

CURRICULUM VITAE

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EDUCATION AND TRAINING

Undergraduate

1992-1996	University of Shandong, Jinan, China	Bachelor, 1996	Microbiology
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Graduate

2000-2005	Institute of Materia Medica, Chinese Academy of Medical Sciences and Peking Union Medical College, Beijing, China	Ph.D., 2005	2000-2005
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Post-Graduate

2005-2012	University of Pittsburgh Pittsburgh, PA	Postdoctoral Associate	Dr. Valerian E. Kagan
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APPOINTMENTS AND POSITIONS

Academic

2012-2014	Research Instructor	Dept. of Environmental and Occupational Health Graduate School of Public Health University of Pittsburgh
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**Non-
Academic**

1996-2000	Research Associate	Shandong Kexing Bioproducts Co., Ltd. Jinan, China
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CERTIFICATION AND LICENSURE

Specialty Certification

Year	Name of Certificate	Certifying Board
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Medical or Other Professional Licensure

Type of License	Licensing Board	State
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MEMBERSHIP IN PROFESSIONAL AND SCIENTIFIC SOCIETIES

2008-2013	American Association for Cancer Research
2012-2013	Society of Radiation Research
2012-2013	Society of Toxicology

HONORS

Year of Award	Title of Award Awarding Association
Year of Award	Title of Award Awarding Association

PROFESSIONAL ACTIVITIES

1. Teaching

a. Courses Taught

Years Taught	Course Number: Title	Hours of Lecture, credits Average Enrollment	Role in course Primary/Coordinator
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b. Other Teaching (lectures, tutorials and continuing education courses)

Date(s)	Type of Teaching	Title
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c. Major Advisor for Graduate Student Essays, Theses, and Dissertations

Name of Student	Degree Awarded, Year	Type of Document and Title	Notes
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d. Service on Masters or Doctoral Committees

Dates Served	Name of Student	Degree Awarded	Title of Dissertation/Essay
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e. Service on Comprehensive or Qualifying Examination Committees

Dates Served	Student Population	Type of Exam (Qualifying/Comprehensive)
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The student population, i.e., 1 Ph.D. Biostatistics student, 7 Masters-level M.M.P.H. students, etc.

f. Supervision of Post-Doctoral Students, Residents, and Fellows

g. Mentoring of Graduate Students in Field Placements

Dates	Name of Student	Degree/Program Description	Field Site
			Agency/Organization Location

h. Other Teaching and Training

July, 2012 ~ September, 2012	Praveer Vyas	Summer student
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2. Research and Training

a. Grants and Contracts Received

Principal Investigator

Years Inclusive	Grant and/or Contract Number and Title	Source	Annual Direct Costs	% Effort
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Co-Principal Investigator

Years Inclusive	Grant and/or Contract Number and Title	Source	Annual Direct Costs	% Effort
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Co-Investigator on Grants

Years Inclusive	Grant and/or Contract Number and Title	Source	Annual Direct Costs	% Effort
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b. Invited Lectureships and Major Seminars Related to Your Research

Date	Title of Presentation	Venue
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c. Other Research and Training Activities

Date	Position	Description of Activity
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PUBLICATIONS

1. Refereed Articles

1. Huang Z, Epperly M, Watkins SC, Greenberger JS, Kagan VE, Bayir H. (2016) Necrostatin-1 rescues mice from lethal irradiation. *Biochim Biophys Acta.* 1862(4):850-856.
2. Mao G, Qu F, St Croix CM, Tyurina YY, Planas-Iglesias J, Jiang J, Huang Z, Amoscato AA, Tyurin VA, Kapralov AA, Cheikhi A, Maguire J, Klein-Seetharaman J, Bayir H, Kagan VE. (2016) Mitochondrial Redox Opto-Lipidomics Reveals Mono-Oxygenated Cardiolipins as Pro-Apoptotic Death Signals. *ACS Chem Biol.* 11(2):530-540.
3. Kagan VE, Jiang J, Huang Z, Tyurina YY, Desbourdes C, Cottet-Rousselle C, Dar HH, Verma M, Tyurin VA, Kapralov AA, Cheikhi A, Mao G, Stolz D, St Croix CM, Watkins S, Shen Z, Li Y, Greenberg ML, Tokarska-Schlattner M, Boissan M, Lacombe ML, Epand RM, Chu CT, Mallampalli RK, Bayir H, Schlattner U. (2016) NDPK-D (NM23-H4)-mediated externalization of cardiolipin enables elimination of depolarized mitochondria by mitophagy. *Cell Death Differ.* 2016 Jan 8. doi: 10.1038/cdd.2015.160.
4. Jiang J, Bakan A, Kapralov AA, Ishara Silva K, Huang Z, Amoscato AA, Peterson J, Krishna Garapati V, Saxena S, Bayir H, Atkinson J, Bahar I, Kagan VE. (2014) Designing inhibitors of cytochrome c/cardiolipin peroxidase complexes: mitochondria-targeted imidazole-substituted fatty acids. *Free Radical Biology & Medicine.* 71:221-230.
5. Chu CT, Ji J, Dagda RK, Jiang JF, Tyurina YY, Kapralov AA, Tyurin VA, Yanamala N, Shrivastava IH, Mohammadyani D, Qiang Wang KZ, Zhu J, Klein-Seetharaman J, Balasubramanian K, Amoscato AA, Borisenko G, Huang Z, Gusdon AM, Cheikhi A, Steer EK, Wang R, Baty C, Watkins S, Bahar I, Bayir H, Kagan VE. (2013) Cardiolipin externalization to the outer mitochondrial membrane acts as an elimination signal for mitophagy in neuronal cells. *Nature Cell Biology.* 15(10):1197-1205.
6. Schlattner U, Tokarska-Schlattner M, Ramirez S, Tyurina YY, Amoscato AA, Mohammadyani D, Huang Z, Jiang J, Yanamala N, Seffouh A, Boissan M, Epand RF, Epand RM, Klein-Seetharaman J, Lacombe ML, Kagan VE. (2013) Dual Function of Mitochondrial Nm23-H4 Protein in Phosphotransfer and Intermembrane Lipid Transfer: A CARDIOLIPIN-DEPENDENT SWITCH. *J Biol Chem.* 288(1):111-121.
7. Stoyanovsky DA, Huang Z, Jiang J, Belikova NA, Tyurin V, Epperly MW, Greenberger JS, Bayir H, Kagan VE. (2011) A manganese-porphyrin complex decomposes H₂O₂, inhibits apoptosis, and acts as a radiation mitigator in vivo. *ACS Med Chem Lett.* 2(11):814-817.
8. Atkinson J, Kapralov AA, Yanamala N, Tyurina YY, Amoscato AA, Pearce L, Peterson J, Huang Z, Jiang J, Samhan-Arias AK, Maeda A, Feng W, Wasserloos K, Belikova NA, Tyurin VA, Wang H, Fletcher J, Wang Y, Vlasova II, Klein-Seetharaman J, Stoyanovsky DA, Bayir H, Pitt BR, Epperly MW, Greenberger JS, Kagan VE. (2011) A mitochondria-targeted inhibitor of cytochrome c peroxidase mitigates radiation-induced death. *Nat Commun.* 2:497. doi: 10.1038/ncomms1499.
9. Thambiayya K, Wasserloos KJ, Huang Z, Kagan VE, St Croix CM, Pitt BR. (2011) LPS-induced decrease in intracellular labile zinc, [Zn]²⁺, contributes to apoptosis in cultured sheep pulmonary artery endothelial cells. *Am J Physiol Lung Cell Mol Physiol.* 300(4):L624-632.
10. Huang Z, Jiang J, Belikova NA, Stoyanovsky DA, Kagan VE, Mintz AH. (2010) Protection of normal brain cells from γ -irradiation-induced apoptosis by a

- mitochondria-targeted triphenyl-phosphonium-nitroxide: a possible utility in glioblastoma therapy. *J Neurooncol.* 100(1):1-8.
11. Stoyanovsky DA, Kapralov A, Huang Z, Maeda A, Osipov A, Hsia CJ, Ma L, Kochanek PM, Bayr H, Kagan VE. (2010) Unusual peroxidase activity of polynitroxylated pegylated hemoglobin: Elimination of H₂O₂ coupled with intramolecular oxidation of nitroxides. *Biochem Biophys Res Commun.* 399(2):139-43.
 12. Jiang J, Stoyanovsky DA, Belikova NA, Tyurina YY, Zhao Q, Tungekar MA, Kapralova V, Huang Z, Mintz AH, Greenberger JS, Kagan VE. (2009) A mitochondria-targeted triphenylphosphonium-conjugated nitroxide functions as a radioprotector/mitigator. *Radiat Res.* 172(6):706-717.
 13. Jiang J, McDonald PR, Dixon TM, Franicola D, Zhang X, Nie S, Epperly LD, Huang Z, Kagan VE, Lazo JS, Epperly MW, Greenberger JS. (2009) Synthetic protection short interfering RNA screen reveals glyburide as a novel radioprotector. *Radiat Res.* 172(4):414-422.
 14. Kapralov A, Vlasova II, Feng W, Maeda A, Walson K, Tyurin VA, Huang Z, Aneja RK, Carcillo J, Bayir H, Kagan VE. (2009) Peroxidase activity of hemoglobin-haptoglobin complexes: covalent aggregation and oxidative stress in plasma and macrophages. *J Biol Chem.* 284(44):30395-30407.
 15. Bayir H, Kapralov AA, Jiang J, Huang Z, Tyurina YY, Tyurin VA, Zhao Q, Belikova NA, Vlasova II, Maeda A, Zhu J, Na HM, Mastroberardino PG, Sparvero LJ, Amoscato AA, Chu CT, Greenamyre JT, Kagan VE. (2009) Peroxidase mechanism of lipid dependent cross-linking of synuclein with cytochrome c: protection against apoptosis versus delayed oxidative stress in Parkinson's disease. *J Biol Chem.* 284(23):15951-15969.
 16. Huang Z, Jiang J, Tyurin VA, Zhao Q, Mnuskin A, Ren J, Belikova NA, Feng W, Kurnikov IV, Kagan VE. (2008) Cardiolipin deficiency leads to decreased cardiolipin peroxidation and increased resistance of cells to apoptosis. *Free Radic Biol Med* 44(11):1935-1944.
 17. Jiang J, Huang Z, Zhao Q, Feng W, Belikova NA, Kagan VE. (2008) Interplay between bax, reactive oxygen species production, and cardiolipin oxidation during apoptosis. *Biochem Biophys Res Commun* 368(1):145-150.
 18. Bayir H, Kagan VE, Clark RS, Janesko-Feldman K, Rafikov R, Huang Z, Zhang X, Vagni V, Billiar TR, Kochanek PM. (2007) Neuronal NOS-mediated nitration and inactivation of manganese superoxide dismutase in brain after experimental and human brain injury. *J Neurochem.* 101(1): 168-181.
 19. Yuan W, Zhu H, Cheng K, Huang Z, Qin Y, Yang J, Zhu P. (2006) A novel butenoate derivative from *Aspergillus niger*. *Nat Prod Res.* 20(6): 573-577.
 20. Zhang T, Huang Z, Dai Y, Chen X, Zhu P, Du G. The expression of recombinant human LOX-1 and identifying its mimic ligands by fluorescence polarization-based high throughput screening. *J Biotechnol.* 2006 Oct 1;125(4):492-502. Epub 2006 Jun 2.
 21. Zhentai Huang, Tiantai Zhang, Jinling Yang, et al. (2005) Cloning and expression of human lectin-like oxidized low-density lipoprotein receptor-1 in *Pichia pastoris*. *Biotech. Letters* 27(1): 49-52.
 22. Zhang TT, Huang ZT, Dai Y, Liu AL, Zhu P, Du GH. (2005) Identification of ligands for human LOX-1 through fluorescence polarization-based high throughput screening. *Yao Xue Xue Bao.* 40(9): 792-795.

23. Jinling Yang, Zhentai Huang, Xinhui Zhu, Ping Zhu. (2003) Convenient method for elimination of several same restriction sites in vector by incomplete digestion. *Acta Bot.-Occident.Sin.* 23(11): 1981-1983.

2. Books and Book Chapters

1. Authors (same order as publication). Title of Chapter. *Book Title*. Place of Publication: Publisher. Year and Date. pages.

3. Published Proceedings

1. Authors (same order as publication). Title of Article. *Journal Title*. Year and Date. Volume (Issue): pages.

4. Invited Articles

1. Authors (same order as publication). Title of Article. *Journal Title*. Year and Date. Volume (Issue): pages.

5. Review Articles

1. Authors (same order as publication). Title of Article. *Journal Title*. Year and Date. Volume (Issue): pages.

6. Published Abstracts

1. Mintz, Arlan; Huang, Zhentai; Jiang, Jianfei; et al. Radiation sensitivity in human astrocytes T98G cells and human brain microvascular endothelial cells. Source: *NEURO-ONCOLOGY* OCT 2008 Volume: 10 Issue: 5 Pages: 790-790
2. Mintz, Arlan; Huang, Zhentai; Jiang, Jianfei; et al. Evaluation of cytochrome c (cyt c) and subunit IV of cyt c oxidase (COX IV) levels in normal human brains and glioblastoma specimens. Source: *NEURO-ONCOLOGY* OCT 2008 Volume: 10 Issue: 5 Pages: 790-790
3. Mintz, Arlan; Kagan, Valerian; Huang, Zhentai; et al. Effect of hemi-GS-nitroxide 5-131 on radiation-induced apoptosis in T98G glioma cells. Source: *NEURO-ONCOLOGY* OCT 2008 Volume: 10 Issue: 5 Pages: 785-785

7. Presentations

1. Huang Z, Tyurina Y, Jiang AND Kagan VE, Cheikhi A, Tokarska-Schlattner M, Boissan M, Lacombe M, Epand R, Schlattner U, Epand RM, Kagan VE. Externalization of cardiolipin as an “eat-me” mitophagial signal is facilitated by NDPK-D. 58th Biophysical Annual Meeting San Francisco, California, USA Feb 15 – 19, 2014.
2. Chu, C. T.; Ji, J.; Dagda, R. K.; Jiang, J.; Amoscato, A.; Kapralov, O.; Yanamala, N.; Klein-Seetharaman, J.; Balasubramanian, K.; Borisenko, G.; **Huang, Z.**; Baty, C.; et al. Cardiolipin redistribution as an "eat-me" signal for mitophagy in Parkinson disease models. Conference: 42nd Annual Meeting of the Society-for-Neuroscience New Orleans, LA, USA Date: October 13 -17, 2012.
3. Atkinson J, Kapralov AA, Huang Z, Belikova NA, Yanamala N, et al. Mitochondria-targeted ligands of heme-iron in cytochrome c as novel radioprotectors/radiomitigators. Conference: 56th Annual Meeting of the Radiation Research Society Maui, Hawaii, USA Date: September 15 – 29, 2010.

8. Non-Print Media

1. (As applicable) Authors (same order as publication). Title of Article. *Title of Media* [Indication of Media]. Publishing Company. Year and Date. Volume (Issue): pages or path.

9. Other Publications

1. Authors (same order as publication). Title of Article. *Journal Title*. Year and Date. Volume (Issue): pages.

SERVICE

1. Service to School and University

Years	Committee	Position
Years served	Committee, including committee service, committee chairs, administrative appointments and assignments (indication of standing or ad hoc committee)	Position (indication of elected or appointed)

2. Service to Field of Scholarship

a. Editorial Boards, Editorships

Date	Position	Organization
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b. Manuscript and Other Document/Publication Review

09/26/2011	Asia Life Sciences
12/08/2011	Journal of Environmental Biology
12/18/2011	Pharmaceutical Crops
10/11/2012	Phytotherapy Research
05/15/2013	Journal of Environmental Biology

c. Study Sections, Review Panels, and Advisory Boards

Date	Position	Organization and Nature of Activity
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d. Leadership in Scholarly and Professional Organizations and Honorary Societies

Date	Position	Organization
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3. Service for Practice and Policy-Making, including Consultantships

a. Governmental Organizations

Date	Position	Type of Service and/or Agency
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b. Non-Governmental and Community-Based Organizations

Date	Position	Type of Service and/or Organization
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4. Non-Professional Service

Year(s)	Position and Organization	Type of Service
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5. Clinical and Related Activities (OPTIONAL - if applicable)

A. Outpatient: Patient Care

<u>LOCATION/SERVICE</u>	<u>DESCRIBE ACTIVITY</u> (e.g. patient care, call, surgery, precepting, etc.)	<u>TIME DEVOTED TO ACTIVITY</u> (e.g. number of half days/week, number of days/year, etc.)
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Supporting descriptive information (if applicable)

B. Inpatient: Patient Care

<u>LOCATION/SERVICE</u>	<u>DESCRIBE ACTIVITY</u> (e.g. patient care, precepting, call, surgery, etc.)	<u>TIME DEVOTED TO ACTIVITY</u> (e.g. number of half days/week, number of days/year, etc.)
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Supporting descriptive information (if applicable)

C. Other Patient Care

<u>LOCATION/SERVICE</u>	<u>DESCRIBE ACTIVITY</u> (e.g. patient care, call, surgery, etc.)	<u>TIME DEVOTED TO ACTIVITY</u> (e.g. number of half days/week, number of days/year, etc.)
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Supporting descriptive information (if applicable)