 2013 – 5, 2014	RESEARCH ADMINISTRATION COMMITTEE, Department of Pediatrics, University of Louisville
7, 2014 – 6, 2016	PROMOTION, APPOINTMENT, AND TENURE COMMITTEE, Department of Pediatrics, University of Louisville
7, 2014 – 7, 2016	RESEARCH COMMITTEE, Department of Pediatrics, University of Louisville

5, 2014 – 5, 2016	RESEARCH ADMINISTRATION COMMITTEE, Department of Pediatrics, University of Louisville
7, 2016 – 6, 2018	PROMOTION, APPOINTMENT, AND TENURE COMMITTEE, Department of Pediatrics, University of Louisville
7, 2016 – 7, 2017	RESEARCH COMMITTEE, Department of Pediatrics, University of Louisville
5, 2016 – 5, 2017	RESEARCH ADMINISTRATION COMMITTEE, Department of Pediatrics, University of Louisville
7, 2016 – 6, 2018	STUDENT PROMOTION COMMITTEE, School of Medicine, the University of Louisville
10, 2015 – 12, 2019	Coordinator and member of Wenzhou Medical & Jilin University Task Force, Department of Pharmacology and Toxicology, University of Louisville
1, 2014 – 12, 2020	Co-Director, UofL China Pediatric Research Training Exchange Program for China's Junior Physician
7, 2017 – 10, 2017	One of five review committee for the five-year review of Dr. Murali Ankem, Chair of the Department of Urology, University of Louisville
7, 2018 – present	PROMOTION, APPOINTMENT, AND TENURE COMMITTEE, Department of Pediatrics, University of Louisville
2018 – present	Interview Committee members for Pediatric Endocrinology Fellowship
10, 2018 – present	Pediatrics Grants Review Committee, Department of Pediatrics, University of Louisville
11, 2018 – present	Pediatric Innovation & Research Advisory Team (PIRAT), Department of Pediatrics, University of Louisville

Grant Review

Ad hoc reviewer

2002-2004	Philip Morris USA, Inc. Research Foundation
2003	American Diabetes Association
2003	Pilot Project Program for NIEHS Funded CRED
2005, 2007	Air Force Office of Scientific Research Program
2006	Dutch Diabetes Association
2007 – 2017	National Natural Science Foundation of China [NSFC]
2008	The Kentucky Diabetes Research Board
2009	Diabetes UK (The British Diabetic Association) for Project Grant
2009 – 2016	The University of Wyoming IDEA Networks for Biomedical Research Excellence (INBRE) Pilot Grant program
2009 – 2016	Projects for Health and Technologies Research Italian Ministry of Health via NIH from Italy
2011	Projects for the CHEX 2011 program of the French National Research Agency
2012	Legacy Heritage Biomedical Science Partnership Research Grant (Appl. No: 464/12) for Israel Science Foundation

Regular members

2004 – 2015	Member of the American Diabetes Association Research Grant Review Panel
2007	Member of the American Heart Association, Southern/Ohio Valley Peer-Review Committee 3C
2008-2011	Member of the American Heart Association, Great River, Region 1- Cardiac Biology 1 Study Group
2016, 10	Member of the American Heart Association, Great River, Region 1- Cardiac Biology 1 Study Group

2011 – 2016	Member of the American Heart Association, National Innovation Award,
2013 – 2019	Member of the American Heart Association's Cardiac Bio Reg - BSci 5 Peer Review Committee
2019 – present	Member of the American Diabetes Association Research Grant Review Panel

Irregular members

2009	Member of NIH Special Emphasis panel of RFA HL1-002, Nov. 5, 6, 2009
2014	Member of special panel for NHLBI PPG-2014 (Sept. 29, 2014)
2014	Panel member of Department of Veterans Affairs Merit awards – Fall 2014 Cardiology A (CARA; cardiac disease), Dec. 10 – 11, 2014 (Washington, DC).
2015	Panel member of NIH Special Emphasis of RFA-AI-14-055 "Centers for Medical Countermeasures against Radiation Consortium (CMCRC)", March 24 – 26, 2015
	Panel member of Department of Veterans Affairs Merit awards – Fall 2015 Cardiology A (CARA; cardiac disease), Dec. 2 – 3, 2015.
	Panel member of the Focused Program Award-Healthcare-Associated Infection Reduction (FP-HCAIR), for the Department of Defense Congressionally Directed Medical Research Programs (CDMRP) on Friday, Dec. 17, 2015.
2016	Panel member of the Focused Program Award-Healthcare-Associated Infection Reduction (FP-HCAIR), for the Department of Defense Congressionally Directed Medical Research Programs (CDMRP) on July 31, 2016.
2017	IAR Reviewer Invitation for meeting 2017/05 ZHD1 DRG-D (50) 1 - Structural Birth Defects Special Emphasis Panel (SEP), April, 6-7, 2017;
2018	Panel member of for the Wound and Injury5 (WI5) peer review panel of the 2018 Defense Medical Research and Development Program (DMRDP) for the Department of Defense Congressionally Directed Medical Research Programs (CDMRP), via teleconference on March 28 th and 29 th , 2018.
	Pre-Metals Toxicology (pre-MT) peer review panel of the 2018 Peer Reviewed Medical Research Program (PRMRP) for the Department of Defense Congressionally Directed Medical Research Programs (CDMRP), July 12, 2018.
2019	Scientist reviewer for the Metals Toxicology (MT) peer review panel of the FY19 Peer Reviewed Medical Research (PRMRP) for the Department of Defense (DOD) Congressionally Directed Medical Research Programs (CDMRP) from May 7, 2019 to June 12, 2019. [Karen S. Sellins, Ph.D. Scientific Review Officer, General Dynamics Information Technology]
2020	The Fund for Scientific Research-FNRS (F.R.S.-FNRS) in Brussels in Belgium, for a grant application entitled " <i>Characterization of the pancreatic β cells signature in early type 1 diabetes to identify new therapeutic targets for disease prevention/treatment.</i> " April 25, 2020
	The Graduate Women in Science (GWIS) National Fellowship Program, for a research proposal: " <i>Prenatal Supplementation can Protect Against Fertility Deficits that Originate in Utero.</i> ", May 1 – July 1, 2020.

Scientist review for the Peer Reviewed Medical Research (PRMRP), Discovery Metal Toxicity (DIS-MT) peer review panel for the 2020 Department of Defense Congressionally Directed Medical Research Programs (CDMRP). [Donald A. Martyn, Ph.D. Scientific Review Officer General Dynamics Information Technology]. From June 10 –July 15, 2020

National Institute of Child Health and Human Development Special Emphasis Panel: Developmental Mechanisms of Human Structural Birth Defects, 07/20/2020 - 07/21/2020

2021 *Ad hoc* reviewer for American Diabetes Association of RFA: Health Disparities and Diabetes Research, Postdoctoral Fellowship Award, June 11, 2021

Ad hoc reviewer of the PRE-ME/CFS panel, for the program announcements (PAs) of the Investigator-Initiated Research Award (IIRA) and the Technology/Therapeutic Development Award (TTDA) which are available at <http://cdmrp.army.mil/funding/prmrp.shtml>, 17 May 2021 to Monday, 14 June 2021

Member of the meeting ROSTER, National Center for Complementary and Integrative Health Special Emphasis Panel NATIONAL CENTER FOR COMPLEMENTARY & INTEGRATIVE HEALTH [ZAT1 PS (03)], NCCIH Training and Education Review Panel (CT) 06/17/2021 - 06/18/2021

Other professional activities:

2002	Judge for the best posters for the presentation of post-doctoral fellows, Research!Louisville
2003	Judge for the best poster for the presentation of post-doctoral fellows, Research!Louisville, Louisville, November 2-4
2005-2007	Secretary, Chinese American Diabetes Association
2005	Judge for the best paper and abstract for the students and postdoctoral fellows, American Association of Chinese in Toxicology Annual Meeting, New Orleans, March 6-10
2005	Co-Chair for the poster session: Renal toxicity, the 44th Annual Meeting of Society of Toxicology
2005	Members of Organizing Committee, International Conference on Radiation Medicine and Protection, Changchun, August 16-18
2005	Members of Scientific Program Committee, the 5th International Conference on Metallothionein, Beijing, October 8-12
2005	Judge for the best poster of Student and postdoctoral fellows, Ohio Valley Society of Toxicology (OVESOT) Annual Meeting, Jewish Hospital, Rudd Heart and Lung Center Conference Center, Louisville, October 28
2005	Judge for the best posters for Faculty presentations, Research!Louisville, Louisville, November 2-4
2006	Co-Chair for the section of inflammatory cytokines and diabetic complications, the first Xiangya International Conference on Inflammation and Diabetes, Changsha China, April 28 to 30
2006	Co-Chair for the section of Cardiomyopathy: Diagnostic criteria and chelation therapy in Thalassaemia and other iron loading diseases, at the 16th International Conference on Oral Chelation in the Treatment of Thalassaemia, Cancer and Other Diseases, Limassol, Cyprus (October 25-31st).
2006	Members of International Scientific Committee for the 16th International Conference on Oral Chelation in the Treatment of Thalassaemia, Cancer and Other Diseases, Limassol, Cyprus (October 25-31st).
2007-2009	President-elected, Chinese American Diabetes Association

- 2007 Co-Chair for the sections of Oxidants, Radicals and Laboratory, and Thalassaemia and chelation, at the 17th International Conference on Oral Chelation in the Treatment of Thalassaemia, Cancer and Other Diseases, Shenzhen, China, (November 23-27).
Members of International Scientific Committee for the 17th International Conference on Oral Chelation in the Treatment of Thalassaemia, Cancer and Other Diseases, Shenzhen, China, November 23-27, 2007.
- 2008 Judge for the best posters for Post-doctoral fellow presentations, Research!Louisville, Louisville, October 20 – 24
- 2009 Chair for the symposium session titled Zinc, Inflammation and Diabetes for the 48th Society of Toxicology (SOT) Annual Meeting in Baltimore, MD, March 15-19
- 2009-2011 President, Chinese American Diabetes Association
Judge for the best posters for Post-doctoral fellow presentations, Research!Louisville, Louisville, October 13 – 15, 2009
- 2010 American Heart Association’s Abstract Grader for Scientific Sessions
Chair for the symposium session titled “Zinc, Copper, and Their Metabolic Effect: Myths and Musts (SP-66 - 644572)” for the 48th Society of Toxicology (SOT) Annual Meeting in Salt Lake City, Utah, Baltimore, MD, March 7-11
Committee member of Jean Lu Student Scholarship and the Distinguished Chinese Toxicologist Lecture Award, for the Association of American Chinese Toxicology (AACT)
Judge for the best posters for Post-doctoral fellow presentations, Research!Louisville, Louisville, October 11 - 15
Vice President for the International Scientific Committee, at the 20th International Conference on Chelation (ICOC) for the treatment of Thalassaemia, Cancer and Other Diseases related to Metal and Free Radical Imbalance and Toxicity. Grand Rapids, MI, USA, October 22-25th
Co-Chair for the sections of “Modulation of iron containing proteins chelators and other agents for application in neurodegenerative diseases”, at the 20th International Conference on Oral Chelation (ICOC) for Treatment of Thalassaemia, Cancer and Other Diseases related to Metal and Free Radical Imbalance and Toxicity. Grand Rapids, MI, USA, October 22-25th
Co-Chair for the sections of “Mechanisms of oxidative stress in diabetes and of metal ions in Alzheimer’s diseases”, at the 20th International Conference on Oral Chelation (ICOC) for Treatment of Thalassaemia, Cancer and Other Diseases related to Metal and Free Radical Imbalance and Toxicity. Grand Rapids, MI, USA, October 22-25th
Extramural evaluator for reviewing the qualification of Dr. Wenhong Cao, MD for appointment as Research Associate Professor by Department of Nutrition the University of North Carolina at Chapel Hill, December 3, 2010.
- 2011 Co-Chair for the sections of “Diabetes, Cancer and Drug Use – Which is the Culprit? At the 2nd Zhongshan International Diabetes Forum, in Guangzhou, China, on July 16-17
Extramural evaluator for reviewing the qualification of Dr. Loren Wold, PhD to be appointed as Associate Professor of Pediatrics with Tenure in the Department of Pediatrics within the School of Medicine at The Ohio State University, August 15
Extramural evaluator for reviewing the qualification of Dr. Tianqing Peng, MD to be appointed as Term Associate Professor in the Departments of Surgery and Pathology at the Schulich School of Medicine & Dentistry, the University of Western Ontario, August 29
American Heart Association’s Abstract Grader for Scientific Sessions
Judge for the best posters for Post-doctoral fellow presentations, Research!Louisville, Louisville, October 10 - 14

- Co-Chair for the Second Forum of the Chinese-American Symposium of Diabetic Complications at the Wenzhou Medical College, Wenzhou, Zhejiang, China, November 28-29
- 2012 Co-Chair for the Third Forum of the Chinese-American Symposium of Diabetic Complications at the Ruian People's Hospital, Ruian, Zhejiang, China, May 1
- Judge for the best posters for Post-doctoral fellow presentations, Research!Louisville, Louisville, September 18 - 21
- Academic committee member of 3rd International Conference on Fibroblast Growth Factors (ICFGFs2012), Wenzhou, December 7 – 10 (<http://www.fgf2012conference.com/>).
- 2013 Provisional International Scientific Committees for Fourth International Conference on Recent Advances in Health and Medical Sciences (4th RAHMS), the 1st International Conference on Oncology and Anticancer Research (1st ICOAR) and the 22nd International Conference on Chelation (22nd ICOC), Azia Beach Hotel, Resort & Spa. Paphos, Cyprus, June 6th - 12th (<http://www.rahms-medicine.org/rahms/>)
- Co-Chair for the First Changchun Forum for Cardiovascular Diseases and Dietary Nutrition, at the First Hospital of Jilin University, on April 30
- Co-Chair for the Southern Zhejiang Endocrinologic & Metabolic Diseases Forum (2013) and the 4th Chinese-American Diabetic Complications Forum, at Wenzhou Medical University, October 11 -13
- 2014 Chair for the Poster Session: Metal Neurotoxicity II: MeHg and Other Metals, on March 25, 2014 from 1:00 PM to 4:30 PM at CC Exhibit Hall, during the 2014 Annual Meeting in Phoenix, Arizona, March 23 – 27
- Co-Chair for the Fifth Forum of the Chinese-American Symposium of Diabetic Complications at the Ruian People's Hospital, Ruian, Zhejiang, China, May 10, 2014
- Poster Chairing Professor for Posters of Recent Advances in Vascular Biology at Scientific Sessions 2014, Chicago, IL, Nov. 16 – 19, 2014
- 2015 Co-Chair for the Oral Session of Low Dose Radiation Effects, May 27, 2015 (16:10 to 17:00 pm) at the 15th International Congress of Radiation Research - Kyoto, Japan
- Judge for the best posters for Post-doctoral fellow presentations, Research!Louisville, Louisville, October 26 – 28, 2015
- Co-Chair for the Sixth Forum of the Chinese-American Symposium of Diabetic Complications at the Ruian People's Hospital, Ruian, Zhejiang, China, November7, 2015
- 2016 Co-Chair for the Seventh Forum of the Chinese-American Symposium of Diabetic Complications at the Ruian People's Hospital, Ruian, Zhejiang, China, July 4th, 2016
- 2017 Co-Chair for the Best Junior Faculty Award winner oral presentation and Featured presentation at the Fourth Annual ACRE/APS Symposium, Portland, OR, USA, July 9, 2017,
- Co-Chair for the Eighth Forum of the Chinese-American Symposium of Diabetic Complications at the Ruian People's Hospital, Ruian, Zhejiang, China, Nov. 5, 2017.
- 2018 Co-Chair for the Featured Presentation at the Fifth Annual ACRE/APS Symposium, San Antonio, Texas, USA, July 29, 2018,
- Co-Chair for the Ninth Forum of the Chinese-American Symposium of Diabetic Complications at the Ruian People's Hospital, Ruian, Zhejiang, China, Oct. 20, 2018.
- 2019 Co-Chair for the Tenth Forum of the Chinese-American Symposium of Diabetic Complications at the Ruian People's Hospital, Ruian, Zhejiang, China, May 12, 2019.

Co-Chair for the Featured Presentation at the 1st Asian Cardiovascular Symposium: A pre-meeting symposium at BCVS-2019, at Westin Boston Waterfront, Boston, MA on July 28, 2019

Co-Chair Ohio Valley Society of Toxicology Annual Meeting at the Procter & Gamble Mason Business Center (MBC), Mason, OH 45040, October 18, 2019

2020 Judge for the Young Investigator Award (YIA) competition during SfRBM's 2020 Virtual Conference, November 12, 2020.

2021 One of the committee members for 2021 MSS Career Achievement Award review, invited by MSS president Dr. Jennifer Freeman, March 5th, 2021

Extramural review and recommendation requested by extramural Universities and Institutions

2014 Invited by Dr. James P. Kehrer, Professor and Dean, Faculty of Pharmacy & Pharmaceutical Sciences, University of Alberta, Edmonton, AB Canada, to evaluate the scholarly distinction and creative research of Dr. John Seubert for his promotion to Professor for the Department of Cardiovascular Toxicology, University of Alberta (October 17, 2014).

2015 Invited by Dr. Mark Tykocinski, Dean, Sidney Kimmel Medical College, Thomas Jefferson University, Philadelphia, to evaluate the scholarly distinction and creative research of Dr. Yajing Wang in support of her promotion to Research Associate Professor for the Department of Emergency Medicine, Thomas Jefferson University (February 27, 2015).

2016 Invited by Dr. David K. Driman, Director of Education, Department of Pathology and Laboratory Medicine Schulich School of Medicine & Dentistry, Western University, London, Canada to evaluate the scholarly distinction and creative research of Dr. Subrata Chakrabarti for being nominated for the Western University Distinguished University Professorship (January 11, 2016).

Invited by Donna L. Patterson, Program Coordinator, Office of Senior Appointments and Promotions, the UConn School of Medicine, to evaluate the scholarship and merit of Dr. Beiyan Zhou for her promotion to Associate Professor with tenure of Immunology in the Department of Immunology (March 17, 2016)

Robert M. Pascuzzi, Professor and Chair, Department of Neurology, Indiana University School of Medicine the scholarship and merit of Dr. Yansheng Du for his promotion to the rank of Professor of Neurology within Indiana University's School of Medicine (April 30, 2016)

Invited by Dr. Kem P Krueger, Dean of School of Pharmacy University of Wyoming, to evaluate the scholarship and merit of Dr. Baskaran (Baski) Thyagarajan for his tenure and promotion to Associate Professor in the School of Pharmacy at the University of Wyoming (October 8, 2016).

2017 Invited by Dr. Todd Anderson, Professor and Chair, Department of Environmental Toxicology, Texas Tech University, Lubbock, TX, to evaluate the scholarship, teaching, and service activities of Dr. Weimin Gao for his promotion to Full Professor in the Department of Environmental Toxicology, Texas Tech University (August 13, 2017).

2018 Invited by Dr. J. Robert Beck, Deputy Director, Chief Academic & Administrative Officer, H.O. West & J.R. Wike Chair in Cancer Research, Fox Chase Cancer Center, Philadelphia, to evaluate the scholarship and merit of Dr. Mohan Doss for his promotion to Professor in Fox Chase Cancer Center in Philadelphia PA (January 26, 2018)

Invited by Dr. Robert Haché, Vice-President Research and Innovation, York University to evaluate the career achievements of Prof Gary Sweeney in relation to his application for a York Research Chair (December 2, 2018).

- 2019 Invited by Dr. Linda A. Alexander, Senior Associate Dean for Academic, Student and Faculty Affairs West Virginia University School of Public Health to evaluate Dr. Travis Knuckles for the promotion from Assistant Professor to Associate Professor of Occupational and Environmental Health Sciences (OEHS) in the Health Sciences-Scientist Educator Track (non-tenure earning) at the West Virginia University School of Public Health (WVUSPH), based on Dr. Knuckles prepared resume and materials, provided by Dr. Alexander, November 24, 2019.
- 2020 Invited by Dr. Subrata Chakrabarti, Professor and Chair/Chief, Department of Pathology and Laboratory Medicine Schulich School of Medicine & Dentistry, London, Canada, to evaluate scholarship and merit of Dr. Zia A. Khan for his promotion to Professor in the Department of Pathology and Laboratory Medicine, Schulich School of Medicine & Dentistry, Canada (July 30, 2020)
- Invited by Robert Hester, Chair, Department of Physiology P&T Committee University of Mississippi Medical Center, Jackson, MS, to evaluate the scholarship and merit of Dr. Yingjie for his tenure at the University of Mississippi-School of Medicine (August 3, 2020).
- 2021 Invited by Dr. Jajing Wang from the Emergency Medicine at Sidney Kimmel Medical College (SKMC) at Thomas Jefferson University, to provide a recommendation letter to Dr. Mark Tykocinski, Dean of SKMC at Thomas Jefferson University, Philadelphia, PA, for Dr. Yajing Wang to apply for the promotion from Associate Professor (Research Track) to Full Professor (Tenure Track) (July 15, 2021)

EDUCATIONAL ACTIVITIES

Director (coordinator) of Radiation Biology Courses for Radiation Oncology Residents

- 2010: Radiation and Cancer Biology for Radiation Oncology Residents Spring 2010
 2011: Radiation and Cancer Biology for Radiation Oncology Residents Spring 2011
 2012: Radiation and Cancer Biology for Radiation Oncology Residents Spring 2012
 2013: Radiation and Cancer Biology for Radiation Oncology Residents Summer/Fall 2013
 2014: Radiation and Cancer Biology for Radiation Oncology Residents Summer/Fall 2014
 2015: Radiation and Cancer Biology for Radiation Oncology Residents Summer/Fall 2015
 2016: Radiation and Cancer Biology for Radiation Oncology Residents Summer/Fall 2016
 2017: Radiation and Cancer Biology for Radiation Oncology Residents Summer/Fall 2017
 2018: Radiation and Cancer Biology for Radiation Oncology Residents Summer/Fall 2018
 2019: Radiation and Cancer Biology for Radiation Oncology Residents Summer/Fall 2019
 2020: Radiation and Cancer Biology for Radiation Oncology Residents Summer/Fall 2020

Molecular Toxicology (Code: PHTX661), *requested by NIH T32 program*

- 2020: "Multi-organ toxicity crosstalk" at 3:00 PM – 4:30 PM on Monday April 20, 2020 (six graduates)
 2021: "Multi-organ toxicity crosstalk" at 3:00 PM – 4:30 PM on Monday April 05, 2021 (Five graduates)

PhD graduate committee at the Department of Pharmacology & Toxicology, University of Louisville School of Medicine

- 2014 – 2017: Tuo Shao, from Wenzhou Medical University, Mentor: Dr. Wenke Feng
 2014 – 2015: Hongxu Shi, from Wenzhou Medical University (After the first year program, the student has changed mentor/lab, so that the project was also changed and committee for him was reorganized).
 2015 – 2017 Marc Dwenger, Master program of Pharmacology and Toxicology, Mentor: Dr. Brad Keller

- 2015 – 2019: Qian Lin, from Wenzhou Medical University, Mentor: Dr. Yi Tan
 2016 – 2020: Leixao Jin, from Wenzhou Medical University, Mentor: Dr. Daniel Conklin
 2017 – April 2018: Jamie Young, Master to PhD program of Pharmacology and Toxicology, Mentor: Gavin Arteel
 2017 – 2020: Yihong Li, from Wenzhou Medical University, Mentor: Dr. Shao-yu Chen
 2017 – 2020: Yuxuan Zheng, from Jilin University, Mentor: Dr. Walter (Bert) H. Watson
 2018 – Present: Haiyan Lu, from Wenzhou Medical University, Mentor: John Pierce Wise, Sr.
 2018 – 2020: Rachel M. Speer, PhD program of Pharmacology and Toxicology, Mentor: John Pierce Wise, Sr.
 2021 – Present: Aggie Rena Williams, PhD program of Pharmacology and Toxicology, with project “Impact of Particulate Hexavalent Chromium on RAD51 Paralog Complexes in human lung cells”, Mentor: John Pierce Wise, Sr.,;
 2021 – Present: Idoia Meaza Isusi, PhD program of Pharmacology and Toxicology, with project “Translating Particulate Cr(VI)-Induced Chromosome Instability, Loss of Homologous Recombination Repair and Targeting of RAD51 from Human Lung Fibroblasts to Bronchial Epithelial Cells”, Mentor: John Pierce Wise, Sr.

Lecturer for the class for Radiation Oncology Residents

- 2005: Radiation and Cancer Biology for Radiation Oncology Residents Spring 2005
 2006: Radiation and Cancer Biology for Radiation Oncology Residents Fall 2006
 2007: Radiation and Cancer Biology for Radiation Oncology Residents Fall 2007
 2008: Radiation and Cancer Biology for Radiation Oncology Residents Fall 2008
 2010: Radiation and Cancer Biology for Radiation Oncology Residents Spring 2010
 2011: Radiation and Cancer Biology for Radiation Oncology Residents Spring 2011
 2012: Radiation and Cancer Biology for Radiation Oncology Residents Spring 2012
 2013: Radiation and Cancer Biology for Radiation Oncology Residents Summer/Fall 2013
 2014: Radiation and Cancer Biology for Radiation Oncology Residents Summer/Fall 2014
 2015: Radiation and Cancer Biology for Radiation Oncology Residents Summer/Fall 2015
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 2017: Radiation and Cancer Biology for Radiation Oncology Residents Summer/Fall 2017
 2018: Radiation and Cancer Biology for Radiation Oncology Residents Summer/Fall 2018
 2019: Radiation and Cancer Biology for Radiation Oncology Residents Summer/Fall 2019
 2020: Radiation and Cancer Biology for Radiation Oncology Residents Summer/Fall 2020
 2021: Radiation and Cancer Biology for Radiation Oncology Residents Summer/Fall 2021

Mentoring graduates and post-doctoral fellows

Sara Holt, BS	Research Assistant	5/2001 – 2/2002
Maureen Hernandez, DVM	Res. Assist/Technician	7/2002 – 8/2003
Ye Song, MD, PhD	Post-doctoral fellow	9/2002 – 5/2005
Jonathan Wilkerson,	Medical student (2 nd year)	6/2003 – 9/2003
Jiangxun Wang, MS	Research Associate	5/2003 – 7/2005
Yibo Du, Bs	Technician	5/2003 – 12/2005
Guihua Zhou, MD, PhD	Post-doctoral fellow	2/2005 – 8/2008
Meagan Peek,	Medical Student	6/2006 – 8/2006
Wei Wang, PhD	Post-doctoral fellow	1/2006 – 10/2007
Yunan Tang, MD, PhD	Post-doctoral fellow	12/2006 – 12/2007
Yuehui Wang, MD, PhD	Post-doctoral fellow	2/2006 – 9/2008
Jiayin Lu, MD	MD/PhD candidate (3 rd Hospital of Jilin Univ.)	2/2007 – 2/2008
Yi Tan, PhD	Post-doctoral fellow (Wenzhou Medical Univ.)	2/2007 – 4/2013

Jiancheng Xu	MD/PhD candidate (1 st Hospital of Jilin Univ.)	4/2008 – 3/2009
Qiuju Liu	MD/PhD candidate (1 st Hospital of Jilin Univ.)	4/2008 – 3/2009
Shunyin Jin	Post-doctoral fellow	9/2008 – 8/2010
Junling Yang	Postdoctoral fellow, MD, PhD (2 nd Hospital of Jilin Univ)	9/2009 – 10/2010
Yuguang Zhao	MD/PhD candidate (1 st Hospital of Jilin Univ.)	9/2009 – 2/2011
Bing Li	PhD candidate (2 nd Hospital of Jilin Univ.)	3/2010 – 2/2011
Chi Zhang	Postdoctoral fellow (Wenzhou Medical Univ.)	3/2010 – 11/2013
Xia Yin	PhD candidate (1 st Hospital of Jilin Univ.)	5/2010 – 4/2012
Yang Bai	PhD candidate (1 st Hospital of Jilin Univ.)	10/2010 – 8/2012
Bo Wang	PhD candidate (Pathophysiology Dept. of Jilin Univ.)	11/2010 – 11/2011
Qiang Chen	Research Associate	11/2010 – 02/2012
Xiao Miao	PhD candidate (2 nd Hospital of Jilin Univ.)	03/2011 – 3/2013
Weixia Sun	PhD candidate (1 st Hospital of Jilin Univ.)	04/2011 – 4/2013
Wenpeng Cui	PhD candidate (2 nd Hospital of Jilin Univ.)	07/2011 – 07/2012
Zhongwen Gao	PhD candidate (1 st Hospital of Jilin Univ.)	09/2011 – 11/2012
Quan (France) Zhang	Research Associate (Guiyang Medical College)	04/2012 – 8/2014
Ying (Lily) Xin	Research Associate	05/2012 – 8/2014
Xin (Kent) Jiang	PhD candidate (1 st Hospital of Jilin Univ.)	05/2012 – 4/2013
Changting Meng	Research Associate (Beijing Union Hospital)	08/2012 – 6/2013
Yongang (George) Wang	PhD candidate (3 rd Hospital of Jilin Univ.)	10/2012 – 10/2013
Yongang (Garry) Wang	PhD candidate (1 st Hospital of Jilin Univ.)	10/2012 – 10/2013
Zhiguo (Zak) Zhang	PhD candidate (1 st Hospital of Jilin Univ.)	10/2012 – 10/2013
Shanshan (Sarah) Zhou	PhD candidate (1 st Hospital of Jilin Univ.)	10/2012 – 11/2014
Yangwei Wang	PhD candidate (2 nd Hospital of Jilin Univ.)	03/2013 – 03/2014
Hao (Robert) Wu	PhD candidate (2 nd Hospital of Jilin Univ.)	03/2013 – 03/2015
Lili Kong	PhD candidate (2 nd Hospital of Jilin Univ.)	09/2013 – 03/2015
Yucheng Liu	Summer Student	04/2013 – 08/2013
Kendell J Prater	Summer Student	05/2013 – 08/2013
Kyle Hawkins	Summer Student	05/2013 – 08/2013
Liang Tingting	Mater Candidate (Guiyang Medical College)	06/2013 – 05/2014
Kristen A. McClung	Research Associate	09/2013 – 08/2014
Weiyang Guo	Research Associate (1 st Hospital of Jilin Univ.)	12/2013 – 12/2014
Haifeng Zhang	Postdoctoral fellow (1 st Hospital of Jilin Univ.)	12/2013 – 12/2014
Manyu (Robert II) Lou	PhD candidate (2 nd Hospital of Jilin Univ.)	05/2014 – 03/2016
Shudong Wang	PhD candidate (1 st Hospital of Jilin Univ.)	08/2014 – 08/2016
Tao Bai	PhD candidate (1 st Hospital of Jilin Univ.)	08/2014 – 03/2016
Jing Xu	Research Associate (1 st Hospital of Jilin Univ.)	08/2014 – 08/2015
Ji Wang	PhD candidate (2 nd Hospital of Jilin Univ.)	08/2014 – 08/2015
Zheng Xu	PhD candidate (1 st Hospital of Jilin Univ.)	11/2014 – 03/2017
Xingkai Liu	PhD candidate (1 st Hospital of Jilin Univ.)	11/2014 – 03/2016
Xingyu Lin	PhD candidate (1 st Hospital of Jilin Univ.)	01/2015 – 03/2016

Junlian Gu	Postdoctoral fellow	07/2014 – 06/2017
Xinyue Liang	Postdoctoral fellow	01/2015 – 07/2016
Angela Gao	Second year medical graduate UofL	05/2015 – 08/2015
Jian (Kenny) Zhang	PhD candidate (1 st Hospital of Jilin Univ.)	11/2015 – 04/2018
Xinyue (Christina) Hu	PhD candidate (1 st Hospital of Jilin Univ.)	11/2015 – 10/2017
Xin (Golden) Lian	PhD candidate (1 st Hospital of Jilin Univ.)	12/2015 – 05/2018
Bowei Wang	Postdoctoral fellow	02/2016 – 02/2017
Hua Guo	Postdoctoral fellow	02/2016 – 01/2018
Ling-bo Qin	Postdoctoral fellow	05/2016 – 06/2017
Yongsoo Park	Visiting professor	06/2016 – 05/2017
Saizhi Jian	Postdoctoral fellow (Wenzhou Medical Univ.)	10/2016 – 9/2018
Yaqin Liang	Postdoctoral fellow (Wenzhou Medical Univ.)	10/2016 – 9/2018
Zhijie Li	Postdoctoral fellow (Wenzhou Medical Univ.)	10/2016 – 6/2018
Xiaogiang Tang	PhD candidate (1 st Hospital of Jilin Univ.)	10/2016 – 11/2019
Jiqun Wang	PhD candidate (1 st Hospital of Jilin Univ.)	10/2016 – 11/2019
Quanli Cheng	PhD candidate (1 st Hospital of Jilin Univ.)	10/2016 – 9/2017
Zongyu Zheng	PhD candidate (1 st Hospital of Jilin Univ.)	11/2016 – 03/2019
Haitao Yu	PhD candidate (1 st Hospital of Jilin Univ.)	07/2017 – 07/2019
Wanning Wang	PhD candidate (1 st Hospital of Jilin Univ.)	07/2017 – 09/2019
Tianjiao Ma	PhD candidate (1 st Hospital of Jilin Univ.)	09/2017 – 03/2019
Yike Sun	PhD candidate (1 st Hospital of Jilin Univ.)	11/2017 – 11/2019
Hui Xu	PhD candidate (1 st Hospital of Jilin Univ.)	11/2017 – 11/2019
Tingwen Ge	PhD candidate (1 st Hospital of Jilin Univ.)	11/2017 – 03/2020
Bin Zhou	Postdoctoral fellow from Jiangxi Children's Hospital	09/2017 – 10/2019
Yixiang Zhang	PhD candidate (2nd Hospital of Jilin Univ.)	03/2018 – 02/2019
Zhuo Li	PhD candidate (2nd Hospital of Jilin Univ.)	03/2018 – 06/2020
Yin Kang	Postdoctoral fellow from Guangdong Province Hospital	03/2018 – 02/2019
Jamie Young	PhD program of Pharmacology and Toxicology	04/2018 – present
Emma Huang	Summer student	05/2018 – 12/2020
Juan Zeng	PhD candidate (1 st Hospital of Jilin Univ.)	07/2018 – 07/2019
Wenqian Zhou	Postdoctoral fellow (1 st Hospital of Jilin Univ.)	11/2018 – present
Hongbo Man	Postdoctoral fellow (1 st Hospital of Jilin Univ.)	11/2018 – present
Xiang Wang	Postdoctoral fellow (1 st Hospital of Jilin Univ.)	11/2018 – 9/2020
Shan Huang	PhD candidate (1 st Hospital of Jilin Univ.)	11/2018 – present
Jia Li	Postdoctoral fellow (1 st Hospital of Jilin Univ.)	11/2018 – present
Jianjian Yu	PhD candidate (Tianjin Chest Hospital)	03/2019 – 3/2020
Ter Bao	PhD candidate (1 st Hospital of Jilin Univ.)	03/2019 – present
Guangyan Zhang	Postdoctoral fellow (Guangdong Genera Hospital)	03/2019 – 02/2020
Ryan Morate	Summer student	06/2019 – 08/2019
Xuemei Wu	Visiting Professor (1st Hospital of Jilin Univ.)	06/2019 – 09/2019
Lijuan Xiong	Postdoctoral fellow from Jiangxi Children's Hospital	09/2019 – 10/2021

Johnny Wish, Jr.	Postdoctoral fellow (PRI, Pharma/Tox, UofL)	07/2019 – 08/01/2021
Qian Lin	Postdoctoral fellow (PRI, Pediatrics, UofL)	08/2019 – 06/2020
Shannan Green	Master graduate orientation (UofL, Biochemical)	02/2020 – 09/2020
Erica Hassoun	Undergraduate (UofL, Biology, as a mentor in the President's Council Mentoring Program)	09/2020 – 04/2021
Jessica Fulkerson	2021 - Summer Research Scholar Program student	05/2021 – 07/2021

Mentoring Junior Faculty

01/01/2018 – present:	Dr. Jun Cai from Assistant Professor (Tenure Track), xxx
05/01/2013 – present:	From my postdoctoral fellow to Assistant professor (Research track: 2013 – 2018; Tenure Track: 2018 - 2019), Associate Professor (Tenured, 2019 – present)
08/31/2021 – present:	From my postdoctoral fellow (2019 – 2021) to Assistant professor (Research track: 2021 – present)

Seminar at national and international institutes or universities

- “Advances in research on adaptive response induced by low dose radiation” at Research Laboratory, Atomic Energy of Canada Limited (AECL), Canada (September 17, 1994).
- “Protective action of Metallothionein from radiation damage” at Beijing Institute of Industrial Hygiene, Beijing, China (November 16, 1996).
- “Metallothionein and oxidative-stress-induced carcinogenesis” at The First Teaching Hospital, Norman Bethune University of Medical Sciences, China, (September 15, 2000).
- “Diabetes: Animal models and cardiomyopathy” at Inflammation Research Group for the Series Seminars, Louisville (October 14, 2002)
- “Metallothionein prevents radiation and diabetes toxicity” at the Jilin University School of Preventive Medicine, P.R China (December 13, 2002)
- “Metallothionein prevents diabetic cardiomyopathy through suppression of diabetes-induced cardiac oxidative damage and cell death” at the Department of Pharmacology & Toxicology, University of Louisville School of Medicine (September 25, 2003).
- “Metallothionein prevents diabetic cardiomyopathy through suppression of diabetes-induced cardiac oxidative damage and cell death” at the Basic Research Lecture in the Division of Gastroenterology/Hepatology, Department of Medicine, for Resident Fellows, University of Louisville, (Oct. 24, 2003).
- “Metallothionein prevents diabetic cardiomyopathy through suppression of oxidative stress and myocardial cell death” at Colorado State University for the Cell and Molecular Biology Graduate Program (Nov. 6, 2003)
- “Diabetic cardiovascular toxicity and its prevention” as one of series of presentations presented by American-Chinese Toxicologist delegation to China, this presentation was given at Beijing University (Nov. 10, 2003), Guilin University (Nov.12, 2003), and Jilin University (Nov. 17 – 18, 2003).
- “Diabetic cardiomyopathy and metallothionein” at the Division of Transplantation Biology Research, The State Key Laboratory of Biomembrane and Membrane Biotechnology, The Institute of Zoology, Chinese Academy of Science, (Oct. 25, 2004), Beijing, PR China
- “Metallothionein prevents diabetic cardiomyopathy through suppression of oxidative stress and myocardial cell death” at the School of Pharmacy, Jinan University (Oct. 27, 2004), Gongzhou, PR China
- “Cardiovascular complications of diabetes and its prevention by metallothionein: potential for pharmaceutical development of metallothionein inducers” at the Botai Pharmaceutical Co. (Nov. 5, 2004), Changchun, PR China

- “Further evidence for metallothionein prevention of diabetic cardiomyopathy” at the School of Preventive Medicine, Jilin University (Nov. 4, 2004), PR China
- “Diabetic cardiovascular complications and its prevention: how to select this research project and design experiments?” at the Dept of Hematology and Oncology, The First Teaching Hospital (Nov. 6, 2004), and also at Department of Urology, The China-Japan Union Hospital (Nov. 8, 2004), Jilin University, Changchun, PR. China
- “Diabetic cardiomyopathy and metallothionein prevention” as one of the Cardiovascular Lecture Series, at the Cardiovascular Research Institute, Morehouse School of Medicine, September 6, 2005
- “Diabetic cardiomyopathy and its prevention by metallothionein: Experimental evidence, possible mechanisms and clinical implication” at the Department of Medicine, Division of Endocrinology, University of Oklahoma College of Medicine (UOCM), Oklahoma City, Feb. 16 2006
- “Metallothionein prevents diabetic cardiomyopathy by suppression of nitrosative damage” at the Department of Medicine, Division of Endocrinology, University of Oklahoma College of Medicine (UOCM), Oklahoma City, Feb. 17, 2006
- “Low-dose radiation induced hormesis and adaptation in leukemia cells” at the University of Wyoming Neuroscience Program & Physiology Club. University of Wyoming College of Health Sciences, Laramie, WY, Nov. 30, 2006
- “Metallothionein prevents diabetic cardiomyopathy: Experimental evidence, possible mechanisms and clinical implications” at the University of Wyoming School of Pharmacy, Laramie, WY, Dec. 1, 2006
- “Biological effects of low-dose radiation: adaptive response and hormesis” at the Journal club, the Department of Radiation Oncology, University of Louisville, February 16, 2007.
- “Diabetes, Zinc & Metallothionein: Is it possible to use transgenic plants for prevention of diabetes and diabetic complications?” at the Jilin Agriculture University, Changchun, China, November 15, 2007.
- “Metallothionein prevents the heart from diabetes: evidence, mechanisms and clinical implications” at the Chinese-Japan Union Hospital, Jilin University, Changchun, May 15, 2008.
- “How to prepare and revise an SCI manuscript: Personal experience” at the Shanghai RuiJing Hospital, sponsored by Chinese Journal of Gastroenterology, and MedJade Co., May 20, 2008.
- “Low dose radiation, metallothionein, and diabetes” at the Bioland Co. Korea, May 22, 2008
- “Metallothionein protection of the heart from diabetes: Experimental evidence, possible mechanisms and clinical implication” at the Department of Pediatrics, the University of Louisville, July 11, 2008
- “How to prepare and revise an SCI manuscript: Several features” at the School of Pharmacy, Wenzhou Medical College, Wenzhou, China, November 13, 2008
- “Personal experience for scientific research, publication and grant application” at the Third Teaching Hospital, Jilin University, Changchun, China, December 23, 2008
- “Research for diabetic complications: where we have been and where we should go” at the Pharmacy School, Wenzhou Medical College, April 19, 2009.
- “Research for multiple diabetic complications: How to collect experimental evidence, explore the mechanisms and develop a potential approach to application in clinics?” at the Wenzhou Medical College, Wenzhou, China, July 20, 2010.
- “Research for multiple diabetic complications: How to collect experimental evidence, explore the mechanisms and develop a potential approach to application in clinics?” at the Jilin University of Agriculture, Changchun, China, August 1, 2010.

- “Research for multiple diabetic complications: How to collect experimental evidence, explore the mechanisms and develop a potential approach to application in clinics?” at the Second Hospital of Jilin University, Changchun, China August 2, 2010.
- “Diabetic cardiomyopathy and metallothionein” at the Department of Physiology, Fourth Military Medical University, Xi’An, China, April 27, 2011
- “Diabetic cardiomyopathy and its prevention by metallothionein- how to develop a research direction” at the School of Pharmacy, Wenzhou Medical College, Wenzhou, China, April 29, 2011.
- “Diabetic cardiomyopathy and its metallothionein – Evidence, Mechanisms and clinical application” Beijing Capital Medical University School of Public Health, Beijing, China. November 24, 2011.
- “Metallothionein prevention of diabetic cardiomyopathy” at the Department of Obstetrics, Gynecology & Reproductive Sciences, University of Maryland Medical Center, Baltimore, June 13, 2012.
- “Metallothionein prevents diabetic cardiomyopathy: Basic research and clinical questions” at the People’s Hospital of Jilin Province, Changchun, May 3, 2013
- “Diabetic cardiomyopathy and its prevention by metallothionein and Nrf2 activators: an update” People’s Hospital at Ruian, Ruian, May 7, 2013.
- “Metallothionein prevents diabetic cardiomyopathy” UNC MHI Seminar Series, December 3, 2013
- “Research on diabetic complications: metallothionein role” Department of Geriatric Diseases at the First Hospital of Jilin University, Changchun, May 23, 2014
- “Diabetic cardiomyopathy and its prevention by metallothionein”, Department of Pharmacology & Nutritional Sciences Seminar Series, University of Kentucky, Kentucky, USA, September 11, 2014
- “Metallothionein Prevents Diabetic Cardiomyopathy” Division of Molecular Cardiology, Department of Medicine, Texas A & M Health Science Center, Temple, Texas, USA, February 19, 2015
- “Role of trace element zinc on diabetes and diabetic complications” Department of Biochemistry & Molecular Biology, Indiana University School of Medicine, Indianapolis, Indiana, April 2, 2015
- “Metallothionein and diabetic cardiomyopathy” Diabetes and Obesity Center, University of Louisville, Baxter Auditorium, March 22, 2016
- “Diabetic Cardiomyopathy and its Potential Intervention: important role of MT and Zn” Departments of Cardiology and Radiology (Image Diagnosis), Beijing Capital University Anzhen Hospital, Beijing, April 26, 2016
- “Diabetic cardiomyopathy and role of oxidative stress” at the Department of OB/GYN and Reproductive Science Center, University of Maryland School of Medicine, Baltimore, DM, on September 27, 2017
- “Diabetic Complications Research in Dr. Lu Cai laboratory and collaborative opportunities” The Third Hospital of Jilin University, Changchun, China, April 20, 2017.
- “Research in Dr. Lu Cai laboratory with a focus on diabetic cardiomyopathy” at the Institute of Radiation Medicine, Chinese Academy of Medical Sciences & Peking Union Medical College, Tianjin, on November 10, 2017.
- “Hormetic effects of low dose radiation: uncommonly expected!” at the Bioengineering Department Seminar Series Spring, J.B. Speed School of Engineering, the University of Louisville, Louisville, KY, on February 7, 2018
- “Diabetic cardiomyopathy and role of oxidative stress” at the School of Health Sciences, Purdue University, West Lafayette, Indiana, on February 13, 2018
- “Diabetic cardiomyopathy and role of oxidative stress” at the Department of Pharmacology and Toxicology, EHS Seminar at the University of Louisville School of Medicine, Louisville, KY, on March 1, 2018

“Effects of chronic exposure to low-dose Cd on multi-organs” at the Department of Pharmacology and Toxicology, EHS Seminar Series University of Louisville School of Medicine, Louisville, KY, on September 3, 2020

“Health Effects of Low Dose Ionizing Radiation” invited by University of Louisville School of Public Health & Information Sciences Student Government Association Council that held a series of seminars for World Cancer Day by UofL faculty across multidisciplinary departments at the School of Public Health, and School of Medicine starting at 9AM – 4:00 pm on February 4th, 2021 via Microsoft Teams.

“Diabetic Cardiomyopathy: Role of Zn and its Binding Protein (MT) in Insulin Signaling” at the Division of Endocrinology, Metabolism and Diabetes Multidisciplinary Endocrine Conference, on Wednesday, March 10, 2021, 4:00-5:00 p.m. virtually (<https://bluejeans.com/563839152>)

CLINICAL ACTIVITIES

N/A

GRANTS AND CONTRACTS

Ongoing grants

1. 01/1/2018 – 12/31/2021
 - 1-18-IBS-082
 - Basic Research Award from American Diabetes Association
 - “Zinc-induced MT prevents diabetic cardiomyopathy by regulating CARD9/P38a MAPK”
 - Total support cost: #345,000
 - Yearly: \$115,000
 - Effort: 10%
 - Role: PI
2. 07/01/2021 – 06/30/2023
 - NIH/NIEHS 1R21ES033327-01
 - Cr(VI)-Induced DNA Damage Contributes to Brain Aging
 - Effect: 3%
 - Role: Co-Investigator
3. 05/01/2017 – 04/30/2022
 - 1R01HL12587701A1
 - A novel mechanism of stromal cell derived factor 1 protection against diabetic cardiomyopathy
 - Total support cost: \$1,250,000
 - Yearly \$250,000
 - Effort: 5%
 - Role: Co-I (PI: Yi Tan)
4. 05/01/2018 – 04/30/2022
 - Robley Rex Veterans Affairs Medical Center
 - The Vagus Nerve in Lung Disease
 - Total support cost: \$1,017,581
 - Effort: 5%
 - Role: Co-I (PI: Jun (Jerry) Yu)
5. 09/01/2019 – 08/31/2023

NIH/ R1NIEHS R01
 Cell survival advantage in cadmium induced carcinogenesis”
 Effort: 5%
 Role: Co-investigator [Chendil Damodaran (PI)]

6. 09/01/2021 – 08/31/2023

NIH/NIEHS 1 R21 ES033327-01
 Cr(VI)-Induced DNA Damage Contributes to Brain Aging
 Effort: 3%
 Role: Co-investigator [John Wise, Jr. (PI)]

7. 07/01/2021 – 06/30/2026

NIH/NIEHS T32, ES011564
 UofL Environmental Health Sciences Training Program
 Effort: N/A
 Role: Mentors for one PhD graduate & one Postdoc. Fellow (Hein and Wise, Multi-PI)

8. 07/01/2020 – 06/30/2025

NIH/NIEHS, P30 ES030283
 University of Louisville Center for Integrated Environmental Health Sciences
 Effort: 2-3%
 Role: Leader for the Multi-Organs Interesting group (MOL RIG);
 Director of Metallomics Shared Resource for Environmental metals, at the Integrated
 Toxicomics & Environmental Measurement Facility Core, ITEMFC (PI: States)

9. 07/01/2020 – 06/30/2021

Uof L EVPRI Internal Grant, Research II
 “Role of Nrf2 Pathway in Right Heart Failure” This project will define the role of Nrf2 in
 preventing pulmonary arterial pressure-induced right heart failure
 Role: Co-investigator [Jiapeng Huang (PI)]

10. 06/01/2020 – 05/31/2021

UofL School of Medicine Basic Grant
 “Study of Right Ventricular Dysfunction in an Untreated Type I Diabetes Mellitus Mouse
 Model”
 Role: Co-investigator [Jiapeng Huang (PI)]

Pending Research Support

NIH/1 R21 AG073794-01 Jun Cai (PI/PD), Lu Cai (mPI) Submitted by Oct. 16, 2020
 “The bioeffects of focal fractionated low-dose ionizing radiation on endogenous adult neural stem cells in Alzheimer’s
 dementia”

CDC/1U18DP006530-01 Jiapeng Huang (PD), Lu Cai (mPI)
 “Adoption of a Community Wide, Multifaceted, Personalized, and Barrier Focused Peer Group Method to Improve
 Type 2 Diabetes Outcomes in Low Income Communities”

NIH/1R21ES033747-01 Madhavi Rane (PD), Lu Cai (mPI) Submitted by February 16, 2021
 “Divergent roles of whole-life low and high cadmium exposure on postweaning High-fat-Diet-induced renal
 pathogenesis”

NIH/1R21 Jun Cai (PI/PD), Lu Cai (Co-I) Submitted by February 16, 2021
 “Disruption of β -catenin destruction complex and neurodevelopmental disorders in whole-life cadmium exposure and postnatal obesity”

NIH/1R01DK118229-01A1 Madhavi Rane (PD), Lu Cai (mPI) Revised & resubmitted by July 16, 2020
 “Elucidating the role of Akt1-substrates in modulation of renal functional responses to diabetes” [Not discussed]

NIH/1R01 DK132163-01 Yi Tan (PD/PI), Lu Cai (mPI) Submitted by June 6, 2021
 “Dual targeting CXCR4 and CXCR7 prevents diabetic kidney disease”

Completed grants

1. 04/01/2016 – 03/31/2020
 R01 NHLBI/1R01HL131110-01A1
 “E2F1 in bone marrow progenitor cells”
 Role: PI (Louisville-subcontract, FE: 5% [\$58,885]; PI: G. Qin, University of Alabama)
2. 07/01/2017 – 06/30/2018
 KSEF-3937-RDE-020
 “Zinc Homeostasis and Brain White Matter Integrity in High-fat Diet-induced Obesity”
 Role: Co-I (PI: Dr. Jun Cai)
3. 1/2015 – 12/2017
 7-14-BS-018, Basic Research Award from American Diabetes Association
 “A Translational Approach to Preventing Diabetic Cardiomyopathy by Targeting Nrf2 Function”
 Total support cost: \$ 339,250 (\$295,000 direct/\$112,500 indirect)
 Yearly: \$109,250/\$115,000/\$115,000
 Effort: 20%
 Role: PI
4. 12/2015 – 11/2017 (one year NCE)
 Pilot Award from Children’s Hospital Foundation & Norton Healthcare Foundation
 Zinc and nutrient deficiency in Children diabetes
 Total support cost: \$ 47,500
 Yearly: \$47,500
 Effort: 5%
 Role: Co-PI (PI: Kupper Wintergerst, Division of Endocrinology, Pediatrics)
5. 9/15/2013 – 8/31/2016 (NCE for one year)
 R01 NIDDK/1R01DK091338-01A1
 “Low-dose irradiation as a novel intervention for diabetic nephropathy”
 Total support cost: \$ 375,000 (\$250,000 direct/\$125,000 indirect)
 Yearly: \$250,000/\$125,000
 Effort: 15%
 Role: PI
6. 9/15/2013 – 8/31/2016
 3R01DK091338-02S1 NIH Supplementation grant
 Metabolic mechanisms by which low-dose irradiation prevents diabetic nephropathy

Total support cost: \$ 100,000 (\$100,000 direct/\$50,000 indirect)
Yearly: \$100,000
Effort: 5%
Role: PI

7. 1/2013 – 12/2016 (NCE for one year)

Basic Research Award from American Diabetes Association
“Sesquiterpenoids abolish hepatocellular carcinoma stem cells in the comprised liver by diabetes”

Total support cost: \$ 339,250 (\$295,000 direct/\$112,500 indirect)
Yearly: \$109,250/\$115,000/\$115,000
Effort: 5%
Role: Co-PI (PI: Dr. Yan Li at the Department of Surgery)

8. 1/2012 – 12/2014

Basic Research Award from American Diabetes Association
“Role of HIF in hypertrophy heart of diabetes”

Total support cost: \$ 339,250 (\$295,000 direct/\$112,500 indirect)
Yearly: \$109,250/\$115,000/\$115,000
Effort: 5%
Role: Co-PI (PI: Dr. Wenke Feng at the Department of Medicine)

9. 1/2011–12/2013:

Basic Research Award from American Diabetes Association
“Nrf2 activator to prevent diabetic cardiomyopathy: A potential therapeutic approach”
Total support cost: \$ 339,250 (\$295,000 direct/\$112,500 indirect)
Yearly: \$109,250/\$115,000/\$115,000
Effort: 20%
Role: PI

10. 9/2010 – 8/2013

OR090617 from Department of Defense
“Acceleration of the Angiogenesis and Soft Tissue Regeneration for the Hind Limb Complex Wound by a Novel Approach: Combined Use of SDF-1betaP2G with FGF and Zinc”
Total support: \$581,086 (388,975 for direct and 192,111 for indirect)
Yearly: \$193,700/\$192,137/\$194,757
Effort: 25%

11. 7/2010 – 6/2013

Bioland Ltd, Nature, Science & Life, South Korea
Collaborating Initiative for Research of Anti-diabetes and Anti-obesity
Total support: \$327,800 (direct cost: \$220,000)
Yearly: \$163,900/\$163,900
Effort: 10%
Role: PI

12. 7/2005–12/2010

American Diabetes Association
“Mechanisms for metallothionein prevention of diabetes-induced nitrosative damage to the heart”

Total direct cost: \$887,500 (\$775,000 direct/\$112,500 indirect)

Effort: 40%

Role: PI

13. 7/2007–12/2010

American Diabetes Association

“Metallothionein and hypoxia inducible factor-1 in diabetic cardiomyopathy” Total support:
\$414,000 (\$360,000 direct/\$54,000 indirect)

Effort: 13% (13% salary)

Role: Collaborator (PI: Wenke Feng)

Role: PI

14. 7/2006–3/2008

Juvenile Diabetes Research Foundation

“Diabetic wound healing by topical use of aFGF/Zn and systemic rise of EPCs”

Total support: \$110,000 (\$100,000 direct/\$10,000 indirect)

Effort: 10%

Role: PI

15. 7/2006–6/2008

Post-doctoral fellowship from American Heart Association, Ohio Valley Affiliate
Prevention of Angiotensin II-induced early cell death by metallothionein leads to a
prevention of the late cardiomyopathy”

Total direct cost: \$84,700 (no indirect cost)

Effort: no effort

Role: Mentor (Trainee: Guihua Zhou as PI)

16. 11/2007–10/2008

Pilot project from The NIEHS Center for Environmental Genomics and Integrative Biology
(CEGIB) at the University of Louisville

“Genomic and Epigenetic Mechanisms for Environmentally Cd-induced Carcinogenesis”

Total direct cost: \$30,000 (no indirect cost)

Effort: 5%

Role: PI

17. 7/2002–2/2006

Philip Morris External Research Program

“Myocardial protection by metallothionein from diabetic complication.” Total support:
\$516,415 (\$361,164 direct/\$155,301 indirect)

Effort: 25%

Role: PI

18. 7/2002–6/2005

American diabetes Association

“Diabetic cardiomyopathy and its prevention by metallothionein”

Total support: \$414,000 (\$360,000 direct//\$54,000 indirect)

Effort: 40%

19. 01/2001–12/2002

Jewish Hospital Foundation

“Metallothionein protection against diabetic cardiomyopathy”

Total support: \$49,500.00 (no indirect cost)

Effort: 20%

Role: PI

20. 2/2001 – 1/2002

University of Louisville School of Medicine

“Diabetic Cardiomyopathy and its prevention by metallothionein”

Total support: \$15,000 (no indirect)

Effort: 10%

Role: PI

EDITORIAL WORK

Editor-in-Chief

2016 – Present *Journal of Toxicology and Risk Assessment*

2017 – Present *Journal of Microbial & Biochemical Technology*

Associate Editor

2011 – 2015 *Journal of Geriatric Cardiology*

2014 – 2019 *Toxicological Sciences*

2015 – present *Immunoendocrinology* (<https://www.smartscitech.com/index.php/ie/about/editorialTeam>);

2020 - present *Radiation Medicine and Protection*

Senior editor

2011 – 2013 *International Journal of Clinical and Experimental Pathology*

2012 – Present *Journal of Diabetes Research and Clinical Metabolism*

Guest Editor for Special issues

(1) *Journal of Diabetes Research*

Special issue: “Cytokines and Diabetes Research” Volume 2014 (2014),

Guest Editors: Jian Xiao, Ji Li, **Lu Cai**, Subrata Chakrabarti, and Xiaokun Li

(2) *Oxidative Medicine and Cellular Longevity*

Special Issue: “Redox Signaling and Myocardial Cell Death: Molecular Mechanisms and Drug Targets” Volume 2016 (2016),

Guest Editors: Rajesh Mohanraj; **Lu Cai**; Partha Mukhopadhyay; Srinivasan Vedantham

(3) *International Journal of Molecular Science*

Special Issue: “Diabetic Complications: Pathophysiology, Mechanisms, and Therapies” 2016 – 2017 (21 publications)

Guest Editors: **Lu Cai**, Yuehui Wang, Zhiguo Zhang

(4) *Journal of Diabetes Research*

Special Issue: “Targeting Oxidative Stress in Diabetic Complications: New Insights” Volume 2017 (2017),

Guest Editors: Hao Wu, **Lu Cai**, Judy de Haan, Robertina Giacconi

(5) *Dose-Response*

- Special Issue: “Potential Clinical Implication of LDR Hormesis and Adaptive Response” Volume 2018 (2018),

Guest Editors: **Lu Cai**, Bing Wang, Qiang Liu

- Special Issue: “Potential Biomarkers of Radiation Damage” Volume 2020 (2020),
Guest Editors: Qiang Liu, Bing Wang, **Lu Cai**

(6) *Frontiers in Public Health*

Special Issue: “Research Topic Medical Application and Radiobiology Research of Particle Radiation” Volume 2020,

Guest Editors: Fei Ye, Chao Sun and Yi Xie (China); Lu Cai (USA); Bing Wang (Japan)

Member of Editorial boards

2001 – 2005	<i>Cardiovascular Toxicology</i>
2003 – 2014	<i>The Journal of Applied Research</i>
2003 – present	<i>Dose Response [Formerly Nonlinearity in Biology, Toxicology and Medicine]</i>
2004 – 2008	<i>Toxicology Letters</i>
2008 – present	<i>Journal of Diabetes</i>
2009 – 2018	<i>World Journal of Cardiology</i>
2009 – 2019	<i>World Journal of Diabetes</i>
2010 – present	<i>Journal of Cancer Therapy</i>
2011 – 2013	<i>Journal of American College of Cardiology</i>
2011 – 2014	<i>World Journal of Experimental Medicine</i>
2012 – present	<i>Am J Physiology: Endocrinology and Metabolism</i>
2013 – 2019	<i>Reviews in Endocrine & Metabolic Disorders</i>
2016 – present	<i>Journal of Geriatric Cardiology</i>
2016 – present	<i>Current Diabetes Reviews</i>
2017 – 2019	<i>Diabetes</i>
2019,10 – 2021, 9	<i>Annals of Translational Medicine</i>
2019 – present	<i>Scientific Report</i>
2020 – Present	<i>Seminars in Cardiothoracic & Vascular Anesthesia</i>

Ad hoc manuscript Review for Peer-Reviewed Journals

1999-2014	<i>Radiation Research</i>
2001-2008	<i>Chemical Research in Toxicology</i>
2001-2014	<i>Toxicological Sciences</i>
2003-2014	<i>Dose Response</i>
2004	<i>Apoptosis</i>
2004-2008	<i>Aging Cell</i>
2004-2009	<i>Cancer Letters</i>
2004-2010	<i>Acta Pharmacologica Sinica</i>
2004-2014	<i>Cardiovascular Research</i>
2005	<i>Cellular and Molecular Biology</i>
2005	<i>Journal of Applied Physiology</i>
2005	<i>Molecular Biotechnology</i>

2005-2008 *BioGerontology*
2005-2011 *Diabetes Res & Clinical Practice*
2005-2014 *International Journal of Biochemistry & Cellular Biology*
2005-2014 *Journal of Molecular and Cellular Cardiology*
2006 *Blood*
2006 *Journal of Nephrology*
2006 *Nephrology Journal*
2006-2011 *Clinical and Experimental Pharmacology and Physiology*
2006-2014 *Life Sciences*
2006-2014 *Alcohol & Alcoholism*
2006-2014 *Diabetes*
2006-2014 *International Journal of Radiation Biology*
2007 *Journal of Biological Sciences*
2007 *Journal of Cellular Physiology*
2007-2014 *Journal of the American College of Cardiology*
2007-2014 *Circulation*
2007-2014 *Obesity Research*
2008 *Anatomic Records*
2008 *Oncogene*
2015 *Oncotarget*
2008 *Redox Report*
2008 *Therapeutic Advances in Cardiovascular Disease*
2008-2010 *Bioorganic & Medicinal Chemistry*
2008-2014 *Journal of Cellular and Molecular Medicine*
2008-2010 *Journal of Drug Targeting*
2008-2012 *Wound Repair and Regeneration*
2008-2014 *Canadian Journals of Physiology & Pharmacology*
2008-2014 *Diabetes Care*
2008-2014 *Diabetologia*
2008-2014 *Journal of Nutrition Biochemistry*
2009 *American Journal of Biomedical Sciences*
2009 *Journal of Applied Toxicology*
2009 *Journal of the American Society of Nephrology*
2009 *Prenatal Diagnosis*
2009-2010 *American Journal of Medical Sciences*
2009-2010 *DiabetesMetabolism Research and Reviews*
2009-2011 *Biological Trace Element Research*
2009-2014 *FASEB Journal*
2009-2013 *Experimental Biology & Medicine*
2009-2014 *American Journal of Physiology - Endocrinology and Metabolism*
2009-2014 *Physiological Genomics*

2010, 2014 *Free Radicals in Biology & Medicine*
 2010 - 2014 *International Journal of Radiation Oncology, Biology & Physics*
 2010 *Journal of Reproductive Immunology*
 2010-2013 *American Journal of Physiology - Heart and Circulatory Physiology*
 2010-2013 *Renal Failure*
 2010-2014 *BBA - Molecular Basis of Disease*
 2010-2014 *Journal of Cardiovascular Pharmacology*
 2011 *Biochemical Journal*
 2011 *Biomaterials*
 2011-2014 *Toxicology Letters*
 2011-2013 *Journal of Diabetes and Metabolism*
 2011-2014 *Biochemical Pharmacology*
 2011-2014 *PLoS One*
 2012- 2014 *Hypertension*
 2012-2013 *European Heart Journal*
 2012-2013 *PNAS*
 2012-2014 *Critical Care Medicine*
 2013 *Journal of Clinical Investigation*
 2014 *Endocrinology*
 2009 - 2014 *Journal of Diabetes*
 2014 *Molecular Endocrinology*
 2008 – 2013 *Journal of Experimental and Pharmacological Therapy*
 2003 – 2014 *Cardiovascular Toxicology*
 2015 – present *Oncotarget*
 2015 – present *Scientific Report*
 2018- present *J Biological Chemistry*
 2018 – Present *Redox Biology*
 2017 – present *eBioMedicine*
 2020 – present *Nature Communication*
 2020 – present *Science Advance*
 2020 – present *Cell Metabolism*
 2020 – present *Endocrine Review*
 2020 – present *Aging Review Research*
 2020 – present *Trends in Molecular Medicine*
 2020 – present *Signal Transduction and Targeted Therapy*

ABSTRACTS AND PRESENTATIONS

Abstracts for Poster Presentations at National/International Meetings: * indicating Cai L as corresponding author

1. **Cai L**, Koropatnick J., Cherian M.G. Protective effect of metallothionein in radiation- and Cu(II)-induced DNA damage *in vitro*. *Fund. Appl. Toxicol* 28 (Suppl. 1): 83, 1995.

2. **Cai, L.**, Hales, B.F., Robaire, B. Cyclophosphamide (CPA) induces apoptosis in the germ cells of rat testes in a cell and stage specific manner. *J. Androl.* 17 (Suppl.1): 35, 1996.
3. Deng, X., **Cai, L.**, Cherian, M.G. Metallothionein and apoptosis in thymus after radiation. *Fund. Appl. Toxicol.* 36 (Suppl. 1): 254, 1997.
4. Lau, J.C., **Cai, L.**, Cherian, M.G. Effect of γ -irradiation in metallothionein synthesis and lipid peroxidation in transgenic mice. *Fund. Appl. Toxicol.* 36(Suppl. 1): 299, 1997.
5. **Cai, L.**, Cherian, M.G. Protective role of metallothionein from cadmium-induced cytotoxic and genotoxic effects in CHO cells. *Fund. Appl. Toxicol.* 36 (Suppl. 1): 113, 1997.
6. Hammond, R.R., **Cai, L.**, LeBlance, M., Cherian, M.G. Induction of metallothionein expression and apoptotic cell death in human primary CNS cultures by ionizing radiation, Proceeding of The Fourth International Metallothionein Meeting, September 17-20, 1997, Kansas City, Missouri, USA, Abstract # 168.
7. **Cai, L.**, Lau, J.C., Waalkes, M.P., Cherian, M.G. Metallothionein in normal and abnormal spermatogenesis. Proceeding of the Fourth International Metallothionein Meeting, September 17-20, 1997, Kansas City, Missouri, USA, Abstract # 100.
8. **Cai L***, Deng, D.X., Cherian, M.G. Effect of metallothionein on radiation-induced apoptosis. Proceeding of the 46th Annual Meeting of the Radiation Research Society, April 25-29, 1998, Louisville, Kentucky. (Ab#: p23-442).
9. Wang, G.J., **Cai, L***,: Low-dose radiation induces hormetic effect in mouse hematopoietic cells and adaptive response of these cells to subsequent radiation-induced cytotoxic effects. Proceeding of the 46th Annual Meeting of the Radiation Research Society, April 25-29, 1998, Louisville, Kentucky. (Ab#: p23-440).
10. Chakrabarti, S., **Cai L.**, Mukherjee, K., Wang, G.J., Cherian, M.G. Endothelins and their receptors in cirrhosis and in neoplastic liver diseases from two geographically separate populations. *Lab. Invest.* 79: 161, 1999.
11. **Cai, L.**, Hammond, R.R., Cherian, M.G. Metallothionein and radiation protection in primary human CNS cultures. *Toxicological Sciences* 48: (Suppl. 1): 290, 1999.
12. **Cai, L.** Klein JB, Kang, Y.J. Metallothionein prevents diabetic cardiomyopathy. *Toxicological Sciences* 60: 13-13, 2001.
13. Kang, Y.J., **Cai, L.** Metallothionein suppression of diabetic cardiomyopathy by inhibition of hyperglycemia-induced oxidative stress. *Free Radical Biology & Medicine* 31 (Suppl 1), S33, 2001.
14. **Cai, L.***, Li, Y., Sun, X., Kang, Y.J. Prevention of diabetic cardiomyopathy by metallothionein in transgenic mice. *Syllabus of Understanding the metabolic syndrome: Effect on diabetes and cardiovascular disease.* December 7-8, 2001. Tempe Mission Palm Hotel, Tempe, Arizona. P141.
15. **Cai, L.**, Li, W., Sun X., Li, Y., Kang, Y.J: Prevention of diabetic cardiomyopathy by metallothionein through suppression of hyperglycemia-induced oxidative stress and cell death. *Toxicological Sciences* 66 (Suppl. 1): 288-288, 2002.
16. Li Y, **Cai L**, Zhou Z., Kang YJ. Up-regulation of endothelia system is involved in nicotine-induced cardiotoxicity in rats with acute myocardial infarction. *Toxicological Sciences* 72 (Suppl. 1): 34-34, 2003.
17. **Cai L**, Sun X, Li Y, Wang L, Kang YJ. Inhibition of peroxynitrite-induced damage is involved in metallothionein prevention of diabetic cardiotoxicity. *Toxicological Sciences* 72 (Suppl. 1): 36-36, 2003.
18. **Cai L**, Li Y, Wang L, Kang YJ. Suppression by metallothionein of early-phase myocardial cell death prevents the late development of diabetic cardiomyopathy. *Diabetes* 52 (Suppl. 1): 172-172, 2003.
19. Song Z, Song Y, **Cai L***. Diabetes enhances LPS-induced cardiac toxicity in mouse model. *Diabetes Metab* 29 (4S): 323, 2003.

20. **Cai L***. Diabetes-induced cardiac oxidative stress, cell death and cardiomyopathy. *Diabetes Metab*, 29 (4S): 322, 2003.
21. Wang J, Jiang Y, Kang YJ, **Cai L***. Protection by Metallothionein induction from cytotoxicity induced by high levels of glucose and triglyceride. *Toxicological Sciences* 78 (Suppl. 1): 167-167, 2004.
22. Song Y, Wilkerson J, Kang, **Cai L***. Prevention of diabetic cardiomyopathy by zinc supplementation correlates with metallothionein induction. *Toxicological Sciences* 78 (Suppl. 1): 167-167, 2004.
23. **Cai L**, Song Y, Zhang L, Jiang Y, Saari JT, Kang YJ. Diabetes-induced cardiac MT synthesis: Independent of metal alterations or oxidative damage, but likely relevant to inflammatory factors. *Toxicological Sciences* 78 (Suppl. 1): 167-167, 2004.
24. Zhou G, Li C, **Cai L***. Advanced glycation end-products induce connective tissue growth factor-mediated renal fibrosis predominantly through transforming growth factor β -independent pathway: AGE-induced CTGF expression plays a pivotal role in diabetic nephropathy. *Diabetes* 2004 (Suppl 2): A507.
25. **Cai L***. Zinc supplementation prevents diabetic cardiomyopathy likely through cardiac Metallothionein induction. *Diabetes* 2004 (Suppl.2): A472-473.
26. Wang GJ, **Cai L***. Low-dose radiation (LDR) induces hematopoietic hormesis: LDR-induced mobilization of hematopoietic progenitor cells into peripheral blood circulation. In: Symposium on Cardiovascular Regenerative Medicine, NIH/NHLBI, Bethesda, Maryland. September 13-14, 2004.
27. **Cai L***. Prevention of diabetes-enhanced LPS cardiotoxicity in cardiac-specific metallothionein-overexpressing transgenic mice. Research Symposium on Inflammation, Diabetes and Cardiovascular Disease: Emerging Science and Clinical Implications. American Diabetes Association, Sofitel Chicago O'Hare Hotel, Rosemont, Illinois, September 30- October 2, 2004. pp.51
28. Song Y, Wu R, Barati M, Rane M, **Cai L***. Diabetes-induced nephropathy associates with Akt and p38 kinase activation. *Toxicological Sci.* 84 (Suppl. 1): 251, 2005.
29. Wang J, Kang YJ, **Cai L***. Metallothionein protection from protein nitration caused by LPS/TNF-alpha-derived intracellular peroxynitrite. *Toxicological Sci.* 84 (Suppl. 1): 375, 2005.
30. **Cai L***, Kang YJ. Prevention of diabetes-enhanced LPS cardiotoxicity in cardiac-specific metallothionein-overexpressing transgenic mice. *Toxicological Sci.* 84 (Suppl. 1): 376, 2005.
31. Li XK, **Cai L***. Zinc and the diabetic heart. *Diabetes* 54 (Suppl. 1): A547 Ab# 2272, 2005
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148. Yanli Cheng, Lili Kong, Hao Wu, Zhonggao Xu, **L. Cai***. Metallothionein as a Nrf2 Downstream Gene Plays an Essential Role in Sulforaphane Protection Against Diabetes-induced Cardiac Remodeling and Pathogenic Changes. *Diabetes* 65 (Suppl.1): A125 (#476-P), 2016
149. Rajesh Mohanraj, Kamal Hassan, Coral Karunakaran, **L. Cai***. Dimethyl Fumarate (DMF) Confers Protection against Diabetes-induced Retinal Pathology via Activation of Nrf-2 Pathway in a Murine Model of Type 1 Diabetes Mellitus. *Diabetes* 65 (Suppl.1): A156 (#604-P), 2016
150. Shudong Wang, Manyu Luo, **L. Cai***, Zhiguo Zhang. Effects of Zinc Status on Obesity-induced Metabolic Disorder and Cardiac Hypertrophy in Young Mice. *Diabetes* 65 (Suppl.1): A499 (#1944-P), 2016
151. Xinyue Liang, Wei Li, **L. Cai***. MicroRNAs Expression in Different Tissues in Mouse Model of Type 1 Diabetes. *Diabetes* 65 (Suppl.1): A611 (#2442-PUB), 2016
152. Lin Q, Huang Z, Song L, Qian L, **Cai L**, Mohammadi M, Tan Y. FGF1 ameliorates diabetic nephropathy through an anti-inflammatory mechanisms. *The Toxicologist* 156 (Issue 1):192 (PS1812), 2017
153. Waterson WH, Freedman JH, Young JL, Burke T, Arteel GE, States JC, **Cai L**, Lang AL, Poole LG, Waner NL, M.a.M.D.C (Me2DC). Effects of chronic arsenic and cadmium on thiol-disulfide redox balance in the liver. *The Toxicologist* 156 (Issue 1): 267 (PS2133), 2017
154. Xu Z, **Cai L***, Sun J. Inhibition of HDAC, especially HDAC3, prevents diabetic cardiomyopathy in OVE26 mice via epigenetic inhibition of ERK1/2-DUSP5 pathway. *The Toxicologist* 156 (Issue 1): 479 (PS3303), 2017
155. Gu J, Wang S, Tan Y, **Cai L***. The p53-specific inhibitor Pifithrin- α protects from diabetic cardiomyopathy through attenuating the early-stage apoptosis and improving the late-stage defect of glycolysis and angiogenesis. *The Toxicologist* 156 (Issue 1): 481 (PS3040), 2017

156. Lin Q, **Cai L**, Tan Y. FGF1 ameliorates diabetic nephropathy through an anti-JNK/NF- κ B signal pathway. *Diabetes* 66 (Suppl.1): 34 (#49-or), 2017
157. Xu Z, Sun J, **Cai L***. Inhibition of HDAC3 prevents diabetic cardiomyopathy in OVE26 mice via epigenetic inhibition of ERK1/2-DUSP5 pathway. *Diabetes* 66 (Suppl.1): 34 (#A123-466-P), 2017
158. Dai X, Zeng J, Yan X, Chen J, Wintergerst K, **Cai L**, Tan Yi. Elevating CXCR7 improves angiogenic function of EPCs via Akt/GSK-3 β /Fyn-mediated Nrf2 activation in diabetic limb ischemia. *Diabetes* 66 (Suppl.1): 34 (#A127-484-P), 2017
159. Park Y, Cui M, Kim H, Gu J, **Cai L***. High glucose with and without high palmitate represses β -Kloth expression and impairs FGF-21 in mouse heart. *Diabetes* 66 (Suppl.1): 34 (#A129-490-P), 2017
160. Gu J, Wang S, Tan Y, **Cai L***. Inhibition of p53 prevents diabetic cardiomyopathy by attenuating the early-stage apoptosis and improving the late-stage defect of glycolysis and angiogenesis. *Diabetes* 66 (Suppl.1): 34 (#A470-1761-P), 2017
161. Qian L, Gu J, Ji H, **Cai L***. Inhibition of p53 with Pifithrin- α prevents diabetes-induced hepatic inflammatory and oxidative injury, probably via up-regulation of Sirt1-Nrf2 pathway. *Diabetes* 66 (Suppl.1): 34 (#A517-1959-P), 2017

Poster Presentations at Local/Regional Meetings, * indicating Cai L as corresponding author

1. **Cai, L.**, Klein, J.B. and Kang, Y.J. Preventive effect of metallothionein on diabetic cardiomyopathy. *Research! Louisville* 2000, pp: F17
2. **Cai, L.**, Wei, L., Sun, X., Li, Y. and Kang, Y.J. Prevention of diabetic cardiomyopathy by metallothionein through suppression of hyperglycemia-induced oxidative stress and cell death. *Abstracts of Research! Louisville* 2001, pp: F6.
3. Cai LW, Song Y, **Cai L**, Rane M. Down-regulation of Akt signalling during hyperglycemia induces renal tubular cell apoptosis. *Research!Louisville* 2006, Ab# FMED4
4. Peek M, Zhou G, Hornung C, **Cai L***. Metallothionein prevention of angiotensin II-induced cardiac cell death and possible influence of p53 express. *Research!Louisville* 2006, Ab# FMED16
5. Wang Y, **Cai L***. Metallothionein prevents diabetes-induced intramyocardial lipid accumulateion and inflammation via preservation of Akt-dependent glucose metabolism in mouse model. *Research!Louisville* 2007, 17, 2007.
6. Tan Y, Li XK, **Cai L***. SDF-1 β p2G, a novel CXCR4 antagonist derived from human SDF-1 β : Pathophysiological evaluation and potential clinical application. *Research!Louisville* 2009, page 8, Ab#:PRF50.
7. Li B, Zhao Y, Guo L, Miao L, Zhang C, Li X, **Cai L***. Impact of zinc deficiency to kidney in diabetic mice. Ohio Valley Society of Toxicology Annual Meeting, Cincinnati, OH, September 24th, 2010. Page 16.
8. Tan Y, Li X, Zhou Z, **Cai L***. Chronic alcohol consumption caused cardiac cell death is mediated by PKC-NADPH oxidase-oxidative stress pathway. Ohio Valley Society of Toxicology Annual Meeting, Cincinnati, OH, September 24th, 2010. Page 32.
9. Zhang C, Jin S, Guo W, Li C, Li X, Rane MJ, Wang G, **Cai L***. Attenuation by low-dose radiation of diabetes-induced cardiac inflammation and pathology. Ohio Valley Society of Toxicology Annual Meeting, Cincinnati, OH, September 24th, 2010. Page 37.
10. Zhao, Y, Tan Y, Li B, Guo L, Li W, **Cai L***. Exacerbation of diabetes-induced testicular apoptosis by zinc deficiency is associated with activation of oxidative stress-mediated p38 and p53 signaling pathways. Ohio Valley Society of Toxicology Annual Meeting, Cincinnati, OH, September 24th, 2010. Page 38.

11. Zhang C, Jin S, Guo W, Li C, Li X, Rane MJ, Wang G, **Cai L***. Attenuation by low-dose radiation of diabetes-induced cardiac inflammation and pathology. Ohio Valley Society of Toxicology Annual Meeting, Cincinnati, OH, September 24th, 2010. Page 32.

ORAL PRESENTATIONS

National/International Meetings

1. Invited oral presentation: "Effect of low-dose radiation on male germ cell death", the 4th International Conference & the 1st Annual Meeting of the International Hormesis Society on Hormesis: Implications for Toxicology, Medicine and Risk Assessment. June 6-8, 2005, University of Massachusetts, Amherst, MA
2. Invited oral presentation: "Metallothionein and diabetic cardiomyopathy" The 5th International Conference on Metallothionein, November 8-12, 2005, Beijing, China
3. Invited oral presentation: "Diabetic cardiomyopathy and its prevention by metallothionein", the 4th CBI/Ray Wu Society Science Meeting, December 18-21, 2005, Boulder, Colorado
4. Invited oral presentation: "Diabetes/obesity-related inflammation, cardiac cell death and cardiomyopathy", The First Xiangya International Conference on Inflammation and Diabetes, Changsha China, April 28 to 30, 2006
5. Invited oral presentation: "Genomic and epigenetic effects of low-dose cadmium on male germ cells: possible increase in cancer risk in the offspring" the 4th Conference on Metal Toxicity and Carcinogenesis, NIOSH (National Institute for Occupational Safety and Health), Morgantown, WV, Sept. 24-27, 2006
6. Keynote Speaker: "Diabetic cardiomyopathy: possible role of Zinc and copper" for the International Scientific Committee for the 16th International Conference on Oral Chelation (ICOC) in The Treatment of Thalassaemia and Other Diseases, Limassol, Cyprus (October 25-31st, 2006).
7. Invited oral presentation: "Cardiac inflammation, cell death and dysfunction under diabetic conditions", at The Second Xiangya International Diabetes Immunology Forum, April 27-28, 2007, Changsha, China
8. Invited oral presentation: "Experimental and clinical information for the possible application of LDR-induced hormesis and adaptive response in medical practice" at the 6th Annual Meeting of the International Hormesis Society, on Hormesis: Implications for Toxicology, Medicine, and Risk Assessment, May 1-2, 2007, University of Massachusetts Amherst, MA
9. Invited oral presentation: "Metallothionein prevents diabetes-induced triglyceride and lipids accumulation in the heart via stimulating Akt-dependent glucose metabolism", in the symposia of Gene and Drug Influences on Cardiovascular Function, the 67th Scientific Sessions, McCormick Place Convention Center, Chicago, IL, June 22-26, 2007.
10. Invited oral presentation (Principle speaker with 50 min presentation and 10 min answering question): "Metallothionein and diabetes" at the Biennial Meeting entitled "The Metallothionein and Bioscience of Metals in Japan 2007, on September 28 and 29, 2007, in Tokushima, Japan
11. Invited oral presentation: "Oxidative stress and diabetic cardiomyopathy" at the 17th International Conference on Oral Chelation in the Treatment of Thalassaemia, Cancer and Other Diseases, November 23-27, 2007, Shenzhen, China.
12. Invited oral presentation: "Trace elemental iron and diabetes: deficiency and overload" at the 17th International Conference on Oral Chelation in the Treatment of Thalassaemia, Cancer and Other Diseases, November 23-27, 2007, Shenzhen, China.

2008

13. Invited oral presentation: "Pathological effects of angiotensin II-induced NADPH oxidase activation, nitrosative stress, apoptosis, and remodeling in diabetic hearts: metallothionein prevention in vitro and in

vivo”, at AHA Arteriosclerosis, Thrombosis and Vascular Biology Annual Conference 2008, Atlanta, GA, April 16-18, 2008.

14. Invited oral presentation: “Is it possible for LDR only to induce hormesis and adaptive response in normal human cells, but not in human tumor cells?” the 7th Annual International Conferences: Dose-Response Implications for Toxicology, Medicine, and Risk Assessment. University of Massachusetts, Amherst, MA, April 29-30, 2008.
15. Invited oral presentation: “Potential application of LDR-induced hormesis and adaptive response in the prevention or therapy of cancer and diabetic complications” at the 5th Chinese Conference for Young Scientists in Radiation Medicine and Protection, May 5- 8, 2008 at Xi’an, China
16. Invited oral presentation: “Chronic exposure to low-dose cadmium caused testicular damages in the rats” at the 5th Conference on Molecular Mechanisms of Metal Toxicity and Carcinogenesis, at Morgantown, West Virginia, September 14-17, 2008.
17. Invited oral presentation: “Roles of GSK in diabetic pathological changes in cardiac inflammation and remodeling” at the 15th Annual Meeting of Chinese Diabetes Society, Xiamen, November 7-9, 2008.
18. Invited oral presentation: “Prevention of diabetic cardiomyopathy by metallothionein” at the forum of Biological Science, at the 50th Anniversary of Wenzhou Medical College, Wenzhou, China, November 14, 2008.

2009

19. Invited oral presentation: “Zinc, inflammation and diabetes: Introduction” at the 48th Society of Toxicology (SOT) Annual Meeting in Baltimore, MD, March 15-19, 2009.
20. Invited oral presentation: “Protection of metallothionein and zinc against diabetic complications” at the 48th Society of Toxicology (SOT) Annual Meeting in Baltimore, MD, March 15-19, 2009.
21. Invited oral presentation: “Cardiac inflammation and diabetic cardiomyopathy”, at The Fourth Xiangya International Diabetes Immunology Forum, April 24-26, 2009, Changsha, China
22. Invited oral presentation: “Activation of GSK-3 β plays a critical role in diabetes-related changes in cardiac energy metabolism, lipid accumulation, inflammation, and remodeling: metallothionein prevention via Akt2 preservation”, the Third Scientific Meeting of Chinese-American Diabetes Association (CADA), The Children Hospital, New Orleans, June 4-5 2009.
23. Invited presentation: “CADA Presidential Speech” to the First Jointed Meeting of Ch-AHA and ACER, at Orlando, Florida, Nov. 16, 2009.

2010

24. Invited oral presentation: “Zinc, Copper, and Their Metabolic Effect: Myths and Musts: Introduction” at the 49th Society of Toxicology (SOT) Annual Meeting in Salt Lake City, Utah, March 7-11, 2010.
25. Invited oral presentation: “Potential effects of zinc on diabetic complications: Role of metallothionein” at the 49th Society of Toxicology (SOT) Annual Meeting in Salt Lake City, Utah, March 7-11, 2010.
26. Invited oral presentation: “New evidence for the prevention of diabetes and its complications by LDR: Potential clinical application” the 4th International Conference & the 9th Annual International Conference: Dose-Response 2010: Implications for Toxicology, Medicine and Risk Assessment. University of Massachusetts, Amherst, MA, April 27 – 28, 2010.
27. Invited oral presentation: “Zinc, Inflammation and Diabetes” at the 20th International Conference on Chelation (ICOC) for the treatment of Thalassaemia, Cancer and Other Diseases related to Metal and Free Radical Imbalance and Toxicity. Grand Rapids, MI, USA, October 22-25th, 2010.
28. Invited oral presentation: “Angiotensin II and Diabetic Cardiovascular Complications” the 14th Scientific Meeting of the Chinese Diabetes Society. Suzhou, China, November 17 – 20, 2010.

2011

29. Invited oral presentation: "Prevention of diabetes and its complications by LDR: an innovative approach" in the 1st Global Chinese Congress of Radiation Research. Xi'An, China, April 24 – 27, 2011.
30. Invited oral presentation: "Low-dose radiation and cancer therapy" in the 1st Global Chinese Congress of Radiation Research. Xi'An, China, April 24 – 27, 2011.
31. Presidential lecture "Lung fibrosis as a new possible diabetic complication is predominantly induced by Angiotensin II" at the Fourth Scientific Meeting of the Chinese-American Diabetes Association (CADA), Double Tree Del Mar (11915 El Camino Real), San Diego, CA, June 23-24, 2011
32. Invited oral presentation, "Metallothionein prevents diabetic cardiomyopathy : evidence, mechanisms and possible clinical application" at the Academy of cardiovascular Research Excellence (ACRE) & the Chinese American Heart Association (CnAHA) Annual Cardiovascular Research Symposium "The Era of Translational Medicine". Orlando, Florida, on November 12th, 2011.
33. Invited oral presentation: "Prevention and therapy of diabetic complications by low-dose radiation: An innovative approach" at the 15th Scientific Meeting of the Chinese Diabetes Society, Beijing, China. November 23-26, 2011

2012

34. Invited oral presentation "Angiotensin II plays a critical role in alcohol-induced cardiac nitrative damage, cell death, remodeling, and cardiomyopathy in a protein kinase C/nicotinamide adenine dinucleotide phosphate oxidase-dependent manner" at the 3rd Forum of Chinese-American Diabetic Complication, Wenzhou, May 1 – 2, 2012.
35. Invited oral presentation: "FGF21 expresses in diabetic hearts and protects from palmitate- and diabetes-induced cardiac cell death in vitro and in vivo via Erk1-dependent p38 MAPK-AMPK signaling pathways" at the 72nd Scientific Sessions of American Diabetes Association, Philadelphia, PA on June 8 – 21, 2012 (Presented by trainee, Dr. Chi Zhang).
36. Invited oral presentation: "FGF21 expresses in diabetic hearts and protects from palmitate- and diabetes-induced cardiac cell death in vitro and in vivo via Erk1/2-dependent p38 MAPK/AMPK signaling pathways" at the 2nd Annual Cardiovascular Research Symposium "From Chaos Theory to Reductionism" Jointly Hosted by: The Academy of Cardiovascular Research Excellence (ACRE) and The Chinese American Heart Association (CnAHA), UCLA Faculty Center, 480 Charles E Young Drive, Los Angeles, November 3, 2012 (Presented by trainee, Dr. Chi Zhang).
37. Invited oral presentation: "FGF21 expresses in diabetic hearts and protects from palmitate- and diabetes-induced cardiac cell death in vitro and in vivo via Erk1-dependent p38 MAPK-AMPK signaling pathways" at the Scientific Sessions 2012, American Heart Association, Los Angeles, CA, November 3 – 7, 2012 (Presented by trainee, Dr. Chi Zhang).
38. Invited oral presentation: "FGF21 cardiac expression and protection from diabetes" at the 16th Scientific meeting of the Chinese Diabetes Society, Chengdu, China, December 5 – 8, 2012.
39. Invited oral presentation: "SDF-1 β P2G, a Novel CXCR4 Antagonist Derived from Human SDF-1 β , Enhances Endothelial Progenitor Cell Mobilization and Ischemic Angiogenesis" at the 3rd International Conference on fibroblast growth factors, Wenzhou, China, December 7 – 10, 2012.
40. Invited oral presentation: "Low-dose radiation: a novel approach to prevent and treat diabetic complications" at the 9th National Conference of Radiological Medicine and Protection, Chinese Medical Association, Zhuhai, China, December 12 – 16, 2012.
41. Invited oral presentation "Angiotensin II plays a critical role in alcohol-induced cardiac nitrative damage, cell death, remodeling, and cardiomyopathy in a protein kinase C/nicotinamide adenine dinucleotide

phosphate oxidase-dependent manner” at the 3rd Forum of Chinese-American Diabetic Complication, Wenzhou, May 1 – 2, 2012.

2013

42. Invited special speaker "Does angiotensin II plays a critical role in alcohol-induced cardiomyopathy", at the Cardiovascular Toxicology Specialty Section at the 52nd Annual Meeting of the Society of Toxicology, March 10-14, 2013, the Henry B. Gonzalez Convention Center in San Antonio, Texas, USA
43. Invited oral presentation “Nrf2 activators may be a good approach to prevent and treat diabetic cardiomyopathy” at the 8th Xiangya Diabetes Immunology Forum, on April 27th~ 28th, 2013, Changsha, Hunan, China
44. Invited oral presentation “Preventive and therapeutic effect of Nrf2 activators on diabetic cardiomyopathy”, at the First Changchun Forum for Cardiovascular Diseases and Dietary Nutrition, April 30, 2013, Changchun, Jilin, China

2014

45. Invited oral presentation: “Low-dose radiation prevents diabetic complications” at the Second Global Chinese Congress of Radiation Research. Suzhou, China, May 12 - 15, 2014
46. Invited oral presentation: “Importance of zinc in metabolic syndrome and diabetes Basic research and clinical questions” at the second joint annual meeting of Jilin Diabetes Society and Jilin Endocrinology Association, Changchun, May 23 – 24, 2014
47. Invited oral presentation: “Diabetic cardiomyopathy and its prevention by metallothionein”, at the 8th Oriental Congress of Cardiology (OCC 2014), organized by the Shanghai Society of Cardiology, Shanghai Medical Association, at Shanghai International Convention Center, Shanghai, May 29 to 31, 2014.

2015

48. Invited oral presentation: “Low-dose Radiation and Diabetes, and its Complications”, at the Biomedical and Environmental Session, the 14th Annual International Conference on Dose-Response: Preconditioning in Biology and Medicine- Mechanisms and Translational Research, at University of Massachusetts, Amherst, MA, April 21-22, 2015
49. Invited oral presentation: “Low-dose Radiation Prevents Diabetic Complications” at the 15th International Congress of Radiation Research - Kyoto, Japan, May 27, 2015

2016

50. Invited oral presentation: “Diabetic cardiomyopathy and its potential intervention”, the 11th Xiangya International Diabetes Immunology Forum, Changsha, April 23 – 24, 2016
51. Invited oral presentation: “Special Lecture: The oxidative stress and diabetic complications” at the 43rd Annual Meeting of the Japanese Society of Toxicology, Nagoya, Japan, June 28 to July 1, 2016
52. Invited oral presentation: “Potential distinct responses of normal tissue and tumors to low dose of radiation” at the Workshop of Radiation Medicine and Protection in Tianjin, September 10, 2016
53. Invited oral presentation: “Nrf2 and metallothionein protect from intermittent hypoxia-induced cardiac injury: similarity & difference” at the Sleep Forum at Wenzhou, Wenzhou, September 18, 2016

2017

54. Invited oral presentation “Diabetic cardiomyopathy and role of oxidative stress” at the 8th Chinese-American Diabetic Complications (RuiAn) Forum & National Continuing Education, Ruian, November 5, 2017

2018

55. Invited oral presentation “Low dose radiation and translational medicine” at the Biomedical and Environmental Session, the 17th Annual International Conference on Dose-Response: Preconditioning in Biology and Medicine- Mechanisms and Translational Research, at University of Massachusetts, Amherst, MA, April 17-18, 2018

56. Invited oral presentation: "Potential distinct responses of normal tissue and tumors to low dose of radiation" the 3rd Global Chinese Congress of Radiation Research (GCCRR2018) in Tianjin, May 11-13, 2018
57. Invited oral presentation "Low-dose radiation and its potential prevention of diabetic complications" for the Ninth Forum of the Chinese-American Symposium of Diabetic Complications at the Ruian People's Hospital, Ruian, Zhejiang, China, Oct. 20, 2018.

2019

58. Invited oral presentation "Historical Introduction of the Research in Lu Cai's lab in past 10 years" at the Tenth Forum of the Chinese-American Symposium of Diabetic Complications at the Ruian People's Hospital, Ruian, Zhejiang, China, May 12, 2019.
59. Invited oral presentation: "Zinc Homeostasis Plays Important Role in the Prevention of Obesity-induced Cardiac Hypertrophy via Regulating Innate Immune/inflammatory BCL10/CARD9/p38MAPK Pathway" at the 13th Conference of the International Society for Trace Element Research in Humans (ISTERH) in Bali, Indonesia, on September 22-26, 2019.
60. Invited Featured Presentation "Diabetic cardiomyopathy and its prevention by metallothionein and Nrf2" at 2019 CnAHA/ACRE/CAAC Joint Research Symposium, organized by Chinese American Heart Association, Academy of Cardiovascular Research Excellence, and Chinese American Academy of Cardiology at Philadelphia, PA, on November 15, 2019,

2020

61. Invited Oral permeation "Metallothionein prevents diabetic cardiomyopathy: New insight!" at the 31th Great Wall International Conference of Cardiology, digitally October 19-25, 2020;
62. Invited Plenary Speaker "Gluco- and lipo-toxicity: Diabetic cardiomyopathy and its prevention by MT and zinc" at the Frontier Scientist Workshop 2020 and the 1st International Virtual Forum on Modern Toxicology: A 2020 Vision, December 4 and 5, 2020

Oral Presentations in Local/Regional Meetings

1. "Metallothionein prevents diabetic cardiomyopathy" at Jewish Hospital Board Meeting, November 12, 2001, Jewish Hospital Conference Center, Louisville.
2. "Diabetes, Complications and possible prevention by metallothionein and zinc", at Step Out to Fight Diabetes Corporate Recruitment Breakfast, May 22, 2007, Masterson, Louisville.
3. "Diabetic cardiomyopathy and metallothionein: Evidence, possible mechanisms and clinical implication" Juvenile Diabetes Center, Kosair Children's Hospital Research Institute, Department of Pediatrics, University of Louisville, July 11, 2008.
4. "Diabetic cardiomyopathy and metallothionein prevention" at the Department of Pediatrics May Research Luncheon, University of Louisville, May 11, 2009.
5. "Current status of diabetes and CADA" at 2010 World Chinese Health Day, invited by Sino-American Health Association (SAHA). New Jersey Chinese Community Center, 17 School House Road, Somerset, NJ, USA, October 30th, 2010.
6. "Alcoholic cardiomyopathy" at the Department of Pediatrics, August Research Luncheon, University of Louisville, August 8, 2011.
7. "Diabetic complication research: where we are and where we will go?" at the Department of Pediatrics, August Research Luncheon, University of Louisville, August 13, 2012.
8. "Diabetic Complications and Zinc: Basic research and clinical questions" at the Department of Pediatrics May Research Luncheon, University of Louisville, May 20, 2013.

9. "Zinc and Diabetes, and Diabetic Complications" at the Diabetes and Obese Center 2014 Retreat, University of Louisville School of Medicine, Kaden Towers, 6100 Dutchmans Lane, Louisville, KY, November 21st, 2014
10. "Lu Cai's Lab Research Interests and the link of LDR to Diabetes" at the Work in Progression (WIP) Seminar in the KCHRI, Rm: 038 of Baxter I on March 18, 2015
11. "Lu Cai's Lab Research Interests and the link of LDR to Diabetes" at the Work in Progression (WIP) Seminar in the KCHRI, Rm: 038 of Baxter I on Jan 17, 2016
12. "Environmental contaminated metals and Children's health: a focus of cadmium" at the Department of Pediatrics Research Luncheon, University of Louisville, June 6, 2016.
13. "Lu Cai's Lab Research Interests, followed by a focus on the role of P53 in diabetic cardiomyopathy" at the Work in Progression (WIP) Seminar in the PRI, Rm: 038 of Baxter I on Jan 18, 2017
14. "Lu Cai's Lab Research Interests, focusing on the research of diabetes and its complications" Chinese Faculty of University of Louisville Medical Campus, at Hibachi Sushi Buffet, 5729 Preston Hwy, Louisville, KY 40219, March 3, 2017.
15. "Lu Cai's Lab Research Interests, and its link to metals" at the Work in Progression (WIP) Seminar in the PRI, Rm: 038 of Baxter I on Jan 17, 2018.
16. Featured speaker: Do You Know the Beneficial Effects of Low Dose Ionizing Radiation? Gathering of Chinese Faculty of University of Louisville Medical Campus, at Hibachi Sushi Buffet, 5729 Preston Hwy, Louisville, KY 40219, July 14, 2018.
17. "Lu Cai's Interests in Cadmium and its potential toxic and health issues" at the Work in Progression (WIP) Seminar in the PRI, Rm: 038 of Baxter I on Jan 16, 2019.
18. "Long-term interests in the health effects of environmental exposure to cadmium in the victim and their offspring" at the Work in Progression (WIP) Seminar in the PRI, Rm: 038 of Baxter I on Jan 15, 2020.

PUBLICATIONS

Peer-reviewed journal articles published, *,# indicating Cai L as corresponding (*) or co-corresponding (#) author

Peer-reviewed Original research articles

1. Cai, L., Liu, S.Z. Induction of cytogenetic adaptive response of somatic and germ cells in vitro and in vivo by low dose x-irradiation. *Int. J. Radiat. Biol.* 58: 187-196, 1990.
2. Liu, S.Z., Cai, L., Sun, J.B. Effect of low dose radiation on repair of DNA and chromosome damage. *Acta Biologica Hungarica* 41: 149-159, 1990.
3. Cai, L., Liu, S.Z. Study on the mechanism of adaptive response induced by low dose radiation. *Chin. Med. J. (in English)*, 105: 277-283, 1992.
4. Liu, S.Z., Cai, L., Sun, S.Q. Induction of cytogenetic adaptive response by chronic exposure of rabbits to very low dose-rate γ -irradiation. *Int. J. Radiat. Biol.*, 105: 277-283, 1992.
5. Cai, L*, Liu, SZ. Effects of cycloheximide on adaptive response induced by low dose radiation. *Biomed. Environ. Sci.* 5: 46-52, 1992.
6. Cai, L*, Jiang J., Wang B., Yao, H., Wang, X.L. Induction of an adaptive response to dominant lethality and to chromosome damage of mouse germ cells by low dose radiation. *Mutat. Res.* 303: 157-161, 1993.
7. Cai, L*, Meng, Q.Y. Studies on the induction of cross-resistance by low-dose radiation or by low concentrations of chemicals. *Biomed. Environ. Sci.* 7: 241-247, 1994.
8. Cai, L*, Wang, P., Piao X.G. Induction of cytogenetic adaptive response in mouse germ cells with multiple low dose X-rays and its biological influence on their offspring. *Mutat. Res* 324: 13-17, 1994.

9. **Cai, L***, Wang, P. Induction of a cytogenetic adaptive response in germ cells of irradiated mice with very low-dose rate of chronic γ -irradiation and its biological influence on radiation-induced DNA or chromosomal damage and cell killing in their male offspring. *Mutagenesis* 10: 95-100, 1995.
10. **Cai, L***, Jiang, J. Mild Hyperthermia can induce adaptation to cytogenetic damage caused by subsequent X irradiation. *Radiat. Res.* 134: 26-33, 1995.
11. **Cai, L.**, Koropatnick, J., Cherian, M.G. Metallothionein protects DNA from copper-induced but not iron-induced cleavage in vitro. *Chem. Biol. Interact.* 96: 143-155, 1995.
12. Yu, W., Wang, M., **Cai, L***, Jin, Y. Pre-exposure of mice to low dose or low dose rate ionizing radiation reduces chromosome aberrations induced by subsequent exposure to high dose of radiation or mitomycin C. *Chin, Med. Sci. J.* 10: 50-53, 1995
13. **Cai, L.**, Cherian, M.G. Adaptive response to ionizing radiation-induced chromosome aberrations in rabbit lymphocytes: effect of pre-exposure to zinc, and copper salts. *Mutat. Res.* 369: 233-241, 1996.7
14. **Cai L**, Hales, B., Robaire, B. Induction of apoptosis in the germ cells of adult male rats after exposure to cyclophosphamide. *Biol. Reprod.* 56: 1490-1497, 1997.
15. **Cai L.**, Tsiapalis, G., Cherian, M.G. Protective of zinc-metallothionein on DNA damage in vitro by ferric nitrilotriacetate (Fe-NTA) and ferric salts. *Chem. Biol. Interact.* 115: 141-151, 1998.
16. Cong, X.L., Wang, X.L., Su, Q., Yan, S., **Cai, L***. Protective effects of extracted human-liver RNA, a known interferon inducer, against radiation-induced cytogenetic damage in male mice. *Toxicol. Lett.* 94: 189-198, 1998.
17. **Cai, L***, Wang, G. Genomic instability of telomere, telomerase and their relationships with radiation carcinogenesis. *J. N. Bethune Univ. Med. Sci.* 24: 538-544, 1998.
18. Ono, S, **Cai, L.**, Cherian, MG: Effects of γ radiation on levels of brain metallothionein and lipid peroxidation in transgenic mice. *Radiat. Res.* 150: 52-57, 1998.
19. **Cai, L.**, Wang, G.J., Xu, Z., Deng, D.X., Chakrabarti, S., Cherian, M.G. Metallothionein and apoptosis in primary human hepatocellular carcinoma (HCC) from Northern China. *Anticancer Res.* 18: 4667-4672, 1998.
20. **Cai, L.**, Wang, G.J., Xu, Z., Deng, D.X., Chakrabarti, S., Cherian, M.G. Endothelins and their receptors in cirrhotic and neoplastic livers of Canadian and Chinese populations. *Anticancer Res.* 19: 2243-2248, 1999.
21. Deng D.X., **Cai, L.**, Cherian, M.G. Increased radiation-induced apoptosis in mouse thymus in the absence of metallothionein. *Toxicology* 134: 39-49, 1999.
22. Chang, X.H., Fu, Y.W., Na, W.L., Wang, J., **Cai, L***. Improved metastatic animal model of human prostate carcinoma using surgical orthotopic implantation (SOI). *Anticancer Res.* 19: 4199-4202, 1999.
23. Wang, G.J., **Cai, L***. Relatively low-dose cyclophosphamide is likely to induce apoptotic cell death in rat thymus through Fas/Fas ligand pathway. *Mutat. Res.* 427: 125-133, 1999.
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