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JIANYUAN CHAI, PH.D.

OBJECTIVE

Positions in Biosciences

SKILLS & ABILITIES

Functions: Design, execution, and interpretation of experiments in molecular, cellular and organismic biology; lab management; R&D affairs; mentoring.

Research Areas of Experience: angiogenesis; apoptosis; cardiac aging; growth factors & signal transduction; inflammation & wound healing; molecular markers & cellular phenotype conversion; symbiosis & parasitism.

Research techniques of competence: DNA/RNA/protein isolation & characterization; cell culture & assays; Northern/Southern/Western blotting; PCR; cloning; ELISA; EMSA; FISH; immunohistochemistry; immunofluorescence; gene expression/silencing; histology; animal surgery & models; microscopic techniques (light, TEM, SEM); etc.

RESEARCH INTERESTS

I have a rather broad research background. Over the years, I have been involved in studies in eukaryotic microbiology, arachnology, cardiovascular biology, and gastroenterology. My current research activity has been on acid reflux associated esophageal adenocarcinoma.

RESEARCH APPOITMENT

PRINCIPAL INVESTIGATOR, U.S. DEPARTMENT OF VETERANS AFFAIRS

2004 - present

Duty: Directing a research lab to study the molecular and cellular mechanisms of gastrointestinal inflammation and cancer. **Accomplishments**: Earned multiple research grants; authored 2 books and 13 peer-reviewed papers; presented at 36 global meetings; mentored dozens of students including high school seniors, undergraduates, graduates and postgraduates.

ASSOCIATE INVESTIGATOR, U.S. DEPARTMENT OF VETERANS AFFAIRS

2001 - 2004

Duty: Studying the molecular and cellular biology of gastrointestinal wound healing. **Accomplishments**: Published 10 peer-reviewed papers; presented at 11 global meetings.

ASSISTANT RESEARCH PROFESSOR, THE CHINESE ACADEMY OF SCIENCES

1987 - 1991

Duty: Studying parasitic protozoa and other invertebrates. **Accomplishments**: Published 8 peer-reviewed papers.

TEACHING APPOINTMENT

ASSOCIATE PROFESSOR, UNIVERSITY OF CALIFORNIA

2014 – present

Duty: Mentoring students in lab research.

ASSISTANT PROFESSOR, UNIVERSITY OF CALIFORNIA

2002 - 2014

Duty: Mentoring students in lab research.

INSTRUCTOR, CITY COLLEGE OF NEW YORK

1991 - 1998

Duty: Teaching courses including Human Anatomy and Physiology, Computer Programming and Simulation, and Electron Microscopy.

INSTRUCTOR, ST. JOHN'S UNIVERSITY

1996

Duty: Teaching courses including General Biology, and Evolutionary Ecology.

ADMINISTRATION EXPERIENCE

ACTING ASSOCIATE CHIEF OF STAFF FOR R&D, VA LONG BEACH HEALTHCARE SYSTEM

2010

Duty: Overseeing the entire research program.

CHAIRMAN OF THE INSTITUTIONAL ANIMAL CARE & USE COMMITTEE (IACUC), VA LONG BEACH HEALTHCARE SYSTEM

2008 - 2012

Duty: Reviewing and authorizing research projects using animal subjects.

RADIATION SAFETY COORDINATOR, CITY COLLEGE OF NEW YORK

1991 - 1998

Duty: Inventory, monitoring, and disposing of radioisotopes for the entire school (18 labs in total).

EDUCATION

HARVARD UNIVERSITY, BOSTON, POSTDOCTORAL FELLOW IN MOLECULAR BIOLOGY (1998 – 2001)

Studying the molecular and cellular biology of cardiovascular aging and published 2 peer-reviewed papers.

CITY UNIVERSITY OF NEW YORK, NEW YORK, PH.D. IN BIOLOGY (1991 – 1998)

Studying molecular biology of endosymbiosis. Published 3 peer-reviewed papers.

THE CHINESE ACADEMY OF SCIENCES, CHINA, M.S. IN CELL BIOLOGY (1982 – 1985)

Studying biology of parasitic protozoa.

INNER MONGOLIA UNIVERSITY, CHINA, B.S. IN ZOOLOGY (1978 – 1982)

Thesis: "Role of Trypsin Inhibitors in Preservation of Sperms in Liquid Nitrogen".

AWARDS, HONORS & OTHER ACTIVITIES

R01 (2007 – 2011, $670K, PI), U. S. Department of Veterans Affairs

Career Development Award (2004 – 2007, $400K, PI), U. S. Department of Veterans Affairs

Grant-in-Aid Award (2004 – 2006, $140K, PI), American Heart Association

Research Enhancement Award (2001 – 2004, recipient), U. S. Department of Veterans Affairs

Ruth L. Kirschstein National Research Service Award (1998 – 2001, recipient), U. S. National Institute of Health

Inclusions in Marquis Who's Who in America (volumes 2009, 2011, and 2013)

Editorial board members:

Journal of Oncology and Biomarker Research *(Editor-in-Chief),* ***Journal of Biomarkers***, ***Journal of Medical Genomics and Biomarkers, Journal of Gastroenterology, Insight Knowledge, Gastroenterology and Hepatology***, ***WebMedCentral***, ***World Journal of Gastroenterology***, ***World Journal of Biological Chemistry***, ***World Journal of Gastrointestinal Endoscopy***, ***World Journal of Gastrointestinal Oncology*** *(Associate Editor-in-Chief)*

PROFESSIONAL MEMBERSHIP

American Society of Biochemistry and Molecular Biology

American Heart Association

American Gastroenterological Association

Global Diabetes Exchange

European Union Virtual Community

Biomed Experts

Expert Scape in Obesity

International Symbiosis Society

SELECTED PUBLICATIONS

BOOKS:

1. **Chai J**. 2013. **Research Directions in Tumor Angiogenesis**. ISBN 978-953-51-0963-1. InTech, Croatia.
2. **Chai J**. 2011. **Peptic Ulcer Disease**. ISBN 978-953-307-976-9. InTech, Croatia.

JOURNAL ARTICLES:

3. **Chai J**, Jamal MM. 2012. S100A4 in esophageal cancer: Is this the one to blame? **World Journal of Gastroenterology**. 18(30): 3931-3935.
4. **Chai J**, Modak C, Mouazzen W, Narvaez R, Pham J. 2010. Epithelial or mesenchymal: Where to draw the line? **BioScience Trends**. 4(3): 130-142.
5. **Chai J**, Norng M, Modak C, Reavis K, Mouazzen W, Pham J. 2010. CCN1 Induces a Reversible Epithelial-Mesenchymal Transition in Gastric Epithelial Cells. **Laboratory Investigation**. 90(8): 1140-1151.
6. Chu EC, **Chai J**, Tarnawski AS. 2007. Mesalamine downregulates c-Myc and genes promoting survival and proliferation of human colon cancer cells. A key to its chemopreventive action? **Alimentary Pharmacology & Therapeutics**. 25(12): 1443-9.
7. Nguyen T, **Chai J**, Li A, Akahoshi T, Tanigawa T, Tarnawski AS. 2007. Novel roles of local insulin-like growth factor-1 activation in gastric ulcer healing: promotes actin

polymerization, cell proliferation, re-epithelialization, and induces Cyclooxygenase-2 in a phosphatidylinositol-3 kinase dependent manner. **American Journal of Pathology**. 170(4): 1219-28.

8. Chow J, Norng M, Zhang J, **Chai J**. 2007. TRPV6 mediates capsaicin-induced apoptosis in gastric cancer cells – Mechanisms behind a possible new "hot" cancer treatment. **BBA – Molecular Cell Research**. 1773(4): 565-76.
9. **Chai J**, Norng M, Tarnawski AS, Chow J. 2007. A critical role of serum response factor in myofibroblast differentiation during experimental oesophageal ulcer healing in rat. **Gut**. 56(5): 621-30.
10. **Chai J**, Baatar D, Tarnawski AS. 2004. Serum response factor promotes re-epithelialization and muscular structure restoration during gastric ulcer healing. **Gastroenterology**. 126: 1809-18.
11. **Chai J**, Jones MK, Tarnawski AS. 2004. Serum response factor is a critical requirement for VEGF signaling in endothelial cells and VEGF-induced angiogenesis: Insight into the mechanisms. **FASEB Journal**, 18: 1264-6.
12. Zhang X, **Chai J**, Azhar G, Sheridan P, Nagano K, Brown T, Yang J, Khrapko K, Borras A, Lawitts J, Misra R, Wei JY. 2001. Early postnatal cardiac changes and premature death in transgenic mice overexpressing a mutant form of serum response factor. **Journal of Biological Chemistry**, 276: 40033-40.

REFERENCES Upon request.