

## CURRICULUM VITAE

NAME: Jessie L.-S. Au  
CITIZENSHIP: U.S.A.

### EDUCATION

<u>Institution</u>	<u>Degree</u>	<u>Year</u>	<u>Field</u>
School of Pharmacy University of California San Francisco, CA	Pharm.D.	1972	Clinical Pharmacy
Dept. of Pharmaceutical Chemistry University of California San Francisco, CA	Ph.D.	1980	Pharmaceutics
Dept. of Experimental Therapeutics Roswell Park Memorial Institute Buffalo, NY	Postdoctoral Fellow	1979-1980	Biochemical Pharmacology

### RESEARCH INTERESTS

Development of effective treatments of solid tumors has been my career goal. Our group has thus far taken two of our discoveries through clinical evaluation (including a phase III study that yielded positive findings). My work is typically in the interface between diverse disciplines, with the goal of translating laboratory findings to survival-extending cancer treatments. My research goal for the next five years is to continue the development of several discoveries from my lab at Optimum Therapeutics, a biotech company I co-founded in 2003 and where I currently serve as Chief Scientific Officer. On a broader scale, my goal is to develop a new field of studies, Oncometrics, which I define as using computation and modeling to improve the success rate of clinical cancer drug development (currently at <7%).

### EDUCATION OF NEXT-GENERATION PHARMACEUTICAL SCIENTISTS

My first academic position at the Ohio State University, where I trained 36 Ph.D. and 5 M.Sc. in pharmaceutical sciences, has led to my opinion that a new, cross-fertilization approach is needed to train drug development scientists who can translate the explosive growth in biomedical scientific knowledge into efficacious and cost-efficiently cancer treatments. This, in turn, requires bringing professors in diverse disciplines (biological, physical, computational sciences) to share the training of graduate students so that the future scientists will have the unique combination of expertise that has proven elusive thus far, in part due to the silo structures in academic programs. Hence, I took early retirement and left my tenured professor position in 2013 and became part-time, non-tenured professors at three different universities. This arrangement, albeit unorthodox, has provided the opportunity to pioneer this new educational approach. In September 2014, I initiated the first program at the University of Oklahoma Health Sciences Center, where we currently have nine pre-doctoral and three post-doctoral students (including a visiting student from Politecnico di Milano).

## **HONORS AND AWARDS**

President Scholarship, 1971-1972; Edith Claypole-Joe Shoong Scholarship, 1976-1977; Patent Fund Award; NIH Predoctoral Fellow, 1977-1979, University of California San Francisco.  
Rho Chi National Graduate Scholarship, 1977-1978.  
Technology Transfer Award, International Union Against Cancer, 1981.  
New Investigator Research Award, NIH, 1982.  
Research Career Development Award, NIH, 1990.  
MERIT Award, NIH, 1992.  
University Distinguished Scholar Award, The Ohio State University, 1992.  
Dorothy M. Davis Chair of Cancer Research, The Ohio State University, 1992.  
Fellow, American Association of Pharmaceutical Scientists, 1992.  
Frank Duckworth Eminent Visiting Scholar, University of Florida, 1993.  
Joseph V. Swintosky Distinguished Lecturer, University of Kentucky, 1997.  
Distinguished University Professor, The Ohio State University, 1998.  
Fellow, American Association for the Advancement of Science, 1999.  
Distinguished Visiting Professor, National University of Singapore, 2000.  
Alumni Row, University of California San Francisco, 2000.  
Research Achievement Award in Pharmacokinetics, Pharmacodynamics and Drug Metabolism, American Association of Pharmaceutical Scientists, 2004.  
Semi-Finalist, Inaugural NIH Director's Pioneer Award  
Member, FDA Pharmaceutical Sciences and Clinical Pharmacology Advisory Board, 2006-2010, 2013-2016, 2016-2019  
Co-founder & Co-Chair, Bladder Cancer Research Network (Co-chair with Dr. Seth Lerner of Baylor Medical University, consortium of 30+ academic/research urologic oncologists)  
Member, Scientific Advisory Board, Bladder Cancer Advocacy Network, 2006-present  
Member, NCI Bladder Cancer Task Force, 2010-present  
Member, The Cancer Genome Atlas (TCGA) Bladder Cancer Working Group, 2010-present  
Profiled as Distinguished Pharmaceutical Scientist (12<sup>th</sup> in the series of a total of 28 spanning 1987 through 2014), American Association of Pharmaceutical Sciences (about 10,000 members), 2008  
Mosier Endowed Chair in Pharmaceutical Sciences, University of Oklahoma Health Sciences Center, 2014-present  
Distinguished Scholar in Pharmacy, Chinese University of Hong Kong, 2015.  
Endowed Chair in Systems Pharmacology, Taipei Medical University, 2016

## **MEMBERSHIP**

American Association of Cancer Research; American Association of Cancer Research Women in Cancer Research; American Association of Pharmaceutical Scientists; American Association for Advancement of Science

## **PROFESSIONAL EXPERIENCE**

Clinical Pharmacist: Staff/Supervisor, Presbyterian Hospital of Pacific Medical Center, San Francisco, CA, 1972-1975; Volunteer pharmacist, Haight-Ashbury Free Medical Clinics, San Francisco, CA, 1977.

Research Affiliate III, 1979-1980; Cancer Research Scientist I and II, Roswell Park Memorial Institute, Buffalo, NY, 1980-1983  
Assistant Professor, Division of Pharmaceutics and Pharmaceutical Chemistry, College of Pharmacy, The Ohio State University, 1983-1989  
Member, Cancer Pharmacology Program, Institute of Biomedical Sciences Academic Sinica, Taipei, Taiwan, 1988-1993.  
Associate Professor, Division of Pharmaceutics and Pharmaceutical Chemistry, College of pharmacy, The Ohio State University, 1989-1992.  
Acting Co-Director, Developmental Therapeutics Program, OSU Comprehensive Cancer Center, 1991-1992.  
Professor, Colleges of Pharmacy and Medicine, The Ohio State University, 1992.  
Co-Director, Head and Neck Oncology Program, OSU Comprehensive Cancer Center, 1992-1993.  
Co-Director, Urologic Oncology Program, OSU Comprehensive Cancer Center, 1992-1999.  
Director of Translational Research, OSU Comprehensive Cancer Center, 1993-1994.  
Deputy Director, OSU Comprehensive Cancer Center, 1994-1997.  
Dorothy M. Davis Chair in Cancer Research, The Ohio State University, 1992-2004.  
Member, OSU Comprehensive Cancer Center, 1983-2013.  
Distinguished University Professor, Colleges of Pharmacy, Medicine and Engineering, The Ohio State University, 1998-2013.  
Distinguished University Professor Emeritus, The Ohio State University, 2013-present.  
Adjunct Professor, Department of Surgery, Medical University of South Carolina, 2013-present.  
Adjunct Professor, Department of Pharmaceutical Sciences, University of Oklahoma, Oklahoma City, OK, 2013-2014  
Research Professor & Mosier Endowed Chair, Department of Pharmaceutical Sciences, University of Oklahoma, Oklahoma City, OK, 2014-present  
Co-Founder (2003) and Chief Scientific Officer (2013-present), Optimum Therapeutics LLC  
Visiting Professor (since 2014) and Chair Professor in Systems Pharmacology (since 2016), Taipei Medical University, Taipei, Taiwan  
Founding Director, Institute of Quantitative Systems Pharmacology, Carlsbad, CA, 2016.

### **ADMINISTRATIVE EXPERIENCE**

#### **Research administration:**

- Experience in leading a relatively large research laboratory (40+ research personnel) and large-scale collaborative research projects in the U.S., Canada and Europe.
- As Chief Scientific Officer, responsible for working with US government funding agencies to establish and implement policies and procedures on ensuring research integrity

#### **Academic administration:**

- Held various administration positions in the Ohio State University Comprehensive Cancer Center and appointments to university level committees including the budget restructuring committee (responsible for reviewing and making recommendations on revenue sources). As Deputy Director of the Comprehensive Cancer Center with 200+ members drawn from 11 colleges, I was responsible for the preparation and defense of the NCI Cancer Center Core Grant and its expenditure, and budgeting and expending discretionary funds from the Cancer Hospital, the assignment of cancer center space (26,000 nsf), and the strategic and programmatic

planning. I also worked on initiatives to promote and leverage technology transfer as an alternative source of revenues to support cancer research.

- Developed the first-of-its-kind graduate program in drug development. This program involves shared teaching of Ph.D. students by two or more professors in one or more institutions so that the student acquires diverse research expertise (vs. students in traditional programs who are typically trained in a single laboratory).

### **PROFESSIONAL SERVICE (National and International)**

Participant in the International Cancer Research Technology Transfer Program sponsored by the International Union Against Cancer, 1982

Reviewer for Cancer Research, Cancer Chemotherapy and Pharmacology, Analytical Biochemistry, Pharmaceutical Research, Journal of Pharmaceutical Sciences, In vitro, Journal of National Cancer Institute, Biopharmaceutics and Drug Disposition, Journal of Drug Targeting, Journal of Chromatography, Oncogene, Clinical Cancer Research, PharmSci, Journal of Controlled Release, Journal of Pharmacology and Experimental Therapeutics, Biochemical Pharmacology, Nature Biotechnology, Biomaterials, Journal of Controlled Release, AAPS J

Member, NCI Program Project Grant Site Visit Team, 1983, 1992, 1993, 1998-2002, 2010

Member, NIH Experimental Therapeutics II Study Section, 1987-1992; NIH Small Business Innovative Research Study Section, 1987-1990; NIH AIDS and Related Research Review Group, 1989; NIH Pediatric AIDS Clinical Trial Study Section, 1993; NIH Alternative Medicine Study Section, 1993; NIH Pharmacology Study Section, 1994-96; NIH Experimental Therapeutic II Study Section, 1997; NCI Manpower (Training Grants) Study Section, 1997; NCI Cancer Center Support Grant Review Committee, 1997, 1998, 2005; NIH Developmental Therapeutics Study Section, 2002-2005; NIH Biomaterials and Biointerfaces Study Section, since 2010; NCI Center of Cancer Nanotechnology Excellence, since 2010; Miscellaneous NCI/NIH Study Sections, 2007-present (see below for additional listing since 2009)

Chair, Experimental Therapeutic II Special Study Section, 1996, 1997

Member, U.S. Army Medical R & D Command Breast Cancer Research Program Review Group, 1994, 1997

Member, Oncology Boundary Advisory Committee, NIH, 2001-2003 (responsible for realignment of oncology-related study sections which took place in 2003)

Member, NCI Scientific Review Group Translational and Clinical Subcommittee D, 2001 – 2003.

Member, Katholieke Universiteit Leuven, Research Grant Application Evaluation Committee, 2002;

Reviewer, Research grants for Fonds zur Forderung, Der Weissenchaftsfonds. Austria, 2004

Member, Arizona Disease Control Research Commission Review Panel, 1997-2002

Ad hoc Member, Board of Scientific Counselors, National Center for Research Resources, Review of Biomedical Engineering and Instrumentation Program, 1996

Chairperson, AAPS Annual Meeting Symposia, 1992, 2001

Member, Editorial Advisory Board, Pharmaceutical Research, 1990-mid 2000s

Member, Editorial Advisory Board, AAPS Journal, 1998-mid 2000s

Member, American Association of College of Pharmacy Graduate Affairs Committee, 1992 and 1993

Chair (1993-1994) & Member (1994-1995), American Association of College of Pharmacy Paul Dawson Biotechnology Award Committee

Member, American Association of Pharmaceutical Scientists: Task Force on Alternative Sources of Revenue, 1995-1996; Bylaw Committee, 1995-1997

Member, NCI Strategy Planning Meeting on Intraperitoneal Cisplatin and Paclitaxel in ovarian

Cancer, 1995

External Reviewer of academic programs and faculty, University of Utah, University of Georgia, University of Michigan, University of Alabama, SUNY Stony Brook, University of Singapore, National Health Research Institute (Taiwan)

Scientific Advisor, University of Pittsburgh Cancer Institute, 1997-1998; Roswell Park Cancer Institute, 1998-2001

Member, American Association of Cancer Research Program Committee, 1997, 1998, 2001.

Scientific Advisory Board, National Cancer Institute/Controlled Release Society International Symposium on Tumor Targeted Delivery Systems, 2000

Member, NCI Gynecologic Oncology Group Retreat, May, 2000

Member, NCI State of the Science Meeting on Lung Cancer, June, 2000

Member, NCI State of the Science Meeting on Bladder Cancer, September, 2000

Member, Scientific Program Committee, EORTC-NCI-AACR 2002 Symposium on Molecular Targets and Cancer Therapeutics, Frankfurt, Germany, 2002

Chairperson, Electorate Nominating Committee, Pharmaceutical Sciences, American Association for the Advancement of Science (AAAS), 2001-2002

Member-at-Large, AAAS Pharmaceutical Section, 2003–2006

Member, Program Committee, Co-Chair on Symposium on Growth factor receptors and beyond. Second Pharmaceutical Sciences World Congress, Kyoto, Japan, 2004.

Member and Co-Chair, External Advisory Committee, Oklahoma Biomedical Research Infrastructure Network (BRIN) Program Idea Networks for Biomedical Research Excellence (INBRE), 2004-2019 (Co-Chair since 2014).

Reviewer, Cancer Research UK, 2004, 2005

Chair, AAPS PPDM Hot Topics Committee (FDA Critical Path), 2004, 2005

Member, Scientific Advisory Board, Attenuon LLC, 2004-2009

Review Committee, Science Foundation Ireland, 2006

Member, Board of Consulting Editors, Pharmaceutical Research, 2006-2008

Member, Program Committee; Convener, Symposium on Molecular Targeting in Cancer

Chemotherapy, Third Pharmaceutical Sciences World Congress, Amsterdam, Netherlands, 2007

Member, Scientific Advisory Board, Ascent Biomedical Ventures 2004-2007

Co-Chair, Bladder Cancer Research Network (Co-Chair with Seth Lerner of Baylor Medical University, a newly formed group of 40+ academic/research urologic surgeons), 2007-present

Member, Scientific Advisory Board & Management Committed, Bladder Cancer Advocacy Network, 2010-present

Member, Bladder Cancer Think Tank Steering Committee, 2007-present

Member, NCI Bladder Cancer Task Force, 2010-present

Member, The Cancer Genome Atlas (TCGA) Bladder Cancer Working Group, 2010-present.

Member, Editorial Board, Current Cancer Drug Targets, 2013-present

Recent NIH/NCI review activities, since 2009

- ZHD1-DSR-K-(09), Biological Testing Facility, February 9, 2009
- ZCA1-RTRB-2-(R1), February 24, 2009
- ZCA1-RTRB-2-(C1), NCI Small Business Innovation Research (SBIR) Program Topic 229 - Development of Molecular Pharmacodynamic Assays for Targeted Therapies, March 19, 2009
- ZCA1-RPRB-M-(F3), July 20, 2009
- ZCA1-RPRB-J-(09), NCI Grant Opportunity Clinical/Translational, August 5-6, 2009
- ZCA1-GRB-S-(M1), January 22, 2010
- BMBI Biomaterials and Biointerfaces. February 3-4, 2010

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