#### **CURRICULUM VITAE**

University of North Carolina at Chapel Hill Eshelman School of Pharmacy

#### **BIOGRAPHICAL**

Name: Leaf Huang Birth Date: September 23, 1946

Birth Place: China

**Citizenship:** Naturalized citizen of U.S.A.

Business Address: Division of Pharmacoengineering E-Mail Address: leafh@email.unc.edu

and Molecular Pharmaceutics University of North Carolina at

Chapel Hill

Eshelman School of Pharmacy 1315 Kerr Hall, CB#7571

Chapel Hill, NC 27599

Web Site: https://pharmacy.unc.edu/laboratory-

of-drug-targeting/

**Business Phone:** 919-843-0736 **Business Fax:** 919-966-0197

#### **EDUCATION and TRAINING**

**UNDERGRADUATE:** 

1964-1968 National Taiwan University B.S. Physics

Taipei, Taiwan 1968

**GRADUATE:** 

1969-1974 Michigan State University Ph.D. Alfred Haug, Ph.D., Advisor

East Lansing, MI 1974 Biophysics

**POSTGRADUATE:** 

1974-1976 Postdoctoral Fellow Richard E. Pagano, Ph.D.,

Department of Embryology Mentor

Carnegie Institution of Washington

Baltimore, MD Cell Biology, Biophysics

# **APPOINTMENTS and POSITIONS**

ACADEMIC:		
2017-2020	Shanghai University of Traditional Chinese Medicine	Adjunct Professor
2016-2017	Shenyang Pharmaceutical University, China	Visiting Professor
2013-2016	Fudan University, China	Advanced Visiting Scholar
2012	Fourth Military Medical University, China	Visiting Professor
2012-present	Division of Pharmacoengineering and Molecular Pharmaceutics Eshelman School of Pharmacy University of North Carolina at Chapel Hill Chapel Hill, NC	Fred Eshelman Distinguished Professor (with tenure)
2010-2017	Chung-Yuan Christian University, Taiwan	Visiting Chair Professor
2010-present	UNC-NCSU Joint Department of Biomedical Engineering University of North Carolina at Chapel Hill Chapel Hill, NC	Professor (joint appointment)
2009	Sichuan University, Chengdu, China	Honorary Professor
2005-2012, 2015	Division of Molecular Pharmaceutics Eshelman School of Pharmacy University of North Carolina at Chapel Hill Chapel Hill, NC	Fred Eshelman Distinguished Professor (with tenure) and Chair
1999-2005	Department of Pharmaceutical Sciences School of Pharmacy University of Pittsburgh Pittsburgh, PA	The Joseph Koslow Chair Professor of Pharmaceutical Sciences, with tenure
1999-2005	Center for Pharmacogenetics School of Pharmacy University of Pittsburgh Pittsburgh, PA	Director
2001-2005	Department of Bioengineering University of Pittsburgh School of Engineering Pittsburgh, PA	Professor (Secondary Appointment)
1999-2005	Department of Pharmacology	Professor
Curriculum Vitae		Leaf Huang, Ph.D.

01/05/2023

Page 2

	University of Pittsburgh School of Medicine Pittsburgh, PA	(Secondary Appointment)
1999-1999	School of Pharmacy University of Pittsburgh Pittsburgh, PA	Associate Dean for Research
1997-1999	Molecular Pharmacology Training Program Interdisciplinary Biomedical Graduate Program School of Medicine University of Pittsburgh Pittsburgh, PA	Director
1993	Liposome Vector Core Pittsburgh Center for Human Gene Therapy University of Pittsburgh Pittsburgh, PA	Director
1992-1999	Department of Pharmaceutical Sciences School of Pharmacy University of Pittsburgh Pittsburgh, PA	Professor (Joint Appointment)
1992	University of Pittsburgh Cancer Institute Pittsburgh, PA	Full Member
1991-1999	Department of Pharmacology University of Pittsburgh School of Medicine Pittsburgh, PA	Professor with tenure and Head, Laboratory of Drug Targeting
1991-	Department of Molecular Genetics and Biochemistry University of Pittsburgh School of Medicine Pittsburgh, PA	Professor (Secondary Appointment)
1985-1991	Department of Biochemistry University of Tennessee Knoxville, TN	Professor with tenure
1978-1991	University of Tennessee Cell, Molecular and Developmental Biology Program University of Tennessee, Knoxville	Faculty Member
1987-1991 Curriculum Vitae 01/05/2023	Comparative and Experimental Medicine	Faculty Member Leaf Huang, Ph.D. Page 3

Program
University of Tennessee

	University of Tennessee	
1985-1991	Biotechnology Program University of Tennessee, Knoxville	Faculty Member
1987-1988	Research and Development LipoGen, Inc.	Vice President
1985-1986	Cell, Molecular and Developmental Biology Program University of Tennessee, Knoxville	Acting Director
1986	Department of Biology Lanzhou University Lanzhou, China	Visiting Professor (Honorary Appointment)
1980-1985	Department of Biochemistry University of Tennessee, Knoxville	Associate Professor with tenure
1982-1985	Department of Biochemistry University of Tennessee, Knoxville	Associate Head
1985	Department of Biological Sciences and Biotechnology Tsinghua University Beijing, China	Visiting Professor (Honorary Appointment)
1983-summer	Institute of Zoology Academia Sinica Beijing, China	Research Scholar
1982-summer	Department of Chemistry Stanford University	Visiting Research Scholar
1980	Department of Biology Beijing University Beijing, China	Visiting Professor (Honorary Appointment)
1976-1980	Department of Biochemistry University of Tennessee, Knoxville	Assistant Professor
1974–1976	Department of Embryology Carnegie Institution of Washington Baltimore, MD	Postdoctoral Fellow
1969-1974	Department of Biophysics and MSU/DOE Plant Research Laboratory Michigan State University	Research Assistant
Curriculum Vitae 01/05/2023		Leaf Huang, Ph.D. Page 4

# **HONORS**

Title of Award	Year
Matthey-Bishop Pre-doctoral Fellowship Carnegie Institution of Washington Fellowship	1970-1971 1974-1975
U.S. Public Health Service Research Fellowship	1975-1976
Chancellor's Research Scholar, University of Tennessee, Knoxville	1983
Research Career Development Award, NIH	1981-1986
Member, Science Alliance Center of Excellence, University of Tennessee, Knoxville	1984-1991
Distinguished Speaker, National Science Commission, Republic of China	1993
Distinguished Lecturer, Chinese Pharmaceutical Society, Republic of China	1996
Controlled Release Society Outstanding Pharmaceutical Paper from the 24 <sup>th</sup> International Symposium on Controlled Release of Bioactive Materials	1997
Fellow, American Association of Pharmaceutical Scientists	1997
Heward Visiting Scientist to the Montreal General Hospital/McGill University	1998
Chairman, Non-viral Gene Therapy Committee, American Society for Gene Therapy	1998 – 1999
Research Grand Round, Moffitt Cancer Center, Tampa, FL	1999
Plenary Speaker, Japanese Society of Pharmaceutical Sciences, Tokushima, Japan	1999
The Joseph Koslow Endowed Chair, University of Pittsburgh	1999 - 2005
"Meet The Professor", American Society of Gene Therapy Annual Meeting	1999, 2000, 2001
Plenary Speaker, 22 <sup>nd</sup> Annual Eino Nelson Memorial Conference, Captiva Island, FL	2001
Fellow, American Institute for Medical and Biological Engineering	2003
Distinguished Faculty Committee, University of Pittsburgh	2003 - 2005
Alec D Bangham MD FRS Achievement Award, Liposome Research Days conference, Hsin-Chu, Taiwan. <b>This is the highest honor in liposome research.</b>	2004
Elected member of the Advisory Board, American Society of Gene Therapy	2006 -2011
Plenary speaker, annual meeting of The Pharmaceutical Society of Taiwan, Taiwan	2007
Plenary speaker, The 6 <sup>th</sup> China-Japan-Korea Foresight Joint Symposium on Gene Delivery and International Symposium on Biomaterials, Sanya, China	2008
Forum speaker, 60 <sup>th</sup> anniversary of Dalian Institute of Chemistry and Physics, Chinese Academy of Sciences, Dalian, China	2009
Plenary speaker, 4 <sup>th</sup> International Conference in Advanced Drug Delivery, Shanghai, China	2009
Curriculum Vitae 01/05/2023	Leaf Huang, Ph.D. Page 5

Honorary Professor, Sichuan University, China	2009
Distinguished speaker, Japan Association for The Advancement of Medical Equipment	2010
Distinguished speaker, Global Center of Excellence, University of Shizuoka, Japan	2010
Distinguished speaker, The Academy of Pharmaceutical Science and Technology, Japan	2010
T. Nagai Postdoc Research Achievement Award, Controlled Release Society. Award was presented to both Dr. Sang Kyoon Kim (postdoc) and Professor Leaf Huang (mentor)	2010
Visiting Chair Professor, Chung-Yuan Christian University, Taiwan	2010
Elected Vice Chair, Gordon Research Conference on "Cancer Nanotechnology"	2011
Elected member, Board of Scientific Advisors, Controlled Release Society.	2012-15
Keynote speaker, Symposium of Advanced Nanomaterials in Biomedicine, Chung Yuan Christian University, Taiwan.	2012
Visiting Professor, Fourth Military Medical University, Xi'An, China	2012
Qiushi Chair Professor, Zhejiang University, China (declined)	2012
Changjiang Chair Professor, Zhejiang University, China. Selected by the Ministry of Education, People's Republic of China (declined)	2012
Senior Visiting Scholar, Fudan University, China	2013-16
Keynote speaker, Chinese Pharmaceutical Conference, "Lipidic Nanoprecipitates for Drug and Gene Delivery", Wuhan, China	2013
Distinguished Pharmaceutical Scientist Award, American Society for Pharmaceutical Scientists. <b>This is the highest scientific recognition of AAPS</b> .	2013
Qiushi Chair Professor, Zhejiang University, China	2014
Keynote speaker, Cross-Strait Biomaterials and Controlled Drug Release Symposium, Hsinchu, Taiwan	2014
Keynote speaker, NanoDDS2014 conference, Chapel Hill, NC	2014
Keynote speaker, Australian Society of Nanomedicine, Sydney, AU	2015
Visiting professor, ARC Center of Excellence in Convergent Bio-Nano Science and Technology. Lecture tour in three Australian universities	2015
Keynote speaker, International Conference on Applied Materials, Chung Yuan Christian University, Taiwan	2015
Honorable speaker for the Applied Chemistry Lecture Series, Changchun Institute of Applied Chemistry, Chinese Academy of Sciences, Changchun, China Curriculum Vitae	2016
01/05/2023	Leaf Huang, Ph.D. Page 6

Keynote speaker, 48 <sup>th</sup> annual Pharmaceutics Graduate Student Research Meeting, University of Missouri Kansas City	2016
Lifetime Achievement Award, Chinese American Society of Nanomedicine and Nanobiotechnology	2016
Highly Cited Researchers 2016 in "Pharmacology & Toxicology" by Thomson Reuters	2017
Distinguished Alumni Award, Physics department, National Taiwan University.	2017
Highly Cited Researchers 2017 in "Pharmacology & Toxicology" by Thomson Reuters	2018
Member, External Review Team, School of Pharmaceutical Sciences, Peking University	2018
Highly Cited Researchers 2018 in "Pharmacology & Toxicology" by Clarivate Analytics	2019
Keynote speaker, School of Pharmacy, University of Pittsburgh	2019
Keynote speaker, Virginia Nanomedicine Forum, Virginia Commonwealth University	2019
Keynote speaker, AAPS PharmSci360 Symposium	2020
Highly Cited Researchers 2019 in "Cross-Field" by Clarivate Analytics	2020
Highly Cited Researchers 2020 in "Cross-Field" by Clarivate Analytics	2021
Elected to College of Fellows, Controlled Release Society	2022
Highly Cited Researchers 2021 in "Cross-Field" by Clarivate Analytics	2022
Highly Cited Researchers 2022 in "Cross-Field" by Clarivate Analytics	2022

# MEMBERSHIPS in PROFESSIONAL and SCIENTIFIC SOCIETIES

Society of Chinese Bio-scientists in America Controlled Release Society American Association of Pharmaceutical Scientists American Society of Gene and Cell Therapy American Association of Colleges of Pharmacy

# START-UP COMPANIES CO-FOUNDED

Lipogen, Inc.	Knoxville, TN	1987-1990
Rx Therapeutics, Inc.	Woodland, TX	1992-1996
Lipella, Inc.	Pittsburgh, PA	2005-present
Curriculum Vitae		Leaf Huang, Ph.D.
01/05/2023		Page 7

PDS Biotechnology, Inc.

Qualiber, Inc.

Chapel Hill, NC

Taiwan

OncoTrap

Princeton, NJ

2006-present

2010-2017

Zondo-2017

Chapel Hill, NC

Chapel Hill, NC

2013-2014

2016-2019

#### Teaching Activity:

#### University of Tennessee:

Taught "Structure and Function of Biological Membranes" to graduate students, (1976, 1978, 1980, 1982)

Group taught "Introductory Biochemistry" to pre-med and pre-vet students, (1977-81, 1990)

Taught "Techniques of Biochemistry" to graduate students, (1977) and group taught again, (1978 - 1986)

Group taught "Biochemistry" to graduate students, (1978-1991)

Taught "Introductory Biochemistry" to non-majors, (1979-1981)

Group taught "Advanced Cell Biology," (1981, 1983, 1985, 1986, 1988, 1989, 1990)

Taught "Liposome Technology" to graduate students, (1985, 1986, 1987, 1989)

#### University of Pittsburgh:

Lectured in "Macromolecules and Bioenergetics" (MS Biochemistry 2210), (1992, 1993)

Lectured in "Cancer Pharmacology" (Pharmacology MS PHL 2563), (1993 to 1997)

Lectured in "Receptors and Signal Transduction" (Pharmacology MS PHL 3510), (1991, 1994 to 1997)

Co-director of "Advanced Topics in Drug Delivery and Targeting" (Pharmacy 3008), (1994, 1997)

Lectured in "Scientific Ethics" (MGB MS MIC 2290), (1995, 1996)

Lectured in "Principles in Pharmacology" (Pharmacology 2560) (1994 to 2001)

Supervised Problem Based Learning Session and Conferences of "Medical Pharmacology" (1994 to 2001)

Lectured in "Molecular Pharmacology" (MSPHL 2340) (1999 to 2002)

Taught "Methods in Pharmacology" (Pharmacology MS PHL 2555) (1993 to 1996)

Lectured in "Advanced Topics in Virology" (MGB MS MIC 2030) (1996).

Lectured in "Cancer Biology and Therapeutics" (MSCMP 3710 and MSPHL 3310), (1999 to 2004)

Lectured in "Drug Delivery Systems", (1999)

Lectured in "Molecular and Medical Genetics", (2000 to 2003)

Lectured in "Gene Therapy Vectors", (2001)

Course co-director and lectured in "Advanced Topics in Drug Delivery and Targeting" (Pharm 3008), (2001, 2003)

#### University of North Carolina, Chapel Hill

Lectured in PHCY 61 "Basic Pharmaceutics II" (2006)

Lectured in MOPH 864 "Advance in Drug Delivery" (2006, 2007)

Lectured in MOPH 411 "Basic Pharmaceutics II" (2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014)

Lectured and led lab session in MOPH 850 "Pharmaceutical Analysis" (2007, 2008, 2009)

Course director and lecturer, MOPH 864 "Advances in Drug Delivery" (2008, 2009, 2011, 2013, 2015)

Lectured in DPMP 738 "Nanomedicine" (2009), Block leader (2012), course coordinator (2014, 2016), lecturer (2017, 2018, 2019, 2020, 2021, 2022)

Coordinated MOPH 899 "Seminar" (2012-13)

Lectured in MOPH 868 "Advances in Drug Delivery and Nanomedicine" (2016-2020)

Coordinated and Lectured in DPMP 864 "Advances in Drug Delivery" (2021-2022)

Curriculum Vitae Leaf Huang, Ph.D. Page 8

## Chung Yuan Christian University, Taiwan

"Advances in Drug Delivery", a one-week intensive course for graduate students (2011)

## Graduate Students Supervised and Their Current/Last Known Positions:

## **University of Tennessee**

Siu-Cheong Ho Characterization of Large Unilamellar Phospholipid Vesicles

and Their Interactions with Cultured Chinese Hamster Cells,

(M.S. 1977), Retired.

Ruanglakana Vajanabukka The Nicotinic Acetylcholine Regulator of *Torpedo californica*:

Purification and Reconstitution, (M.S. 1979), Faculty,

Chulalonkon University, Bangkok, Thailand

Garry L. Adrian Entrapment of Proteins in Phosphatidylcholine Vesicles, (M.S.

1979), Staff Scientist, State Government of Indiana

Benedict Changan Chang Synthesis and Characterization of a New Fluorescent

Phospholipid, (M.S. 1979), Industrial Scientist, Merck, Inc.

James A. Wilkins Transport of 5-Hydroxytryptamine by Platelet Dense

Granules, (Ph.D. 1979), Senior Scientist, Otsuka America

Pharmaceuticals, Inc.

Stephen R. Grant Site Specific Binding of Liposomes, (Ph.D. 1980), Retired

Siu-Cheong Ho Phospholipid Vesicles as Carriers to Transfer Biological

Molecules into Cells, (Ph.D. 1980), Retired.

Paul T. Naylor Induction of Cytotoxic T-lymphocytes by Liposomes

Containing Herpes Simplex Virus and H-2 Antigens, (Ph.D.

1981), Orthopedic Surgeon, Knoxville, TN

Sharon S. Carpenter-Green Wheat Germ Agglutinin Covalently Coupled to Liposomes,

(M.S. 1981), Science Teacher, S.C.

Chen-Yen Wang Polyhistidine Mediates an Acid Dependent Fusion of

Negatively Charged Liposomes, (M.S. 1984), Professor,

University of Hawaii, Honolulu

Bruce P. Babbitt Model System for Studies of Specific Membrane Interactions,

(Ph.D. 1985) Vice President, Parexel, Inc.

Yung-Shyeng Tsao Interactions of Sendai Virus with Model Target Membrane,

(Ph.D. 1985), Senior Scientist, Merck, NJ

Curriculum Vitae 01/05/2023

Leaf Huang, Ph.D.

Page 9

Sean M. Sullivan Heat-Sensitive Immunoliposomes, (Ph.D. 1985), Senior

Director, Vical Corporation, San Diego, CA

Jerome Connor pH-sensitive Liposomes: Characterization and Application,

(Ph.D. 1986), Director of Development, LifeCell Corporation,

Branchburg, NJ

Kelly S. Houck The Role of Multivalency in Antibody Mediated Liposome

Targeting, (M.S. 1987), practicing physician, Johnson City,

TN

Chen-Yen Wang Cytoplasmic Delivery of Macromolecules via pH-Sensitive

Liposomes, (Ph.D. 1987), Professor, University of Hawaii,

Honolulu, HA

Rodney J.Y. Ho Target-Sensitive Immunoliposomes: Design and Application,

(Ph.D. 1987), Professor, University of Washington, Seattle,

WA

Brenda Hughes Lung Capillary Endothelial Cell Specific Monoclonal

Antibodies Target Liposomes to Mouse Lung in vivo, (jointly

supervised by Stephen Kennel), (M.S. 1988)

David Collins Mechanism of Destabilization of pH-Sensitive Liposomes and

Implications for Cellular Delivery, (Ph.D. 1989), Corporate

Fellow, Eli Lilly, Indianapolis, IN

Ana Tari Structure and Function of Phosphatidylglycerol in the

Stabilization of Phosphatidylethanolamine Bilayer, (M.S. 1989), Research Associate Professor, University of Florida, Division of Hematology-Oncology, Gainesville, Florida

Lori Steiner Optimization of DNA Entrapment in pH-Sensitive Liposomes,

(M.S. 1989), Pre-Clinical Business Development Manager,

ClinForce, Research Triangle Park, NC

Dexi Liu pH-Sensitive Liposomes: From Test Tube to Animal Model,

(Ph.D. 1990), Professor and Chair, School of Pharmacy,

University of Georgia, Athens, GA

Atsuhide Mori Role of Glycolipids on Liposome Biodistribution, Tumor

Uptake and Immunotargeting, (M.S. 1991), Senior Scientist,

Yamanouchi Pharmaceutical Co., Ltd., Japan

Xiaohuai Zhou Liposome Mediated Gene Transfer in Mammalian Cells,

(Ph.D. 1991), Food & Drug Administration, Riverside, CA

Curriculum Vitae 01/05/2023

Yong-Serk Park Effect of Glycolipids on Lipid Polymorphism and Liposome

Circulation, (Ph.D. 1992), Professor and Vice Dean, Yonsei

University, South Korea

Ana M. Tari Studies on Bilayer Liposomes Composed of 1, 2-Diacyl-3-

succinylglycerol, (Ph.D. 1992), Research Associate Professor, University of Florida, Division of Hematology-Oncology,

Gainesville, Florida

#### **University of Pittsburgh**

Fan Zhou MHC Class I Restricted Presentation of Protein Antigen

Delivered by Liposomes, (Ph.D. 1992), Pathologist, Portland,

Oregon

David Litzinger In Vivo Investigations Into the Drug Delivery Potential of

Liposomes, (Ph.D. 1993), Associate Director, Preclinical

Sciences, Ambrex, Inc., San Diego, CA

Hassan Farhood Delivery of macromolecules by cationic liposomes. (Ph.D.

1994), Software Consultant, New York, NY

Atsuhide Mori Liposomal Delivery of Lipophilic Antitumor Drugs. (Ph.D.

1994), Senior Scientist, Yamanouchi Pharmaceutical Co., Ltd.,

Japan

Xiang Gao Cationic Liposome and Polymer Mediated Gene Transfer

(Ph.D. 1995), Director of Formulation, HiSun Pharmaceutical

Co., China

Frank Kofi Bedu-Addo Biophysical Studies of Long Circulating Liposomes (Ph.D.

1995), President & CEO, PDS Biotechnology, Inc. Princeton,

NJ

Frank Sorgi Pharmaceutical Considerations for Cationic Liposome

Mediated Gene Delivery Systems. (Ph.D. 1997) President &

CEO, Flag Therapeutics, Raleigh, NC

Kirti Goyal Development of Hammerhead Ribozyme for the Site-Specific

Cleavage of c-erbB-2/c-neu Proto-Oncogene (M.S., 1995)

Michalakis Savva Grafting and Interaction of Water-soluble Synthetic Polymers

with Liposomes (Ph.D. 1998)

Curriculum Vitae 01/05/2023

Mark Whitmore Antitumor Activity of the LPD Lipoplex Prepared with

Immunostimulatory CpG DNA (Ph.D. 2000) Senior Scientist,

Genzyme Corporation, Framingham, MA

Marni Brisson Tierno Development of an Improved Cytoplasmic Expression System

for Gene Therapy (Ph.D. 1999) Medical Science Liaison

Director – East, Castle Biosciences, Inc.

Wai Yan (Vivian) Lui Non-Viral Approaches for Cancer Gene Therapy (Ph.D. 2000)

Associate Professor, Department of Biomedical Sciences,

Chinese University of Hong Kong, Hong Kong

Yadi Tan Overcoming The Inflammatory Toxicity of Cationic

Liposome/DNA complex delivered systemically (Ph.D. 2001),

Consultant, Beijing, China

John Dileo Induction of Anti-Tumor Immunity by Gene Delivery (Ph.D.

2002), Senior Scientist, The MITRE Corporation, McLean,

VA

Pradeep Tyagi Intravesical Therapy of Interstitial Cystitis (Ph.D. 2005),

Associate Professor of Urology, University of Pittsburgh,

Pittsburgh, PA

Jerome Lemoine Delivery of Naked DNA to Nasal Epithelium (Ph.D. 2005),

Postdoctoral Fellow, University of Pacific, San Francisco, CA

Pui-Yan Lee Cell and Gene Therapy for Diabetic Wound Healing (Ph.D.

2005).

**University of North Carolina** 

Claire Wei-Hsu Chen Development of A Simple But Effective Cancer Vaccine

Consisting of An Antigen And A Cationic Lipid (Ph.D. 2007),

Senior Scientist, Amgen British Columbia, Vancouver,

Canada

Shyh-Dar (Star) Li Targeted delivery of siRNA to the tumor (Ph.D. 2008),

Associate Professor, School of Pharmacy, University of

British Columbia, Vancouver, Canada

Hsin-I (Cindy) Hung Combined gene therapy of RNA polymerase II driven siRNA

and apoptosis inducing factor in a melanoma model. PhD student, Medical University of South Carolina, (MS 2008)

Amber Frick PharmD 2009, PhD 2013, University of North Carolina.

Clinical Assistant Professor, Eshelman School of Pharmacy,

University of North Carolina at Chapel Hill

Curriculum Vitae 01/05/2023

Lisa McEwen (Shollenberger)

Interaction of cationic lipid vaccines with cells of the adaptive

immune system (Ph.D. 2009), Associate Professor, Old

Dominion University, Virginia Beach, VA

Yunching (Becky) Chen Nanoparticle delivery of siRNA for cancer therapy (Ph.D.

2010), Associate Professor, National Tsing Hua University,

Taiwan.

Jiexin (Jason) Deng Understanding paclitaxel /pluronic F127 nanocrystals prepared

by the stabilization of nanocrystal (SNC) method. (MS, 2009),

Graduate Student, University of Florida.

Elisabeth Vasievich Lipid-Based Cancer Vaccines. (Ph.D. 2011), Manager,

Roche/Genentech.

Yang Liu Pharmacokinetics and Biodistribution of LCP Nanoparticles.

(Ph.D. 2012), Assistant Professor, School of Pharmacy,

Chapman University.

Yu-Cheng Tseng LCP Nanoparticles for Tumor and Lymph Node Metastasis

Imaging. (Ph.D. 2013), Senior Scientist, HBT Labs Inc. Brea,

CA.

Yuan Zhang Systemic Delivery of Phosphorylated Nucleoside Analogues

and siRNA via LCP Nanoparticles for Cancer Therapy. (Ph.D. 2013) Associate Professor, South China University of Science

and Technology, Guangzhou, China.

Andrew Satterlee Applications for a Radio-Theranostic Nanoparticle with High

Specific Drug Loading (Ph.D. 2016) Entrepreneurial Fellow, University of North Carolina at Chapel Hill, Chapel Hill, NC

Lei Miao The Role of Tumor Desmoplasia in Nanoparticle Delivery of

Drugs and Genes (Ph.D. 2016) Professor, Peking University,

China.

Maximizing the Supported Bilayer Phenomenon: Liposomes

Comprised Exclusively of PEGylated Phospholipid for Enhanced Local and Systemic Delivery (Ph.D. 2017)

Consultant.

Tyler Goodwin Treatment of Liver Metastasis via Nanoparticle Delivery of

Engineered Gene Immunotherapies Expressed Locally and Transiently by the Liver Hepatocytes (Ph.D. 2017), Head,

Tune Therapeutics, Durham, NC

Qi Liu Immunotherapy for Desmoplastic Melanoma: Nanomedicine

Approaches of Vaccination and Immune-Modulation (Ph.D.

Curriculum Vitae 01/05/2023

2018) Senior Scientist, NexImmune, Rockville, MD

Mengying Hu Relaxin Gene Therapy for Advanced Liver Diseases: Fetching

an Endogenous Repair Mechanism. (Ph.D. 2019) Postdoc,

Weill Medical School, Cornell University.

Manisit Das Drug Delivery Strategies to Treat Desmoplastic and

Immunosuppressive Pancreatic Cancer. (Ph.D. 2020) Science

Writer.

Yun Liu Chemo-immunotherapy for Triple Negative Breast Cancer

(Ph.D. 2020), Senior Scientist, Spark Therapeutics,

Philadelphia, PA

Sara Musetti Remodeling the Tumor Microenvironment of Triple Negative

Breast Cancer with Novel Nanoformulations (Ph.D. 2021),

Staff Editor, RTI, Research Triangle Park, NC

Yu Zhang Transferred to other PI, 2022

# Postdoctoral Fellows Supervised and Their Current/last-known Positions:

Larry West (1978-1980) Practicing Physician, Memphis, TN

Anthony Huang (1979-1983) Deceased, 2010

Maria Correa-Freire (1983-1984) Director of Technology Transfer, National Institutes of Health,

Bethesda, MD

Kuixiong Gao (1984-1986) Research Associate, Institute of Agriculture, University of

Tennessee, Knoxville, TN

Susumu Kanda (1984-1986) Deceased, August 1999

Lanrong Hu (1985-1986) Senior Scientist, Clontech, Palo Alto, CA

Stephen Wright (1986-1989) Professor, Carson-Newman College, Jefferson City, TN

Karen Elkins (1987-1988) Senior Investigator, CBER, FDA, Bethesda, MD

Eric Holmberg (1987-1989) Professor, Department of Chemistry and Physics, University

of Alaska, Fairbank

Curriculum Vitae 01/05/2023

Shu-Tian Ruan (1987-1989)	Research Scientist, Department of Immunology, Sloan-Kettering Cancer Center. New York, NY
Purnima Pinnaduwage (1986-1990)	Instructor, Department of Biochemistry, University of Tennessee, Knoxville
Kazuo Maruyama (1988-1990)	Professor, Faculty of Pharmaceutical Sciences, Teikyo University, Japan
Vladimir Trubetskoy (1990-1991)	Senior Scientist, Mirus Corporation, Madison, WI
Dexi Liu (1990-1991)	Professor, Department of Pharmaceutical and Biomedical Sciences, School of Pharmacy, University of Georgia, Athens, GA
Aleksander Klibanov (1991-1993)	Professor, University of Virginia, Charlottesville, VA
Arun Singhal (1992-1994)	Marketing manager, Invitrogen, Inc.
Hans Hofland (1992-1994)	GlaxoSmithKline, Research Triangle Park, NC
Kyonghee Son (1992-1995)	
Robert J. Lee (1994-1995)	Professor, College of Pharmacy, Ohio State University, Columbus, OH
Jing-Ping Yang (1993-1997)	Senior Scientist, Thermo Fisher, Inc., Gaithersburg, MD
Song Li (1994-1996)	Professor, Department of Pharmaceutical Sciences, University of Pittsburgh, Pittsburgh, PA
Hemant Deshmukh (1994-1996)	Senior Scientist, Ligand Pharmaceutical, Inc., San Diego, CA
Yukai He (1994-1997)	Professor, Department of Microbiology, Medical University of Georgia, Augusta, GA
Jung Hee Han (1995)	Postdoctoral Fellow, Korean Advanced Institute Science and of Technology, Seoul, Korea
Toshifumi Hara (1995-1997)	Senior Scientist, Taisho Pharmaceutical Co., Ltd., Saitama, Japan
Soumendu Bhattacharya (1996-1998)	Senior Formulation Scientist, Barr Pharmaceuticals, NJ
Kiyoto Yachi (1996-1997)	Manager, Daiichi Pharmaceutical Co., Tokyo, Japan
Wenchi Tseng (1997-1999)	Professor, National Taiwan University of Science and Technology, Taiwan

Curriculum Vitae 01/05/2023

Sophie Chesnoy Trentesaux (1997-2001)	Global Product Line Manager, Roquette, Paris, France
Kenneth Liang (1998-2001)	Self employed
Ekapop Viroonchatapan (1998-1999)	Assistant Director, Isis Pharmaceuticals, Carlsbad, CA
Xiaofeng Wu (1999-2000)	Scientist, S*BIO Pte Ltd, Singapore
Makiya Nishikawa (1999 – 2001)	Professor, Tokyo Science University, Tokyo, Japan
Zhiyu Li (1999-2000)	Associate Professor, Philadelphia School of Pharmacy and Science, Philadelphia, PA
Feng Liu (1999-2001)	Research Professor, University of North Carolina, Chapel Hill, NC. Deceased in 2014
Takuro Niidome (2001-2002)	Professor, Faculty of Engineering, Kumamoto University, Japan
Zhenhua Li (2000-2003)	Research Associate, Cedar Sinai Medical Center, Los Angeles, CA
Rajkumar Banerjee (2000-2003)	Professor, Indian Institute of Chemical Technology, Hyderabad, India
Etsuko Satoh (2001-2002)	Assistant Professor, Keio University School of Medicine, Tokyo, Japan
Yoichi Negishi (2001-2002)	Associate Professor, Department of Drug Delivery, Tokyo University of Pharmacy and Life Sciences, Tokyo, Japan
Jingshi Zhang (2001-2003)	Pharmacist, Philadelphia, PA
Su-Ji Han (2002- 2003)	South Korea
Bin Sun (2002- 2003)	Research Instructor, Orthopedic Surgery, University of Pittsburgh, Pittsburgh, PA
Zhengrong Cui (2003-2004)	Associate Professor, College of Pharmacy, University of Texas, Austin, TX
Dileep Vangasseri (2003-2005)	Global IP Analyst, GE Global Research, India
Christine Conwell (2004-2007)	Scientific Administrator, Georgia Institute of Technology, Atlanta, GA
Joyeeta Sen (2005- 2007)	Research Chemist, Hyderabad, India
Curriculum Vitae 01/05/2023	Leaf Huang, Ph.D. Page 16

Weili Yan (2006 – 2007)	Senior Scientist, Genentech, Inc. South San Francisco, CA
Ji-Yong Park (2006 – 2008)	Scientist, Food and Drug Administration, Silver Spring, MD
Surendar Reddy (2007 – 2008)	Deceased in 2020 due to COVID.
Wei-Yun Sheng (2008 – 2011)	Consultant.
Jun Li (2008- 2011)	VP of Research, ZY Therapeutics, Research Triangle Park, NC
Sang Kyoon Kim (2008- 2011)	Senior Scientist, Daegu Gyeongbuk Medical Innovation Foundation, Daegu, Korea
Srinivas Ramishetti (2009 – 2013)	Scientist, Tel Aviv University, Israel
Yunxia Hu (2010-2012)	Professor, Tianjin University of Technology, Tianjin, China
Yuhua (Al) Wang (2010-2015)	Principal Scientist, Crispr Therapeutics, Inc., Boston, MA.
Shutao Guo (2011-2014)	Professor, Nankai University, Tianjin, China
Zhenghong Xu (2011-2014)	Scientist, LEAF Pharmaceuticals Inc., Cambridge, MA
Yi Zhao (2013-2016)	Scientist I, Takara Bio USA, Mountain View, CA
Wantong Song (2016-2018)	Professor, Changchun Institute of Applied Chemistry, Chinese Academy of Sciences, Changchun, China
Sai An (2016-2018)	Senior Scientist, Tune Therapeutics, Durham, NC
Limei Shen (2016-2018)	Research Associate, Eshelman School of Pharmacy, UNC, NC
Nasha Qiu (2017-2019)	Professor, The First People's Hospital, Zhejiang University, Hangzhou, China
Jianfeng Guo (2018-2020)	Professor, Jilin University, Changchun, China
Zhuo Yu (2018-2020)	Associate Professor, Shuguang Hospital, Shanghai University of Traditional Chinese Medicine, Shanghai, China
Menglin Wang (2019-2022)	Postdoc, MIT, Boston, MA
Zhenzhen Chen (2022-present)	

Curriculum Vitae 01/05/2023

Visiting (Sabbatical) Faculty/Scientists:	Position at their home institutions
Marisa Gennari (1989)	Assistant Professor of Immunology, Instituto de Ciencias Biomedicas, University of Sao Paulo, Brazil
You-Zhen Ding (1990)	Associate Professor, Department of Cell Biology, Institute of Zoology, Chinese Academy of Sciences, Beijing, China
Anneke Heeremans (1990)	Graduate Student, Department of Pharmaceutics, University of Utrecht, The Netherlands
Aleksander Klibanov (1987,1988, 1989-90)	Senior Researcher, Laboratory of Enzyme Engineering, Cardiology Research Center, Moscow, USSR
Stephen Sugarman, M.D. (1990)	Fellow - Department of Medicine, M.D. Anderson Hospital and Tumor Institute, Houston, TX
Vladimir Torchilin (1988, 1989, 1991)	Professor and Head, Enzyme Engineering Laboratory, Cardiology Research Center, Moscow, USSR
Akira Wada (1989-1991) Annette Buiting (1992)	Researcher, Biological Product Development, Otsuka Pharmaceutical Co., Ltd., Tokushima, Japan Graduate Student, Department of Cell Biology. Free University of Amsterdam, Amsterdam, The Netherlands
Tony Yao (1992)	Undergraduate Student, Department of Biochemistry, Brown University, Providence, RI
Francesca Reig (1992)	Senior Scientist, Consejo Superior de Investigaciones Cientificas, Centro de Investigacion Y Desarrollo, Barcelona, Spain
Maria Jose Fonseca-Chacharo (1993)	Graduate Student, Consejo Superior de Investigaciones Centificas, Centro de Investigacion Y Desarrolo, Barcelona, Spain
Chih-Haw Wallace Lin, Ph.D. (1994)	Research Associate, Carnegie Mellon University, Pittsburgh, PA
Hsiu-Ying Yu Shen, Ph.D. (1994)	Professor, School of Pharmacy, College of Medicine, National

Yong-Serk Park, Ph.D. (1997) Assistant Professor, Yonsei University, South Korea

University, Taipei

Fu-Hsiung Chang, Ph.D. (1996) (1998)

Curriculum Vitae Leaf Huang, Ph.D. 01/05/2023 Page 18

Taiwan University, Taiwan.

Associate Professor, College of Medicine, National Taiwan

Sujatha Dokka, (1997)	Graduate Student, School of Pharmacy, West Virginia University., Morgantown, WV
Yon Rojanasakul, (1997)	Associate Professor, School of Pharmacy, West Virginia University, Morgantown, WV
Ya-Wun Yang, Ph.D. (1997)	Associate Professor, School of Pharmacy, National Taiwan University, Taipei.
Lourdes Herrold, Ph.D. (1998)	Assistant Professor, Carlow College, Pittsburgh, PA
Tanya Jaitley (1998)	Medical Student, School of Medicine, University of Pittsburgh, PA
Merce Rodriguez (1999)	Graduate Student, University of Barcelona, Spain
Cynthia Hofmann (2000)	Pharmacy Student, University of Utrecht, The Netherlands
Kazuo Maruyama (2000, 2001)	Associate Professor, Teikyo University, Japan
Hironobu Yanagie (2000, 2001)	Assistant Professor, Tokyo University, Japan
Hirotaka Sugiyama (2000, 2001)	Assistant Professor, Aichi Medical University, Japan
Lawrence Block (2001)	Professor of Pharmaceutics, Duquesne University, Pittsburgh, PA
Shyh-Dar Li (2001)	Research Associate, Industrial Technology Research Institute, Taiwan
Yong-Serk Park (2002-2003)	Professor, Yonsei University, South Korea
Erin Cobain (2002) (2004)	Intern, Davidson College, NC
Colleen Rock (2002)	Intern, Wilkes School of Pharmacy
Pao-Chu Wu (2005)	Professor, Kaohsiung Medical University, Taiwan
Tomohiro Asai (2005)	Professor, University of Shizuoka, Japan
Chia-Wen Liu (2005)	Assistant Scientist, Industrial Technology Research Institute, Taiwan
Levent Liu (2006)	Senior Scientist, National Health Research Institute, Taiwan
Sumio Chono (2007- 2008) Curriculum Vitae 01/05/2023	Professor, Hokkaido Pharmaceutical University, Japan  Leaf Huang, Ph.D.  Page 19

Kun Gao (2007 – 2008)	Associate Professor, Xian Jiaotong University, China
Subho Mozumdar (2008)	Associate Professor, University of Dehli, India
Chunshun Zhao (2009-2010)	Professor, Sun Yat-Sen University, China
Yeonsu Oh (2010)	Graduate Student, Seoul National University, Korea
Hsing-Hao Su (2010-2011)	Chief Surgeon, Kaohsiung Veterans General Hospital, Taiwan
Taeho Ahn (2010-2011)	Associate Professor, Chonnam National University, Korea
Xia Guo (2010-2011)	Professor, Yangzhou University, China
Yang (Sunny) Yang (2010-2011)	Associate Professor, Sichuan University, China
Dejian Huang (2011-2011)	Associate Professor, National University of Singapore
Chinying (Keen) Chung (2011)	Graduate Student, Pennsylvania State University
Tomohiro Asai (2011-2012)	Professor, Shizuoka University, Japan
Ivy Hsu (2011)	Professor, Chung Yuan Christian University, Taiwan
Grace Yu (2012)	Assistant Investigator, National Health Research Institute, Taiwan
Yun Liu (2012)	Graduate student, Peking University, China
Jing Yao (2012-2013)	Professor, Chinese Pharmaceutical University, Nanjing, China
Shubiao Zhang (2012-2013)	Professor, Dalian Nationality University, Dalian, China
Jing Zhang (2012-2013)	Associate Professor, Jiangxi Traditional Chinese Medical University, Nanchang, China
Guimei Lin (2013-2014)	Associate Professor, Shandong University, Jinan, China
Cheng-An James Lin (2013)	Assistant Professor, Chung Yuan Christian University, Taiwan
Yao Lu (2013-2015)	Associate Professor, Huazhong University of Science and Technology,
Yan Zhao (2013-2014)	Wuhan, China Associate Professor, China Medical University, Shenyang, China
Ali Badiee (2014-2015)	Assistant Professor, School of Pharmacy, Mashhad University of Medical Sciences, Mashhad, Iran
Meirong Huo (2014-2015)	Professor, China Pharmaceutical University, Nanjing, China

Curriculum Vitae 01/05/2023

Leaf Huang, Ph.D.

Page 20

Yang Xiong (2014-2015)	Professor, Zhejiang Traditional Chinese Medical University, Hangzhou,
	China.

Qiang Zhao (transferred from Feng Liu group, 2014) Associate Professor, Sichuan University, Chengdu, China

Hongjuan Zhang (transferred from Feng Liu group, 2014) Associate Professor, Nanjing Medical University, Nanjing, China.

Qi Xiang (transferred from Feng Liu group, 2014) Associate Professor, Jinan University, Guangzhou, China.

Lifang Cheng (transferred from Feng Liu group, 2014) Associate professor, Suzhou University, Suzhou, China.

Yinghui Wei (transferred from Feng Liu group, 2014) Associate Professor, Zhejiang Traditional Chinese Medical University, Hangzhou, China.

Wei Wang (transferred from Feng Liu group, 2014) Professor, China Pharmaceutical University, Nanjing, China.

Zahra Daman (2014 – 2015)	PhD student, Tehran University of Medical Sciences, Tehran, Iran
Lina Liu (2014-2015)	Associate Professor, Guiyang Medical University, Guiyang, China
Nasha Qiu (2014-2015)	Professor, First People's Hospital, Hangzhou, China
Cong Luo (2015-2016)	Professor, Shenyang Pharmaceutical University, Shenyang, China
Kai Shi (2015-2016)	Professor, Nankai University, Tianjin, China
Kaili (Kelly) Hu (2015-2016)	Professor, Shanghai Traditional Chinese Medical University, Shanghai,
Jing Qin (2015-2016)	China Associate Professor, Fudan University, Shanghai, China
Ying Xu (2015-2016)	Associate Professor, Jiangsu University, Zhenjiang, China
Hongda Zhu (2016-2017)	Associate Professor, Hubei University of Technology, Wuhan, China
Xiao Xie (2016-2017)	Attending Surgeon, Xinhua Hospital, Shanghai, China
Xueqiong Zhang (2016-2017)	Associate Professor, Wuhan University of Technology, Wuhan, China

Yanzhi Wang (2016-2017) Associate Professor, Zhengzhou University, Zhengzhou, China

Volunteer scientist

Xiangnan Liu (2016-2017) Graduate student, Fudan University, Shanghai, China

China

Li Jing (2016-2016)

Haiyang Hu (2016-2017)

Lin Hou (2017-2018) Associate Professor, Zhengzhou University, Zhengzhou, China

Curriculum Vitae Leaf Huang, Ph.D. 01/05/2023 Page 21

Associate Professor, Shenyang Pharmaceutical University, Shenyang,

Lucia Salvioni (2017-2017)	Graduate student, University of Milan, Italy
Ying Wang (2017-2017)	Senior Scientist, Regeneron Pharmaceuticals, Inc., Tarrytown, NY
Ligeng Xu (2017-2018)	Associate Professor, Jinan University, Guangdong, China
Jing Zhang (2017-2018)	Professor, Jiangxi University of Traditional Chinese Medicine, Nanchang, China
Yang Xiong (2017-2018)	Professor, Zhejiang University of Traditional Chinese Medicine, Hangzhou, China
Huan Xu (2017-2018)	Associate Professor, Liaoning Normal University, Dalian, China
Lei Li (2017-2018)	Professor, Dalian Medical University, Dalian, China
Yanzuo Chen (2017-2018)	Associate Professor, East China University of Science and Technology, Shanghai, China
Mengrui Liu (2017-2018)	Postdoc, NCSU, Raleigh, NC
Menglin Wang (2017-2019)	Postdoc, University of North Carolina at Chapel Hill, NC
Xuefei Zhou (2018-2020)	Associate Researcher, Zhejiang University, Hangzhou, China
Yishun Yang (2019-2020)	Instructor, Shanghai University of Traditional Chinese Medicine, Shanghai, China
Zhengsheng Liu (2019-2020)	PhD student, Tsinghua University, Beijing, China
Yung-Yi Cheng (2021-present)	Postdoc, University of North Carolina at Chapel Hill, NC
Shuo Han (2021-2022)	PhD student, Southern Medical University, China

# Advisory Committees:

1982-1986	Member, Cellular Biology and Physiology Study Section II, NIH
1983-1987	Member, Scientific Advisory Committee, China National Center for Biotechnology and
	Development, People's Republic of China
1991-1994	Member, AIDS Related Research Study Section 4, NIH
1994-1998	Member, Executive Committee, Liposome Research Days, Inc.
1996-2008	Member, Scientific Review Committee, National Health Research Institute, Taiwan,
	Republic of China
1997-2000,	Member, Non-viral Vector Committee, American Society of Gene Therapy
2004-2007	
1998	Member, Abstract Review Committee for Annual Society Meeting, American Society
	for Gene Therapy

Curriculum Vitae
01/05/2023
Leaf Huang, Ph.D.
Page 22

1998-1999	Member, Nomination Committee, American Society of Gene Therapy
1998	Member, National Gene Vector Laboratories Scientific Review Board
1998-1999	Ad Hoc Member, Medical Biochemistry Study Section, NIH
1999-2002	Member, Medical Biochemistry Study Section, NIH
2004-2007	Member, Scientific Advisory Committee, Vaccine Research & Development Center,
	National Health Research Institute, Taiwan, Republic of China
2005	Ad Hoc member, Neuroscience of Aging Review Committee, NIH
2006	Ad Hoc member, Neuroscience of Aging Review Committee, NIH
2006-2011	Elected member, Advisory Committee, American Society of Gene and Cell Therapy
2006	Ad Hoc member, Study Section on Non-viral Vector Development, NIH
2008	Ad Hoc member, Review Panel G1, National Cancer Institute of Canada
2009	Ad Hoc member, Special Emphasis Panel/Scientific Review Group 2009/05 ZRG1 CB-
	N (50) R meeting, NIH
2010-2012	Scientific Advisory Board, CoiN - The North Carolina Center of Innovation for
	Nanobiotechnology
2011-2013	Member, Board of Visitors, School of Pharmacy, University of Pittsburgh
2012-2015	Elected member, Board of Scientific Advisors, Controlled Release Society
2012-2014	Scientific Advisory Board, Institute of Infectious Diseases and Vaccine Development,
	National Health Research Institute, Taiwan
	Member, Study Section on "The Emerging and Re-emerging Infectious Disease Project",
2012-2013	National Science Council, Taiwan
2015-2019	Member, Study Section on "Gene and Drug Delivery Systems", NIH

# EDITORIAL ACTIVITIES

1984-1998	Editorial Board Member, Chemistry and Physics of Lipids
1986-1991	Editorial Board Member, Journal of Liposome Research
1991-1997	Editor-in-Chief, Journal of Liposome Research
1997-present	Editor Emeritus, Journal of Liposome Research
1992-1999	Editorial Board Member, Journal of Drug Targeting
1992-2001	Editor, BioScience Reports
1993-1999, 2000-	Editorial Board Member, Gene Therapy
1994-2000	Editorial Advisory Board, Bioconjugate Chemistry
1995-2000	Editorial Board, Advanced Drug Delivery Reviews
1999-1999	Associate Editor, Gene Therapy
1999-2004	Associate Editor, Molecular Therapy
1999-2006	Editorial Board Member, Journal of Gene Medicine
2000-2020	Editorial Board Member, Journal of Controlled Release
2003-2010	Editorial Board Member, Molecular Pharmaceutics
2004-present	Editorial Board Member, Biological and Pharmaceutical Bulletin
2010-2015	Editorial Board Member, <i>BBA – Biomembranes</i>
2011-2021	Editorial Board Member, Acta Pharmaceutica Sinica B
2011-present	Editorial Board Member, Molecular Therapy: Nucleic Acids
2014-present	Editorial Board Member, Journal of Chinese Pharmaceutical Sciences

# Industrial Consultations:

1004 1005	Intermedianal Minarala and Chamicala Comparation
1984-1985	International Minerals and Chemicals Corporation
1986-1987	Proctor and Gamble Company
1985-1990	LipoGen, Inc. (Founder and CSO)
1991-1993	Vestar, Inc.
1991-1993	Ribozyme Pharmaceuticals, Inc.
1992-1995	Argus Pharmaceuticals, Inc.
1992-1995	Life Technologies, Inc.
1993-1994	Genzyme Corporation
1993-1994	Theragen, Inc.
1994-1995	NOF Corporation
1994-1996	RGene Therapeutics, Inc. (Founder)
1994-1996	GenVec, Inc.
1996-2001	Targeted Genetics Corporation
2000	Biogen, Inc.
2001-2003	Conrex Pharmaceutical Company
2002-2003	BioMet Corporation
2003-2004	IC-Vec, Ltd.
2003-2007	Industrial Technology Research Institute, Taiwan, Republic of China
2005-present	Lipella Pharmaceutical, Inc. (co-Founder)
2006-present	PDS Biotechnology, Inc. (co-Founder)
2006	Alnylam Pharmaceuticals, Inc.
2007	Ambrilia, Inc. Montreal, Canada
2007	Merck, Inc. Philadelphia, PA
2007	Eli Lilly, Indianapolis, IN
2007-2008	Abbott Laboratories, Chicago, IL
2007	GlaxoSmithKline, London, UK
2007	Eisai Pharmaceutical Company, Research Triangle Park, NC
2008	Pfizer, Boston, MA
2008	Roche, Nutley, NJ
2009-2012	Institute of Biomedical Engineering, Industrial Technology Research Institute,
	Taiwan
2010-2017	Qualiber, Inc., Co-founder and Chief Scientific Officer, Chapel Hill, NC
	(company shut down in 2017)
2013-2014	KRB, Inc. Co-founder and CEO, Taiwan (company shut down in 2014)
2016-2019	OncoTrap, Inc. Co-founder, Chapel Hill, NC

# University Committee Experience:

# University of Tennessee:

Departmental Curriculum Committee, (1976-77, 1981-84)

University Biohazard Planning Committee, (1977-78)

Department Head Search Committee, (1977-79)

Liberal Art Dean's Research Advisory Council, (1978-81)

Departmental Seminar Series, (1978-80, 1985-87, 1990-1991)

Biomedical Research Support Grant Review Committee, (1978-82)

Department Student Recruitment Committee, (1979-81)

Faculty Search Committee, (1979-80, 1984-85)

Planning Committee for Biotechnology Curriculum, (1983-84)

Cell and Molecular Biology Program Steering Committee, (1979-82)

Biology Curriculum Committee, (1982-84)

UT-ORNL Life Sciences Committee, (1984)

Biotechnology Program Executive Committee, (1984-1987)

Biotechnology Task Force, (1986-1987)

Leadership Assessment Review Committee, (1986)

Comprehênsive Examination Committee, (1988-1991)

# University of Pittsburgh:

Appointment and Promotion Committee, Department of Pharmacology (1991-1999)

Comprehensive Examination Committee, Department of Pharmacology (1992-1999)

Graduate Curriculum Committee, (1993-1993)

Faculty Search Committee, Department of Pharmacology, (1992-1993)

Faculty Search Committee, Department of Pharmaceutical Sciences, (1992-1993)

Budget Planning Committee, Department of Pharmacology, (1994 - 1995)

Resource Task Force, School of Medicine, (1994)

Ad Hoc Committee for Faculty Promotion (1994, 1995)

Task Force for Integration of Basic Science into 3rd and 4th Year Medical Curriculum (1996)

Committee for Promotion of Tenured Faculty, School of Medicine (1996-1997)

Ad Hoc Committee for Faculty Grievance (1996)

Departmental Seminar Coordinator (1996-1997)

Director, Molecular Pharmacology Graduate Training Program (1997-1999)

Chairman, Faculty Search Committee, Department of Pharmacology (1998-1999)

Chairman, Faculty Search Committee, Center for Pharmacogenetics (1999-2002)

Committee on Awards (1999-2004)

Entrepreneurial Oversight Committee (2000-2004)

Chairman, Brown Bag Discussion Committee, School of Pharmacy (2001-2003)

Distinguished Faculty Committee (2003-2005)

## University of North Carolina, Chapel Hill

Graduate Curriculum Review Committee, MOPH (2005-2008)

Professional Education Curriculum Committee, School of Pharmacy (2005-2006)

Dean's Advisory Council, School of Pharmacy (2005-2007)

Full Professor's Committee, Eshelman School of Pharmacy (2005-present)

MOPH Faculty Search Committee, Chair (2005, 2006)

Executive Committee, Eshelman School of Pharmacy (2005-present)

Advisory Committee, Carolina Center of Cancer Nanotechnology Excellence (2006-2010)

Conflict of Interest Committee, Eshelman School of Pharmacy (2007-2008)

Chair, Faculty Search Committee, Division of Molecular Pharmaceutics, Eshelman School of Pharmacy (2012-13)

Mentoring Committee for Dr. Shawn Hingtgen, MOPH (2012-2018)

CTSA grant renewal planning committee, UNC (2012)

Faculty Co-Advisor, Christian Pharmacist Fellowship, UNC Eshelman School of Pharmacy, UNC (2013, 2014)

#### Symposium, Courses and Seminar Series Organized:

Membrane Journal Club, University of Tennessee, 1976-1991

- Symposium on Frontiers of Biomembrane Research, University of Tennessee, Speakers: G. E. Palade, E. Holtzman, S. Roseman, D. Papahadjopoulos, W.R., Lowenstein, R.G.W. Anderson, and G.D. Fischbach, November, 1977
- Grantsmanship Workshop in Biomedical Sciences. University of Tennessee, 1980
- "Liposome Technology" course, Jinan University and Tsinghua University, China, summer, 1985
- "The Liposome Conference in St. Petersburg New Concepts, Perspectives and Clinical Applications", St. Petersburg, Russia, June 1993, member of the Organization Committee "A Liposome Birthday Conference: Back to the Future, Babraham, Cambridge, United Kingdom, March 27-30, 1995.
- "Pharmaceutical Approaches of Oligonucleotide and Gene Therapy", Workshop sponsored by Controlled Release Society, Seattle, WA, August 3-4, 1995.
- "Non-viral Vectors for Gene Therapy," Educational Section 88th Annual Meeting of American Association For Cancer Research, San Diego, CA, April 12, 1997.
- "Pharmaceutical Approaches of Oligonucleotide and Gene Therapy", Workshop sponsored by Controlled Release Society, Stockholm, Sweden, June 15-16, 1997.
- "Synthetic Non-viral Vector Systems", Keystone Symposium, Keystone, CO, Co-organizer with Philip Felgner, Frank Szoka, and Ernest Wagner, Jan 19-25, 1998.
- Organized and chaired "Lipid-mediated Gene Therapy", education sessions. American Society of Gene Therapy annual meeting, Seattle, WA, May 28-31, 1998
- "Structure and Design of Synthetic Gene Carriers", San Francisco, co-organizer with Philip Felgner and Francis Szoka, Feb. 24-26, 1999.
- Organized and chaired "Lipid-mediated Gene Therapy", education sessions, American Society of Gene Therapy annual meeting, Washington, DC, June 9-13, 1999.
- Chaired "Delivery or Tumor Targeting" section, Gordon Research Conference on "Chemotherapy of Experimental/Clinical Cancer", New London, NH, July 11-16, 1999.
- Chaired "Nucleic Acid Drugs-Gene Delivery" section, 7<sup>th</sup> International Liposome Research Days, University of California, San Francisco, San Francisco, California, April 13-15, 2000.
- Co-Chaired with Rimona Margalit, "Liposomal Therapeutics: Gene Therapy and More", Controlled Release of Bioactive Materials, Controlled Release Society, Paris, France, July 7-13, 2000.
- Co-Chaired with Philip Felgner, Workshop on "Naked DNA and Physical Methods", American Society for Gene Therapy annual meeting, Seattle, WA, May 30-June 3, 2001.
- Organized and chaired 9th Liposome Research Days Conference, Hsin-Chu, Taiwan, May 11-15, 2004.
- Organized and chaired 1<sup>st</sup> Chapel Hill Drug Conference/10<sup>th</sup> Liposome Research Days Conference, Chapel Hill, NC. May 19-22, 2006.
- Re-established the series "UNC/GSK Distinguished Speakers in Drug Delivery" funded by GlaxoSmithKline, Inc. Organized "UNC/Duke Drug Delivery Discussion Group", 2006-present.
- Member, Program Committee, 11th Liposome Research Days Conference, Yokohama, Japan, July, 2008.
- Member, Program Committee, The 6<sup>th</sup> China-Japan-Korea Foresight Joint Symposium on Gene Delivery, December 2008, Sanya, China.
- Member, Scientific Advisory Committee, 4th Chapel Hill Drug Conference, Chapel Hill, NC, May, 2009.
- Member, Scientific Program Committee, 13<sup>th</sup> Liposome Research Days Conference, Hangzhou, China, October, 2012
- Vice Chair, Gordon Research Conference "Cancer Nanotechnology", July, 2013.
- Chair, Gordon Research Conference "Cancer Nanotechnology", June, 2015.

#### Clinical Trials Participated:

- 1. Gene therapy for melanoma, Phase I, 1992, with Dr. Gary Nabel, University of Michigan. Ann Arbor, MI.
- 2. Gene therapy for gynecological cancers, Phase I, 1994-96, with Dr. Kam Hui, Singapore General Hospital,

Singapore.

- 3. Gene Therapy for cystic fibrosis, Phase I, 1994, with Drs. Eric Alton, Duncun Geddes and Bob Williamson, National Lung and blood Institute, London, UK.
- 4. Gene therapy for cystic fibrosis, Phase I, 1995, with Drs. Stephen Hyde, Debra Gill and Chris Higgins, University of Oxford, Oxford, UK.
- 5. Gene Therapy for Canavan's Disease, Phase I/II, 1996, with Drs. Matthew During and Paula Leone, University of Auckland, New Zealand.
- 6. Gene Therapy for cystic fibrosis by multiple dosing, Phase I, 1996-1997, with Drs. Debra Gill, Stephen Hyde and Chris Higgins, University of Oxford, Oxford, UK.
- 7. Gene therapy for c-erbB-2 overexpressing ovarian and breast cancers, Phase I, 1996-1997, with Drs. G. Hortobagyi and Mien-Chie Hung, MD Anderson Cancer Center, Houston, TX.
- 8. Gene therapy for head/neck carcinoma, Phase I, 1999-2002, with Drs. J. Reubin Grandis and D. Trump, University of Pittsburgh Cancer Institute.
- 9. Evaluation of Intravesical LP08 (sphingomyelin liposomes) in Patients with Interstitial Cystitis/Painful Bladder Syndrome, Phase II, 2015 ongoing, Lipella Pharmaceuticals, Inc.
- 10. Therapeutic vaccine for cervical intraepithelial neoplasia (CIN) patients. Phase I, 2014-2915, PDS Biotechnology.

# Grant and Manuscript Reviews:

National Institutes of Health (ad hoc reviewer, study section member and site visits)

National Science Foundation (grants)

National Research Council (grants)

Medical Research Council, Canada (grants)

**Biochemistry** 

Journal of Biological Chemistry

Biochimica et Biophysica Acta

Science

Cancer Research

Experimental Cell Research

Proceedings of National Academy of Sciences, USA

Journal of Cell Biology

Journal of Cellular Physiology

Planta

Journal of Membrane Biology

Journal of Membrane Biochemistry

Journal of Immunological Methods

Pharmaceutical Research

Chemistry and Physics of Lipids

Journal of Pharmaceutical Sciences

European Journal of Cell Biology

Journal of Liposome Research

Curriculum Vitae

01/05/2023

American Journal of Physiology: Cellular Physiology

Histochemistry and Cytochemistry

Blood

Analytical Biochemistry

Archives of Biochemistry and Biophysics

Journal of Colloidal and Interfacial Chemistry

Gene Therapy

BioScience Reports

Bioconjugate Chemistry

Human Gene Therapy

Journal of American Chemical Society

Nature Biotechnology

Biophysical Journal

Molecular Therapy

Molecular Pharmaceutics

Nature Nanotechnology

Journal of Controlled Release

Nature Medicine

#### Invited Seminars (since 1995):

Roswell Park Cancer Institute, "Liposome mediated gene transfer: chemistry meets genetics", Buffalo, NY, (1995) Seventh International Symposium on Recent Advances in Drug Delivery Systems, "Lipidic systems in gene transfer", Salt Lake City, Utah, (1995)

Second International Conference on Engineered Vaccines for Cancer and AIDS, "Liposomes", San Francisco, (1995)

Stanford University, "Liposome mediated gene transfer: chemistry meets genetics", Stanford, CA, (1995)

A Liposome Birthday Conference: "Back to the Future, Babraham, Cambridge, United Kingdom, (1995)

Conference on "Therapeutic oligonucleotides: From cell to man, cellular & clinical aspects", Paris, France, (1995)

"5th International Symposium on Delivery and Targeting of Peptides, Proteins & Gene, Leiden, The Netherlands, (1995)

Symposium dedicated to A.I. Virtanen, Kuopio, Finland, (1995)

Gene Therapy Session of the 6th International Symposium of SCBA, "Lipid mediated gene transfer in cancer therapy", Vancouver, (1995)

22nd International symposium on the Controlled Release of Bioactive Materials, Seattle, WA (1995)

Controlled Release Society Workshop "Pharmaceutical approaches to oligonucleotide and gene therapy", Seattle, WA (1995)

4th Liposome Research Days Conference, Freiberg, Germany (1995)

NIDKK- Sponsored Conference, "Targeting of novel therapeutics to the liver and GI tract", NIH Conference Center, Bethesda, MD (1995)

Massachusetts General Hospital, "Gene transfer with non-viral systems", (1995)

CHI Artificial Self-Assembling Systems for Gene Transfer Conference, "Lipid self-assembly systems for gene transfer", Wakefield, MA (1995)

Rutgers University Seminar, "Liposomes in gene therapy" Newark, NJ (1995)

6th Princeton Liposome Conference, "Targeted lipid/liposomal delivery of genes" Princeton, NJ (1995)

University of Pennsylvania Medical Center, "Liposomes in gene therapy" Philadelphia, PA (1995)

University of California San Francisco, "Supramolecular assemblies for gene transfer" San Francisco, CA (1996)

Ohio State University, "Supramolecular assemblies for gene transfer", Columbus, OH (1996)

University of Medicine and Dentistry of New Jersey, "Supramolecular assemblies for gene transfer", Newark, NJ (1996)

Symposium on Biotechnology, "Cancer gene therapy with non-viral vectors", Stockholm, Sweden (1996)

Midwest Regional Meeting -American Association of Pharmaceutical Scientists, "Challenges and opportunities of intercellular delivery of DNA" Chicago, IL (1996)

The Pharmaceutical Society of Republic of China, "Novel supramolecular assemblies for gene transfer", Taipei, Taiwan (1996)

5th Liposome Research Days, "Novel supramolecular assemblies for gene transfer", Shizuoka, Japan (1996)

Second Satellite Symposium of The Joint Section on Tumors of the American Association of Neurological Surgeons, "Novel supramolecular assemblies for gene transfer", Montreal, Canada (1996)

Gene Therapy of Cancer Assembly of Nanostructures, "Novel supramolecular assemblies for gene transfer", San Diego, CA (1996)

University of Uppsala, "Supramolecular assemblies for gene transfer", Sweden, (1996)

Liposome Advances: Progress in Drug and Vaccine Delivery, "Supramolecular assemblies for gene transfer", London (1996)

West Virginia University, "Supramolecular assemblies for gene transfer", West Virginia (1997)

Cold Spring Harbor Laboratory, Vector targeting strategies, "Novel supramolecular assemblies for gene transfer", New York (1997)

University of Texas, Houston "Novel supramolecular assemblies for gene transfer", Texas (1997)

American Association for Cancer Research "Non-viral delivery systems for gene therapy", San Diego, CA (1997)

4th International Symposium on Bio-organic Chemistry, "Supramolecular assemblies for gene transfer", Biarritz, France (1997)

The 24th International Symposium on Controlled Release of Bioactive Materials, "Gene therapy systems for DNA delivery", Stockholm, Sweden (1997)

Cambridge Healthtech Institute's Conference, "Artificial Self-Assembling Systems for Gene Delivery", Coronado, CA (1997)

Heward Visiting Scientist to The Montreal General Hospital/McGill University, Montreal Canada (1998)

Johns Hopkins University, Molecular Pharmacology Department, "Cancer Gene therapy with Therapeutic RNA Expressed in the Tumor Cells", Baltimore, MD. (1998)

Johns Hopkins University, Biomedical Engineering Department, "Novel Non-viral Vectors for Gene Transfer: Liposomes and More", Baltimore, MD (1998)

University of Michigan, "Novel non-viral vectors for cancer gene therapy" (1998)

University of Illinois at Chicago, "Novel non-viral vectors for cancer gene therapy", Chicago, IL (1998)

University of Kentucky, Markey Cancer Center, "Novel Non-viral Vectors for Gene Therapy", Lexington, KY (1998)

The First Annual Meeting of the American Society of Gene Therapy, "Cationic Lipid Mediated Gene Therapy", Seattle, WA, (1998)

Society for Controlled Release, "Novel Non-viral Vectors for Gene Therapy", Las Vegas (1998)

Membrane Fusion: Mechanisms and Applications to Cell Biology, Drug Delivery and Gene Therapy, "Fusion Active Liposomes in Gene Delivery", Salamanca, Spain (1998)

University of Texas MD Anderson Cancer Center, "Novel Non-viral Vectors for Cancer Gene Therapy", Houston, TX (1998)

University of Paris-Sud, "Novel Non-viral Vector for Gene Transfer", Paris, France (1998)

Symposium "From Lipids to Membranes, in Tribute to Vittorio Luzatti", "Lipids in Non-viral Vectors", Paris, France (1998)

National Hemophilia Foundation, "Second Biennial Workshop on Gene Therapies for Hemophilia", "Non-viral Vectors", San Diego, CA (1998)

University of Illinois at Chicago, "Gene Therapy as a Drug Delivery Problem", Chicago, IL (1998)

Moffitt Cancer Center, "Novel Non-viral Vectors for Cancer Therapy", Tampa, FL (1999)

- University of Kentucky, College of Pharmacy, "LPD Nanoparticles for Systemic Gene Delivery", Lexington, KY (1999)
- American Society of Gene Therapy, Second Annual Meeting, "LPD nanoparticles as a novel nonviral vector for systemic gene delivery", Washington, D.C., (1999)
- Roswell Park Cancer Institute Seminar, "Cancer therapy with nonviral vectors", Buffalo, NY (1999)
- ASHG Workshop, "Non-Viral Vectors", San Francisco, CA (1999)
- 1999 Global Chinese Symposium on Biomaterials and Controlled Release, "Delivery of DNA for Gene Therapy", Taipei, Taiwan (1999)
- Institute for Human Gene Therapy Seminar, "Cancer Gene Therapy with Non-Viral Vectors", Philadelphia, PA (1999)
- Nature Biotechnology, "LPD Nanoparticles for Gene Delivery", Washington, D.C. (1999)
- Temple University, School of Medicine, "Non-Viral Vectors for Gene Therapy: Activity and Toxicity", Philadelphia, PA (1999)
- University of London, School of Pharmacy, Liposome Advances: Progress in Drug and Vaccine Delivery Seminar, "Novel Non-Viral Vectors: Liposomes and More", London (1999)
- University of Florida, Center for the Neurobiology of Aging, "Non-viral vectors for gene therapy: Liposome and Beyond", Gainesville, FL (2000)
- University of Florida, Center for the Neurobiology of Aging, "Cancer gene therapy using non-viral vectors", Gainesville, FL (2000)
- Boston University, Whitaker Cardiovascular Institute, Non-Viral Vectors for Gene Therapy", Boston, MA (2000)
- Duke University Medical Center, Department of Pharmacology and Cancer Biology, "Gene Transfer Mediated by Non-Viral Vectors", Durham, NC (2000)
- National Defense Medical Center, Neural Transplantation Group, "Non-Viral Approaches to Gene Therapy", Taipei, Taiwan (2000)
- National Chung-Hsin University, "Non Viral Approaches to Gene Therapy", Taichung, Taiwan (2000)
- National Tsing-Hua University, Life Science Department and Chemical Engineering Department, "Non Viral Approaches to Gene Therapy", Hsin-Chu, Taiwan (2000)
- National Cheng-Kung University, "Non Viral Approaches to Gene Therapy", Tainan, Taiwan (2000)
- American Society of Gene Therapy Meeting, "LPD Nanoparticles For Systemic Gene Delivery: Activity And Toxicity", Denver, Colorado (2000)
- Controlled Release Society, "Novel Non-Viral Vectors for Gene Therapy", Paris, France (2000)
- International Symposium on DNA Vaccine and Gene Therapy Technology, NHRI, "Novel Non-Viral Vectors for Gene Therapy", Academia Sinica, Taipei, Taiwan (2000)
- American Association of Pharmaceutical Scientists, "Non-Viral Approach to Gene Therapy", Indianapolis, IN (2000)
- Intracellular delivery of DNA by non-viral vectors workshop hosted by AFM and AFLM, "Lipoplexes", Paris, France (2000)
- 22<sup>nd</sup> Annual Eino Nelson Memorial Conference, "Delivering Genes for Therapy", Captiva Island, FL (2001)
- 10<sup>th</sup> International Symposium on Recent Advances in Drug Delivery Systems, "Novel Non-Viral Vectors", Salt Lake City, UT (2001)
- University of North Carolina at Chapel Hill, Department of Pharmacology, "Non-Viral Gene Therapy", Chapel Hill, NC (2001)
- American Association of Pharmaceutical Scientists, Pharmaceutical Congress of the Americas, "Gene Therapy with Lipidic Non-Viral Vectors", Orlando, FL (2001)
- National Institutes of Health, Division of Intramural Research of the National Human Genome Research Institute, "Non-Viral Gene Therapy", Washington, DC (2001)
- Annual Meeting of Taiwan Neurology Society, "Non-Viral Vectors for Gene Therapy", Taipei, Taiwan (2001)
  Tri-Service General Hospital and National Defense Medical Center, Department of Biochemistry, "Progress and

- Challenges of Non-Viral Gene Therapy", Taipei, Taiwan (2001)
- University of Nebraska Medical Center, Department of Biochemistry and Molecular Biology, "Recent Progress in Non-Viral Gene Therapy", Omaha, NE (2001)
- American Society of Gene Therapy annual meeting, "Naked DNA for Gene Therapy", Seattle, Washington (2001)
- MD Anderson Cancer Center, University of Texas, Gene Therapy Seminar Series, "Non-Viral Gene Therapy", Houston, TX (2001)
- 9th SCBA International Symposium, "Non-Viral Gene Therapy", Taipei, Taiwan (2001)
- AAPS workshop on "Critical Issues in the Design & applications of Polymeric Biomaterials in Drug Delivery", "Lipid mediated gene delivery", Arlington, VA (2002).
- Magee Woman Research Institute, "Gene Therapy for HPV Positive Cervical Cancer", Pittsburgh, PA (2002)
- Virginia Commonwealth University, "Non-viral Gene Therapy Challenges Ahead", Richmond, VA (2002)
- 8th Liposome Research Days Conference, "Beyond the Impossible", Berlin-Buch, Germany (2002)
- National Gene Therapy Center, "Gene Delivery by LPD Nanoparticles", London, UK (2002)
- American Society of Gene Therapy 5<sup>th</sup> Annual Meeting, "Non-viral Vectors- Formulations", Boston, Massachusetts (2002)
- Magee Woman Research Institute, "Non-viral gene transfer to mdx mouse diaphragm: a model for Duchenne Muscular Dystrophy gene therapy", Pittsburgh, PA (2002)
- 6<sup>th</sup> New Jersey Symposium on Biomaterial Science, "Recent advances in drug and gene delivery with lipid and polymer", Piscataway, New Jersey (2002)
- 2<sup>nd</sup> International Symposium on DNA Vaccine and Gene Therapy Technology, "DNA vaccines for HPV DNA-positive tumor model", Taipei, Taiwan (2002)
- "Tumor-specific Delivery by Non-viral Systems: Approaching a Reality", Maui, Hawaii (2003)
- 2<sup>nd</sup> International Symposium on Gene Technology and Skin Gene Therapy, "Novel gene transfer techniques using naked DNA", Düsseldorf, Germany (2003)
- "Liposome Advances" conference, London, UK, (2003)
- University of California, Davis, "LPD nanoparticles as an efficient cancer vaccine carrier", Davis, CA (2004)
- Louisiana State University Health Science Center, "LPD nanoparticles: a gene vector turned into a potent cancer vaccine carrier", New Orleans, LA. (2004)
- 7<sup>th</sup> Pharmaceutical Science Forum, "LPD nanoparticles as a potent cancer vaccine carrier", Hokkaido, Japan (2004)
- 2<sup>nd</sup> annual meeting of the Japanese Society of Gene Delivery and Expression, "Non-viral vectors for gene delivery", Kyoto, Japan (2004)
- 9<sup>th</sup> Liposome Research Days conference, Bangham Award lecture, "My liposome journey", Hsin-Chu, Taiwan (2004)
- Shanghai Liposome Workshop, "LPD nanoparticles: an efficient carrier for cervical cancer vaccine", Shanghai, China (2004)
- Workshop on Pharmaceutical Perspectives of Nucleic Acid Based Therapeutics, "LPD nanoparticles: a novel cancer vaccine carrier", Controlled Release Society annual symposium, Honolulu, Hawaii (2004)
- Shanghai Jiao Tong University, College of Pharmacy, "Cell and gene therapy for diabetic wound healing", Shanghai, China (2005)
- Royal Society of Medicine, "The future for non-viral vectors", London, England (2005)
- School of Pharmacy, University of London, "Cell and gene therapy for diabetic wound healing", London, England (2005)
- Lineberger Comprehensive Cancer Center, University of North Carolina, "A Novel Therapeutic Vaccine Delivery System for Cervical Cancer." Chapel Hill, NC (2005)
- Department of Chemistry, Purdue University, "LPD Nanoparticle Mediated Delivery of siRNA", West Lafayette, IN (2006)
- Conference on Transposable Elements in Gene Therapy, "Non-Viral Delivery of DNA", University of Minnesota, St Paul, MN. (2006)
- International Conference on Pharmacogenetics, "Gene Therapy in Pharmacogenetics?", Changsha, China. (2006)

Curriculum Vitae Leaf Huang, Ph.D.

01/05/2023 Page 31

- International Conference on Nanotechnology in Drug Delivery, "LPD Nanoparticles for Efficient Delivery of siRNA to Solid Tumor", Chandigarh, India. (2006)
- 2<sup>nd</sup> International Liposome Society conference, "LPD nanoparticles for the delivery of siRNA and cancer vaccines", London, UK. (2006)
- 42<sup>nd</sup> Arden Conference on Pharmaceutical Technology, AAPS. "Advances in Gene Delivery and Nucleic Acid Therapeutics: Formulation and Delivery Strategies", West Point, NY (2007)
- Department of Pharmaceutics, School of Pharmacy, Shanghai Jiaotong University, "LPD nanoparticles for delivery of genes and siRNA", Shanghai, China. (2007)
- Pharmaceutical Sciences World Congress, 3<sup>rd</sup>. "Intravenous siRNA effectively silences target genes in solid tumor", Amsterdam, The Nederland. (2007)
- Symposium celebrating 20<sup>th</sup> anniversary of non-viral vectors, annual meeting, American Society of Gene Therapy, "Looking into The Future". Seattle, WA (2007)
- Annual meeting, Controlled Release Society, "Liposomes Live and Kicking: Cancer Vaccine", Long Beach, CA (2007)
- Institute of Nuclear Energy Research, "Targeted Delivery of Genes and Oligonucleotides", Taiwan (2007)
- GTRV Summer Course, "Targeted Delivery of siRNA to Solid Tumor and Metastasis", La Grande Motte, France (2007)
- Brain Cancer Center, Duke University, "Targeted Delivery of siRNA for Tumor Therapy", Durham, NC (2007)
- School of Pharmacy, University of Iowa, "Targeted Delivery of siRNA for Tumor Therapy", Iowa City, IA (2007)
- NCI Nanotechnology Alliance Investigators meeting, "Pharmacokinetics and Nanoparticles", Friday Center, Chapel Hill, NC (2007)
- Symposium on Recent Advances in Vaccinology, National Health Research Institute, "A Simple Vaccine for Cancer Therapy", Taiwan (2007)
- "Targeted Delivery of siRNA for Tumor Therapy", National Health Research Institute, Taiwan (2007)
- "Targeted Delivery of siRNA for Therapy of Solid Tumor and Metastasis", Carolina Center of Cancer Nanotechnology Excellence, UNC-Chapel Hill (2007)
- North Carolina Pharmaceutics Discussion Group, "Delivery of siRNA for Tumor Therapy", Research Triangle Park, NC (2007)
- Pharmaceutical Society of Taiwan, annual meeting, "Targeted Delivery of siRNA for The Therapy of Cancer", Kao-Hsiung, Taiwan (2007)
- Department of Biotechnology, National Kao-Hsiung University, "siRNA: Delivery and Therapy", Kao-Hsiung, Taiwan (2007)
- School of Medicine, National Cheng Kung University, "A Novel Liposomal Cancer Vaccine", Tainan, Taiwan (2007)
- Chang Gung Memorial Hospital, Grand Round, Department of Surgery, "Gene Therapy: Basic Research and Clinical Applications", Kao-Hsiung, Taiwan (2007)
- Chang Gung Memorial Hospital, School of Medicine, "Targeted Delivery of siRNA for Cancer Therapy", Kao-Hsiung, Taiwan (2007)
- Wayne State University School of Medicine, "Targeted Delivery of siRNA for Cancer Therapy", Detroit, MI (2008) Korea Conference in Science and Technology, "Designing a Highly Efficient Vector for siRNA Delivery for Cancer
- Therapy", Jeju Island, Korea (2008)
- Seoul National University, College of Pharmacy, "Delivery of siRNA for Cancer Therapy", Seoul, Korea (2008)
- Cancer Nanotechnology Alliances conference, "LPD Nanoparticles for siRNA Delivery", Chicago, IL (2008)
- Liposome Research Days conference, "A Simple Therapeutic Vaccine for Cervical Cancer", Yokohama, Japan (2008)
- University of Iowa, College of Pharmacy, "Delivery of siRNA for Cancer Therapy", Iowa City, IA (2008)
- Controlled Release Society annual meeting, "siRNA Delivery to Tumor Cells", NYC, NY (2008)
- American Academy of Nanomedicine, "Delivery of siRNA with Nanoparticles", Potomac, MD (2008)
- The Third Oligonucleotide Therapeutics Conference, "Delivery of siRNA", Boston, MA (2008)

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Texas A&M University, "Targeted Delivery of siRNA for Cancer Therapy", College Station, TX (2008)
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The 6<sup>th</sup> China-Japan-Korea Foresight Joint Symposium on Gene Delivery, "Core/Shell Nanoparticles for siRNA Delivery", Sanya, China (2008)

Peking University, School of Pharmacy, "Systematic Delivery of siRNA for Cancer Therapy", Beijing, China (2008)

Peking University, School of Pharmacy, "A Simple Therapeutic Vaccine for Cervical Cancer", Beijing, China (2008)

National Cancer Institute, "Targeted Delivery of siRNA for Cancer Therapy", Frederick, MD (2008)

Louisiana State University, "Delivering siRNA for Cancer Therapy", Baton Rouge, LA (2009)

PittCon annual conference, "Self-assembled Nanoparticles for siRNA Delivery", Chicago, IL (2009)

American Physical Society annual meeting, "Novel Nanoparticles for siRNA Delivery", Pittsburgh, PA (2009)

Conference on "Liposomes and Nanotechnology", Itaparica, Brazil (2009)

Chinese University of Hong Kong, "Non-viral Gene Therapy", Hong Kong (2009)

Chinese University of Hong Kong, "Deliver siRNA for Cancer Therapy", Hong Kong (2009)

Shenzhen University, "Deliver siRNA for Cancer Therapy", Shenzhen, China (2009)

University of Science and Technology of China, "Delivery of siRNA and Peptide for Cancer Therapy", Hefei, China (2009)

Sichuan University, "Delivery of siRNA and Peptide for Cancer Therapy", Chengdu, China (2009)

Zhejiang University, "Delivery of siRNA and Peptide for Cancer Therapy", Hangzhou, China (2009)

Fudan University, "Delivery of siRNA and Peptide for Cancer Therapy", Shanghai, China (2009)

Dalian Nationalities University, "Deliver siRNA for Cancer Therapy", Dalian, China (2009)

Dalian Institute of Chemistry and Physics, "Smart Nanoparticles for siRNA delivery", Dalian, China (2009)

4th International Conference in Advanced Drug Delivery, "Delivery of siRNA for Cancer Therapy", Shanghai, China (2009)

China Pharmaceutical University, "Nanoparticle Delivery of siRNA", Nanjing, China (2009)

University of Florida, "Delivery of siRNA for Cancer Therapy", Gainesville, FL (2009)

National Central University, "Self-Assembled Nanoparticles Evading RES", Chung-Li, Taiwan (2009)

Chung Yuan Christian University, "Delivering siRNA for Cancer Therapy", Chung-Li, Taiwan (2009)

National Health Research Institute, "The Challenge of siRNA Delivery", Zhunan, Taiwan (2009)

University of Washington, "Delivering siRNA for Cancer Therapy", Seattle, WA (2009)

Gakushuin University, "Nanoparticle Delivery of siRNA for Cancer Therapy", Tokyo, Japan (2010)

Hoshi University of Pharmaceutical Sciences, "Nanoparticle Delivery of siRNA for Cancer Therapy", Tokyo, Japan (2010)

Teikyo University, "Nanoparticle Delivery of siRNA for Cancer Therapy", Tokyo, Japan (2010)

Kyoto University, "Nanoparticle Delivery of siRNA for Cancer Therapy", Kyoto, Japan (2010)

Shizuoka University, "Nanoparticle Delivery of siRNA for Cancer Therapy", Shizuoka, Japan (2010)

Dana Farber Cancer Institute, Harvard Medical School, "The Challenge of Delivering siRNA to The Tumor", Boston, MA (2010)

Yale University, "Nanoparticle Delivery of siRNA to Tumors", New Haven, CT (2010)

Purdue University, "Delivery of siRNA for Cancer Therapy", West Lafayette, IN (2010)

Penn State Hershey College of Medicine, "The challenge of delivering siRNA to tumor cells", Hershey, PA (2010)

Beijing University, School of Pharmacy, "Nanoparticle Delivery of siRNA to Tumors", Beijing, China (2010)

Third Military Medical University, "Nanoparticle Delivery of siRNA to Tumors". Chongqing, China (2010)

Sichuan University, Institute of Biomaterials Science, "Novel Membrane/Core Nanostructures for siRNA Delivery", Chengdu, China (2010)

Sichuan University, School of Pharmacy, "Nanoparticle Delivery of siRNA to Tumors", Chengdu, China (2010)

Liposome Research Days conference, "A New Endosome Release Mechanism for Nanoparticle Mediated siRNA Delivery", Vancouver, Canada (2010)

Gordon Conference in "Drug Carriers in Biology and Medicine", "Escaping RES and Endosome", Waterville Valley

Curriculum Vitae Leaf Huang, Ph.D.

01/05/2023 Page 33

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Resort, NH (2010)
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- Vanderbilt University, "Nanoparticle Delivery of siRNA for Cancer Therapy", Nashville, TN (2010)
- Rutgers University, "Nanoparticle Delivery of siRNA for Cancer Therapy", Piscataway, NJ (2010)
- International Vaccine Conference, National Health Research Institute, Taiwan, "Delivery of siRNA and Vaccine for Cancer Therapy", Zhunan, Taiwan (2010)
- Keynote speaker, "Nanoparticle Delivery of siRNA for Cancer Therapy", Symposium on Drug Delivery and Biomedical Sciences, Chung Yuan Christian University, Chung-Li, Taiwan
- NanoDDS10 symposium, "Nanoparticles Escaping Reticuloendothelial System and Endosome: A PEG Dilemma?" Omaha, NE (2010)
- Focused group discussion on "Image Guided Drug Delivery", National Cancer Institute, Bethesda, MD (2010)
- Short Course on Nanotechnology, "The Challenge of siRNA Delivery", AAPS/FIP annual meeting, New Orleans, LA (2010)
- Round Table Discussion on Targeted Delivery of Theranostics, "Nanoparticles Escaping Reticuloendothelial System and Endosome" AAPS/FIP annual meeting, New Orleans, LA (2010)
- National Center for Nanoscience and Technology of China, "Nanoparticle Delivery of siRNA for Cancer Therapy", Beijing, China (2011)
- Sun Yat-Sen University, "Nanoparticle Delivery of siRNA for Cancer Therapy", Guangzhou, China (2011)
- National Taiwan University, "Evading Reticuloendothelial System and Escaping Endosome: Challenges in Nanoparticle Mediated Drug Delivery", Taipei, Taiwan (2011)
- Chang Gung University, "Nanoparticle Delivery of siRNA for Cancer Therapy", Tao-Yuan, Taiwan (2011)
- 2011 International Advanced Drug Delivery Symposium, "LCP Nanoparticles for Drug and Gene Delivery", Hsinchu, Taiwan (2011)
- Liposomes Jerusalem 2011, "Lipidic Nanoparticles: Escaping RES and Endosomes for Enhanced siRNA Delivery", Jerusalem, Israel (2011)
- Gordon Research Conference on "Cancer Nanotechnology", "Nanoparticles Escaping RES and Endosome for Efficient Cytoplasmic Delivery", Waterville, ME (2011)
- Sun Yat-San University, "Nanoparticle Delivery of siRNA to Tumor", Guangzhou, China, (2011)
- Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences, "Nanoparticle Delivery of siRNA to Tumor", Shenzhen, China (2011)
- Union Hospital, "Nanoparticle Delivery of Genes and siRNA to Tumor and Liver", Wuhan, China (2011)
- Zhejiang University, "Nanoparticle Delivery of Genes and siRNA to Tumor and Liver", Hangzhou, China (2011)
- University of Georgia, "Delivery of Genes and siRNA to Tumor and Liver", Athens, GA (2012)
- University of Michigan, "Membrane/Core Nanoparticles for Drug/Gene Delivery", Ann Arbor, MI (2012)
- University of Queensland, "Nanoparticle Delivery of Genes and Drugs to Tumor and Liver", Brisbane, Queensland, Australia (2012)
- CSIRO, "Nanoparticle Delivery of Genes and Drugs to Tumor and Liver", Clayton, Melbourne, Australia (2012)
- University of New South Wales, "Nanoparticle Delivery of Genes and Drugs to Tumor and Liver", Sydney, Australia (2012)
- Symposium of Advanced Nanomaterials in Biomedicine, "Nanoparticle Delivery of Genes and Drugs to Tumor and Liver", Chung Yuan Christian University, Chung-Li, Taiwan (2012)
- National Tsing Hua University, "Nanoparticle Delivery of Genes and Drugs to Tumor and Liver", Hsin-Chu, Taiwan (2012)
- Xi'An Jiaotong University, "Nanoparticle Delivery of Genes and Drugs to Tumor and Liver", Xi'An, China (2012)
- Fourth Military Medical University, "Nanoparticle Delivery of Genes and Drugs to Tumor and Liver", Xi'An, China (2012)
- Ninth World Biomaterials Congress, "LCP Nanoparticles Effectively Deliver siRNA and Drugs to Cancer Cells", Chengdu, China (2012)
- Sichuan University, "Nanoparticle Delivery of Plasmid DNA to the Liver", Chengdu, China (2012)
- Southwest Jiaotong University, "Nanoparticle Delivery of Genes and Drugs to Tumor and Liver", Chengdu, China

Curriculum Vitae Leaf Huang, Ph.D.

01/05/2023 Page 34

(2012)

- Annual meeting, Canadian Society for Pharmaceutical Scientists, "Nanoparticle Delivery of siRNA and Chemotherapy to Tumors", Toronto, Canada (2012)
- UC Davis Cancer Center, University of California Davis, "Nanoparticle Delivery of Genes and siRNA to Tumor and Liver", Sacramento, CA (2012)
- University of Sao Paolo, Sinpospq conference, "Gene Therapy", Ribeirao Preto, Brazil (2012)
- University of Toronto, Faculty of Pharmacy, "Calcium Phosphate Nanoparticles Coated with a Single Lipid Bilayer Efficiently Deliver cDNA and siRNA to Hepatocytes", Toronto, Canada (2012)
- University of Pittsburgh, School of Pharmacy, "Calcium Phosphate Nanoparticles Coated with a Single Lipid Bilayer Efficiently Deliver cDNA and siRNA to Hepatocytes", Pittsburgh, PA (2012)
- China Bio conference, Shanghai Jiaotong University, "Novel formulations for gemcitabine and cisplatin", Shanghai, China (2012)
- Shanghai Institute of Materials Medica, "Membrane/Core Nanoparticles for Drug and Gene Delivery to Tumor and Liver", Shanghai, China (2012)
- Liposome Research Days conference, "Intravenous Delivery of Plasmid DNA to Hepatocytes", Hangzhou, China (2012)
- Zhejiang University, "Membrane/Core Nanoparticles for Drug and Gene Delivery to Tumor and Liver", Hangzhou, China (2012)
- Fudan University, "Membrane/Core Nanoparticles for Drug and Gene Delivery to Tumor and Liver", Shanghai, China (2012)
- Second Military Medical University, "Membrane/Core Nanoparticles for Drug and Gene Delivery to Tumor and Liver", Shanghai, China (2012)
- NCI Cancer Nanotechnology Alliances Conference, "A Novel Cisplatin Nanoformulation with a Bystander Effect", Houston, TX (2012)
- MD Anderson Cancer Center, "Membrane/Core Nanoparticles for Drug and Gene Delivery to Tumor and Liver", Houston, TX (2012)
- Johns Hopkins University, "Membrane/Core Nanoparticles for Drug and Gene Delivery to Tumor and Liver", Baltimore, MD (2012)
- AAPS Webnar, "Potential of Nanotechnology in Gene Therapy" (2013)
- University of North Carolina at Chapel Hill, Carolina Center for Cancer Nanotechnology Excellence, "Membrane/Core Nanoparticles for Drug and Gene Delivery to Tumor and Liver" (2013)
- Chung Yuan Christian University, "Membrane/Core Nanoparticles for Drug and Gene Delivery to Tumor and Liver", Taiwan (2013)
- University of Memphis, "Nanoparticle Delivery of Genes and siRNA to Hepatocytes In Vivo" (2013)
- Stanford University, "Lipid-Calcium-Phosphate (LCP) Nanoparticles for Drug and Gene Delivery" Palo Alto, CA (2013)
- Peking University, School of Chemistry and Chemical Engineering, co-lectured with Professor Michael Jay in "Drug Delivery", an intensive course for 5 days (2013)
- Peking University, "Membrane/Core Nanoparticles for Drug and Gene Delivery to Tumor and Liver" (2013)
- Fudan University, School of Pharmaceutical Sciences, "Liposomes Anything New?" (2013)
- Fudan University, School of Pharmaceutical Sciences, "LPD Nanoparticles for Cancer Therapy" (2013)
- Fudan University, School of Biology and Biotechnology, "Membrane/Core Nanoparticles for Drug and Gene Delivery to Tumor and Liver" (2013)
- Shanghai Jiaotong University, "Liposomes Anything New?" (2013)
- Fourth Military Medical University, "Lipid-Calcium-Phosphate (LCP) Nanoparticles for Drug and Gene Delivery" (2013)
- Nanjing University, "Lipid-Calcium-Phosphate (LCP) Nanoparticles for Drug and Gene Delivery" (2013)
- Georgia State University, "LPD Nanoparticles for Drug and Gene Delivery" (2013)
- Harbin Medical University, China, "Lipidic Nanoprecipitates for Drug and Gene Delivery" (2013)

- Fudan University, School of Pharmaceutical Sciences, "Cancer Drug Delivery", a short course for 4 days (2013) Huazhong University of Science and Technology, School of Biology and Biotechnology, "EPR Effect, Tumor Microenvironment and Stealth Nanoparticles", Wuhan, China (2013)
- Huazhong University of Science and Technology, School of Pharmacy, "Drug Delivery Using Liposomes with a Solid Precipitate Core", Wuhan, China (2013)
- Chinese Pharmaceutical Conference, "Lipidic Nanoprecipitates for Drug and Gene Delivery", Wuhan, China (2013) Zhejiang University, Department of Chemical and Biological Engineering, "EPR Effect, Tumor Microenvironment and Stealth Nanoparticles", Hangzhou, China (2013)
- Chung Yuan Christian University, "Cancer Drug Delivery", a 2-day short course, Taiwan (2013)
- Distinguished Pharmaceutical Scientist Award speech "Liposomes Supported by an Inner Nano-Precipitate Encapsulating Drugs and/or Nucleic Acids", San Antonio, TX (2013)
- Mini-Symposium on "Lipid-Based Nanopreparations for siRNA Delivery", American Society of Pharmaceutical Scientists annual meeting, San Antonio, TX (2013)
- National Taiwan University, School of Pharmacy, "Lipid-coated Nano-precipitate for Drug and Gene Delivery", Taipei, Taiwan (2013)
- Virginia Tech, "Lipid-Calcium-Phosphate (LCP) Nanoparticles for Drug and Gene Delivery", Blacksburg, VA (2014)
- National Health Research Institute, "Tumor Microenvironment: Opportunities and Challenges for Nanoparticle Mediated Therapy", Zhunan, Taiwan (2014)
- National Tsing Hua University, "Remodeling Tumor Microenvironment by Nanomedicines", Hsinchu, Taiwan (2014)
- University of Texas at Dallas, "Lipid-coated Nano-precipitate for Drug and Gene Delivery", Dallas, TX (2014) University of Pennsylvania, "Lipid-coated Nano-precipitate for Drug and Gene Delivery", Philadelphia, PA (2014)
- 5<sup>th</sup> FIP Pharmaceutical Sciences World Congress, Symposium on "Nanotechnologies for drug delivery", "Remodeling tumor microenvironment to improve therapy", Melbourne, Australia (2014)
- 5<sup>th</sup> FIP Pharmaceutical Sciences World Congress, Symposium on "Gene-based therapeutics: Possibilities and challenges", "Delivering Plasmid DNA to Hepatocyte Nuclei", Melbourne, Australia (2014)
- Cross-Strait Biomaterials and Controlled Drug Release Symposium, "Remodeling Tumor Microenvironment to Improve Therapy", Hsinchu, Taiwan (2014)
- Peking University, School of Pharmacy, "Remodeling Tumor Microenvironment to Improve Drug Delivery", Beijing, China (2014)
- Suzhou University, School of Pharmacy, "Remodeling Tumor Microenvironment to Improve Drug Delivery", Suzhou, China (2014)
- Liposome Research Days Conference, "Liposomal Cisplatin Precipitate as a Tool to Study Tumor Microenvironment", Copenhagen, Denmark (2014)
- Virginia Commonwealth University, Department of Biomedical Engineering, "Lipid-Calcium-Phosphate (LCP) Nanoparticles for Drug and Gene Delivery", Richmond, Virginia (2014)
- Fudan University, School of Pharmaceutical Sciences, "Remodeling Tumor Microenvironment to Empower Therapy", Shanghai, China (2014)
- Shanghai Institute of Cancer Research, "Remodeling Tumor Microenvironment to Empower Therapy", Shanghai, China (2014)
- China Pharmaceutical Conference, "Liposomal Cisplatin Precipitate as a Tool to Study Tumor Microenvironment", Changsha, China (2014)
- Central China University of Science and Technology, Tongji School of Pharmacy, "Remodeling Tumor Microenvironment to Empower Therapy", Wuhan, China (2014)
- Hubei College of Science and Technology, School of Pharmacy, "Nanoparticle Mediated Cancer Therapy", Xianning, Hubei, China (2014)
- Zhejiang University, Research Retreat, "Remodeling Tumor Microenvironment to Empower Therapy", Hangzhou, China (2014)

- Academia Sinica, Institute of Cellular and Organismic Biology, "Modulating Tumor Microenvironment to Empower Therapy", Taipei, Taiwan (2014)
- NanoDDS2014 conference, Keynote speaker, "Nanoparticle Remodeling of Tumor Microenvironment to Improve Therapy", Chapel Hill, NC (2014)
- Annual symposium, China Nanomedicine Society, Keynote speaker, "Lipid-stabilized calcium phosphate nanoparticles for drug and gene delivery", Hangzhou, China (2015)
- Shenyang Pharmaceutical University, "Lipid-stabilized calcium phosphate nanoparticles for drug and gene delivery", Shenyang, China (2015)
- Institute of Process Engineering, Chinese Academy of Sciences, "Lipid-stabilized calcium phosphate nanoparticles for drug and gene delivery", Beijing, China (2015)
- Peking University, Department of Biomedical Engineering, "Lipid-stabilized calcium phosphate nanoparticles for drug and gene delivery", Beijing, China (2015)
- Sino-German Youth Forum in Inorganic Nano Materials for Drug Delivery, "Lipid-stabilized calcium phosphate nanoparticles for drug and gene delivery", Shanghai, China (2015)
- Boston University, "Lipid-stabilized calcium phosphate nanoparticles for drug and gene delivery", Boston, MA (2015)
- University of North Texas Health Science Center, "Lipid-stabilized calcium phosphate nanoparticles for drug and gene delivery", Fort Worth, TX (2015)
- Australian Society of Nanomedicine, "Lipid-stabilized calcium phosphate nanoparticles for drug and gene delivery", Sydney, AU (2015)
- University of New South Wales, "Lipid-stabilized nano-precipitates for drug and gene delivery", Sydney, AU (2015)
- University of Queensland, "Lipid-stabilized nano-precipitates for drug and gene delivery", Brisbane, AU (2015) Monash Institute of Pharmaceutical Sciences, "Lipid-stabilized nano-precipitates for drug and gene delivery",
- Melbourne, AU (2015)
- Chung Yuan Christian University, "Lipid-stabilized calcium phosphate nanoparticles for drug and gene delivery", Taiwan (2015)
- Chinese University of Hong Kong, "Lipid-stabilized nano-precipitates for drug and gene delivery", Hong Kong (2015)
- Wayne State University, "Lipid-stabilized nano-precipitates for drug and gene delivery", Detroit (2015)
- Vancouver Nanomedicine Day, "Lipid-stabilized nano-precipitates for drug and gene delivery", Vancouver, Canada (2015)
- University of Delaware, "Nanoparticle delivery of drugs and genes to desmoplastic tumors", Newark, DE (2016)
- Tufts University, "Nanoparticle delivery of drugs and genes to desmoplastic tumors", Boston, MA (2016)
- North Carolina State University, "Nanoparticle delivery of drugs and genes to desmoplastic tumors", Raleigh, NC (2016)
- University of Oklahoma, "Nanoparticle delivery of drugs and genes to desmoplastic tumors", Oklahoma City, OK (2016)
- Asian Symposium of Pharmaceutical Sciences, "Nanoparticle delivery of drugs and genes to desmoplastic tumors", Shenyang, China (2016)
- Changchun Institute of Applied Chemistry, "Nanoparticle delivery of drugs and genes to desmoplastic tumors", Changchun, China (2016)
- Jiangxi University of Traditional Chinese Medicine, "Nanoparticle delivery of drugs and genes to desmoplastic tumors", Nanchang, China (2016)
- Shanghai University of Traditional Chinese Medicine, "Nanoparticle delivery of drugs and genes to desmoplastic tumors", Shanghai, China (2016)
- Fudan University, School of Pharmaceutical Sciences, "Nanoparticle delivery of drugs and genes to desmoplastic tumors", Shanghai, China (2016)
- Fudan University, State Key Lab of Molecular Engineering of Polymers, "Nanoparticle delivery of drugs and genes

- to desmoplastic tumors", Shanghai, China (2016)
- East China University of Science and Technology, "Nanoparticle delivery of drugs and genes to desmoplastic tumors", Shanghai, China (2016)
- 48th annual Pharmaceutics Graduate Student Research Meeting, "Nanoparticle delivery of drugs and genes to desmoplastic tumors", University of Missouri at Kansas City, Kansas City, MO (2016)
- Keynote speaker, "Nanoparticle delivery of drugs and genes to desmoplastic tumors", Chinese American Society of Nanomedicine and Nanobiotechnology, Beijing (2016)
- Peking University, School of Pharmacy, "Nanoparticle delivery of drugs and genes to desmoplastic tumors", Beijing, China (2016)
- Beijing Institute of Pharmacology and Toxicology, "Nanoparticle delivery of drugs and genes to desmoplastic tumors", Beijing, China (2016)
- Sichuan University, School of Pharmacy, "Cancer Drug Delivery", a condensed course, Chengdu, China (2016) University of Nebraska Medical Center, "Nanoparticle delivery of drugs and genes to desmoplastic tumors", Omaha,
- NA (2016)
- North Carolina State University, "Nanoparticle delivery of drugs and genes to desmoplastic tumors", Raleigh, NC
- Kao-Hsiung Medical University, "Nanoparticle delivery of drugs and genes to desmoplastic tumors", Kao-Hsiung, Taiwan (2017)
- Chung Yuan Christian University, "Targeting neighbors: A new approach in drug delivery". Chung-Li, Taiwan
- National Tsing Hua University, "Targeting neighbors: A new approach in drug delivery". Hsin-Chu, Taiwan (2017).
- North Carolina State University, "Targeting neighbors: A new approach in drug delivery". Raleigh, NC (2017).
- University of Pennsylvania, "Nanoparticle delivery of drugs and genes to desmoplastic tumors: Targeting neighbors", Philadelphia, PA (2017)
- Washington University at St. Louis, "Nanoparticle delivery of drugs and genes to desmoplastic tumors: Targeting neighbors", St. Louis, MO (2017)
- Gordon Research Conference on Cancer Nanotechnology, "Targeting Tumor Associated Fibroblasts for Therapy", West Dover, VT (2017)
- Fudan University, School of Pharmaceutical Sciences, "Targeting Tumor Associated Fibroblasts for Therapy", Shanghai, China (2017)
- Chinese University of Hong Kong, "Targeting Tumor Associated Fibroblasts for Therapy", Hong Kong (2017)
- Invited speaker, "Translational Research and Entrepreneur Activity: My Personal Experience with Two Start-Ups", Chinese American Society of Nanomedicine and Nanobiotechnology. Suzhou, China (2017)
- National Center for Nano Science & Technology, "Nanoparticle Exploration of Tumor Microenvironment in Desmoplastic Cancer". Beijing, China (2017)
- Tsinghua University, School of Pharmaceutical Sciences, "Nanoparticle Exploration of Tumor Microenvironment in Desmoplastic Cancer". Beijing, China (2017)
- Central South University, Xiangya School of Pharmaceutical Sciences, "Nanoparticle Exploration of Tumor Microenvironment in Desmoplastic Cancer". Changsha, China (2017)
- Nanqiang Forum for Molecular Imaging, Center for Molecular Imaging and Translational Medicine, Xiamen University, "Nanoparticle Exploration of Tumor Microenvironment in Desmoplastic Cancer". Xiamen, China (2017)
- School of Materials Science and Engineering, Xiamen University, "Nanoparticle Exploration of Tumor Microenvironment in Desmoplastic Cancer". Xiamen, China (2017)
- School of Medicine, Shanghai Jiaotong University, "Nanoparticle Exploration of Tumor Microenvironment in Desmoplastic Cancer". Shanghai, China (2017)
- Shanghai University of Traditional Chinese Medicine, "Nanoparticle Exploration of Tumor Microenvironment in Desmoplastic Cancer". Shanghai, China (2017)
- North Carolina State University, "Remodel Tumor Microenvironment for Immunotherapy". Raleigh, NC (2018)

Curriculum Vitae Leaf Huang, Ph.D.

- Nanotechnology workshop, University of North Carolina at Chapel Hill, "Overcoming the Suppressive Immune Microenvironment with Nanoparticles", Chapel Hill (2018)
- Society for Biomaterials annual meeting, "Overcoming the Suppressive Immune Microenvironment with Nanoparticles", Atlanta, GA (2018)
- Shanghai University of Traditional Chinese Medicine, "Overcoming Suppressive Immune Microenvironment of Solid Tumors", Shanghai, China (2018)
- Airforce Medical University, "Overcoming Suppressive Immune Microenvironment of Solid Tumors", Xian, China (2018)
- School of Pharmaceutical Sciences, Peking University, "Nanoparticle Remodeling the Suppressive Tumor Microenvironment for Immunotherapy". Beijing, China (2018)
- School of Pharmaceutical Sciences, Peking University, "The Creative Moments in My Research Career", Beijing, China (2018)
- School of Life Sciences, Dalian Nationality University, "Targeted Delivery of Drugs and Genes for Tumor Immunotherapy", Dalian, China (2018)
- Wuya School of Innovation, Shenyang Pharmaceutical University, "Nanoparticle Remodeling the Suppressive Tumor Microenvironment for Immunotherapy", Shenyang, China (2018)
- Wuya School of Innovation, Shenyang Pharmaceutical University, "The Creative Moments in My Research Career", Shenyang, China (2018)
- The 5th International Biomaterials Symposium, "Targeting Lipopolysaccharide to Promote Checkpoint Blockade Immunotherapy against Colorectal Cancer and Attenuate Liver Metastasis", Changchun, China (2018)
- College of Pharmacy, University of Texas Austin, "Nanoparticle Remodeling the Suppressive Tumor Microenvironment for Immunotherapy", Austin, TX (2018)
- College of Pharmacy, Virginia Commonwealth University, "Nanoparticle Remodeling the Suppressive Tumor Microenvironment for Immunotherapy", Richmond, VA (2018)
- Beijing Union Medical University, "Nanoparticle Remodeling the Suppressive Tumor Microenvironment for Immunotherapy", Beijing, China (2018)
- Shanghai University of Traditional Chinese Medicine, "Fetching an Endogenous Fibrosis Resolution Mechanism: Gene therapy for Liver Metastasis", Shanghai, China (2018)
- College of Pharmaceutical Sciences, Zhejiang University, "Nanoparticle Remodeling the Suppressive Tumor Microenvironment for Immunotherapy", Hangzhou, China (2018)
- School of Pharmaceutical Sciences, Suzhou University, "Nano-TCM Mediated Chemo-Immunotherapy for Advanced Desmoplastic Tumors", Suzhou, China (2019)
- School of Pharmaceutical Sciences, China Pharmaceutical University, "Nano-TCM Mediated Chemo-Immunotherapy for Advanced Desmoplastic Tumors", Nanjing, China (2019)
- College of Pharmaceutical Sciences, Zhejiang University, "Nano-TCM Mediated Chemo-Immunotherapy for Advanced Desmoplastic Tumors", Hangzhou, China (2019)
- College of Chemical and Biological Engineering, Zhejiang University, "Fetching an Endogenous Fibrosis Resolution Mechanism: Gene therapy for Liver Metastasis", Hangzhou, China (2019)
- Shanghai University of Traditional Chinese Medicine, "Nano-TCM Mediated Chemo-Immunotherapy for Advanced Desmoplastic Tumors", Shanghai, China (2019)
- School of Pharmaceutical Sciences, Fudan University, "Fetching an Endogenous Fibrosis Resolution Mechanism: Gene therapy for Liver Metastasis", Shanghai, China (2019)
- Shuguang Hospital, Shanghai University of Traditional Chinese Medicine, "Targeting Tumor Microenvironment for Immunotherapy", Shanghai, China (2019)
- Canadian Society of Pharmaceutical Scientists annual symposium, "Gene Delivery to Treat Liver Metastasis of Colorectal Cancer", Vancouver, Canada (2019)
- Gordon Research Conference on Cancer Nanotechnology, "Nanotechnology for Manipulating Microbiome in Cancer", Mt. Snow, Vermont (2019)
- China Nano 2019, "Targeting Tumor Microenvironment for Immunotherapy", Beijing, China (2019)

- CASNN 2019, "Targeting Tumor Microenvironment for Immunotherapy", Hangzhou, China (2019)
- Shanghai Institute of Materia Medica, "Research Career and Life", Shanghai, China (2019)
- Renji Hospital, "Targeting Tumor Microenvironment for Immunotherapy", Shanghai, China (2019)
- Shanghai Jiao Tong University, "Targeting Tumor Microenvironment for Immunotherapy", Shanghai, China (2019)
- China Pharmaceutics Conference, "Relaxin for Liver Fibrosis Therapy", Yantai, China (2019)
- Shandong University, "Targeting Tumor Microenvironment for Immunotherapy", Jinan, China (2019)
- Zhejiang University of Traditional Chinese Medicine, "Targeting Tumor Microenvironment for Immunotherapy", Hangzhou, China (2019)
- Shanghai University of Traditional Chinese Medicine, "Chemo-Immunotherapy for Colorectal Cancer and Liver Metastasis", Shanghai, China (2019)
- Fudan University, School of Basic Medical Sciences, "Chemo-Immunotherapy for Colorectal Cancer and Liver Metastasis", Shanghai, China (2019)
- University of Florida, College of Pharmacy, "Targeting Tumor Microenvironment for Immunotherapy", Gainesville, FL (2019)
- Winter Enrichment Program, King Abdulla University of Science and Technology, "Targeting Tumor Microenvironment for Immunotherapy", KAUST, Saudi Arabia (2020)
- North Carolina State University, "Targeting Tumor Microenvironment for Immunotherapy", Raleigh, NC (2020)
- University of Tennessee Knoxville, "Targeting Tumor Microenvironment for Immunotherapy", Knoxville, TN (2020)
- Shanghai University of Traditional Chinese Medicine, "Vaccine Therapy for Solid Tumors", via internet, Shanghai, China (2020)
- Tongji University, "Targeting Tumor Microenvironment for Immunotherapy", via internet, Shanghai, China (2020) Innovations and Transformations in Pharmaceutical Sciences-Virtual 2020, "Targeting Tumor Microenvironment for Immunotherapy", via Zoom. Eshelman School of Pharmacy, University of North Carolina at Chapel Hill, Chapel Hill, NC (2020)
- Carolina Nanomedicine Workshop, "Nanoparticles for Immunotherapy and TME Modulation", via Zoom, University of North Carolina at Chapel Hill, NC (2020)
- Shanghai University of Traditional Chinese Medicine, "Colorectal Cancer Therapy: Preclinical Studies", via Zoom, Shanghai, China (2020)
- Keynote speaker, Second Annual ADME: Lead Characterization and Optimization Conference, "Chemoimmunotherapy for Colorectal Cancer and Liver Metastasis", via Zoom, Gulf Coast Consortia, Houston (2020)
- Keynote speaker, "Blocking Bacterial Lipopolysaccharide to Relieve Immune Suppression in Colorectal Cancer", via internet, AAPS PharmSci360 (2020)
- Northeastern University, "Nanomedicine Targeting Tumor Microenvironment" via Zoom, Boston (2020)
- Keynote speaker, 8th International E-Congress on Nanoscience & Nanotechnology, "Targeting Tumor Microenvironment for Immunotherapy", via internet. Mashhad University of Medical Sciences, Mashhad, Iran (2021)
- Education session, Annual meeting of the American Association for Cancer Research, "Nano-FOLFOX for Cancer Therapy", via Zoom, (2021)
- Pharmaceutics Conference, Shanghai Pharmaceutical Association, "Targeting Tumor Microenvironment for Immunotherapy", via Zoom, (2021)
- Keynote speaker, NanoTME2021 virtual conference, "Nano Intervention of Tumor Microenvironment to Improve Therapy", via Zoom, (2021)
- National Taiwan University, College of Pharmacy, "Nano Intervention of Tumor Microenvironment to Improve Therapy", via internet, (2021)
- Zhejiang University, School of Pharmacy, "Overcoming Tumor Microenvironment for Therapy", "Cancer Immunotherapy and Vaccine", via Zoom, (2022)
- Shenyang Pharmaceutical University, "Macromolecular Nucleic Acid Drugs", via internet, (2022)

Liposome Research Days conference, "Liposomal Antibiotics Induces Anticancer Immunity by Killing the Tumor Associated Bacteria", Vancouver, Canada, (2022)

Xi'An Jiao Tong Liverpool University, "Macromolecular Nucleic Acid Drugs", via internet, (2022)

## Industrial Presentations (since 1995):

Somatix Seminar, Gene Transfer and Gene Therapy, "Nonviral supramolecular assemblies for gene transfer", Alameda, CA (1995)

Roche Bioscience, "Supramolecular assemblies for gene transfer", Palo Alto, CA (1995)

Targeted Genetics, Inc., "Supramolecular assemblies for gene transfer", Seattle, WA (1996)

Introgen Therapeutics, Inc., "Supramolecular assemblies for gene transfer", Houston, TX (1996)

ASTRA, "Supramolecular assemblies for gene transfer", Stockholm, Sweden (1996)

Fournier, "Novel lipidic vectors for gene", France (1997)

Vical, Inc. "Progress in non-viral vector development", La Jolla, CA (1997)

Genzyme Corporation, "Cationic lipids: advantages and limitations in systemic gene transfer." Framingham, MA (1998)

RPR Gencell, "Novel Non-Viral Vectors for Gene Therapy", Hayward, CA (1999)

Pfizer, Inc., "Non-Viral DNA Delivery", Groton, CT (1999)

Aventis Pharma, "Non viral lipidic systems for gene delivery", Paris, France (2000)

Abbott Pharmaceutical Co., "Advance in Gene Delivery Using Non-Viral Vectors", Chicago, IL (2001)

Chicagoland Pharmaceutical Discussion Group (CPDG), Chicago College of Pharmacy, "Advance in Gene Delivery Using Non-Viral Vectors", Chicago, IL (2001)

Genzyme, "Gene Transfer to Muscles with Naked DNA" Framingham, MA (2001)

Purdue Pharma, "LPD nanoparticles as a potent cancer vaccine carrier", NJ (2004)

Alnylam Pharmaceuticals, Inc. "Delivery of siRNA to tumor cells", Boston, MA (2007)

Eisai Pharmaceuticals, Inc. "Targeting drugs and siRNA to tumor cells in animal models", Research Triangle Park, NC (2007)

Merck, Inc. "Delivery of siRNA to Solid Tumor", Philadelphia, PA (2007)

Eli Lilly, "Delivery of siRNA with Self-assembled Nanoparticles", Indianapolis, IN (2007)

GlaxoSmithKline, "Delivery of siRNA with Non-viral Vectors", London, UK (2007)

Abbott Laboratories, "Delivery of siRNA for Tumor Therapy", Abbott Park, IL (2008)

Silence Therapeutics, "Systemic Delivery of siRNA for Cancer Therapy", Berlin, Germany (2008)

Pfizer, "Delivery of siRNA for Cancer Therapy", Cambridge, MA (2008)

PPD, Inc., "Delivery of siRNA for Cancer Therapy", Morrisville, NC (2008)

Roche, "Delivery of siRNA for Cancer Therapy", Nutley, NJ (2008)

Entegrion, Inc. "Nanoparticles Evading RES and Delivering siRNA to Tumor Cells", Durham, NC (2009)

Life Technologies, Inc. "Nanoparticle Delivery of siRNA to Tumor Cells", Carlsbad, CA (2009)

Life Technologies, Inc. "Nanoparticle Delivery of siRNA to Tumor Cells", Austin, TX (2009)

Nitto Denko Technology, "Nanoparticles Escaping Reticuloendothelial System and Endosome", Oceanside, CA (2010)

Dicerna Pharmaceuticals, Inc. "Nanoparticle Delivery of siRNA for Cancer Therapy", Boston, MA (2010)

Ribo Pharmaceuticals, Inc. "Membrane/Core Nanoparticles for Drug and Gene Delivery to Tumor and Liver", Kunshan, China (2012)

Novartis, Inc., "Lipid-Calcium-Phosphate (LCP) Nanoparticles for Nucleic Acid Delivery" Boston, MA (2013)

Luye Sike Pharmaceutical Co., "Lipid-Calcium-Phosphate (LCP) Nanoparticles for Drug and Gene Delivery", Nanjing, China (2013)

Hisun Pharmaceutical Company, "Lipid-Calcium-Phosphate (LCP) Nanoparticles for Drug and Gene Delivery", Hangzhou, China (2014)

Bristol-Myers Squibb, "Lipid-Stabilized Nanoprecipitates for Gene Delivery", East Brunswick, NJ (2017)

Wuxi BioPharma Forum, "Drug Delivery Systems: Current Status and Challenges", Wuxi, China (2018)

Novo Nordisk, "Relaxin Gene Therapy for Liver Fibrosis", via Team (2021)

# Major Research Interest:

Gene therapy; Drug delivery and targeting; Liposome technology; Tumor microenvironment; Cancer vaccine; Tumor associated bacteria

#### **PUBLICATIONS**

H-index: 141 (as of Jan 5, 2023) Total Citations: 75,570 Google Scholar

#### Dissertation:

1. Structure and function of *Acholeplasma* membranes - effects of lipid chain length and carotenoid pigments. Ph.D. dissertation, Michigan State University, 1974.

### Peer Reviewed Articles:

- 1. **Huang, L.**, Jaquet, D.D. and Haug, A. The effect of fatty acyl chain length on some structural and functional parameters of *Acholeplasma* membranes. Canad. J. Biochem. 52:483-490, 1974.
- 2. **Huang, L.** and Haug, A. Regulation of membrane lipid fluidity in *Acholeplasma laidlawii*: effect of carotenoid pigment content. Biochim, Biophys, Acta 352:361-370, 1974.
- 3. **Huang, L.**, Lorch, S.K., Smith, G. and Haug, A. Regulation of membrane fluidity in *Acholeplasma laidlawii*. FEBS Letters 43:1-5, 1974.
- 4. Hsung, J.C., **Huang, L.**, Hoy, D. and Haug, A. Lipid and temperature dependence of membrane bound ATPase activity of *Acholeplasma laidlawii*. Canad. J. Biochem. 52:974-980, 1974.
- 5. Pagano, R.E., **Huang, L.** and Wey, C. Interaction of phospholipid vesicles with cultured mammalian cells. Nature 252:166, 1974.
- 6. **Huang, L.** and Pagano, R.E. Interactions of phospholipid vesicles with cultured mammalian cells. I. characteristics of uptake. J. Cell Biol. 67:38-48, 1974.
- 7. Pagano, R.E. and **Huang, L**. Interaction of phospholipid vesicles with cultured mammalian cells. II. studies of mechanism. J. Cell Biol. 67:49-60, 1975.
- 8. Ozato, K., **Huang, L.** and Ebert, J.D. Accelerated calcium ion uptake in murine thymocytes induced by concanavalin A. J. Cell. Physiol. 93:153-160, 1977.
- 9. **Huang, L.**, Ozato, K. and Pagano, R.E. Interactions of phospholipid vesicles with murine lymphocytes. I. vesicle-cell adsorption and fusion as alternate pathways of uptake. Memb. Biochem. 1:1-25, 1978.

- 10. Ozato, K., **Huang, L.** and Pagano, R.E. Interactions of phospholipid vesicles with murine lymphocytes. II. correlation between altered surface properties and enhanced proliferative response. Memb. Biochem. 1:27-42, 1978.
- 11. Wilkins, J.A., Greenawalt, J.W. and **Huang**, L. Transport of 5-hydroxytryptamine by dense granules from porcine platelets. J. Biol. Chem. 253:6260-6265, 1978.
- 12. **Huang, L.** Transmembrane nature of acetylcholine receptor as evidenced by protease sensitivity. FEBS Letters 102:9-12, 1979.
- 13. **Huang, L.** and Kennel, S.J. Binding of immunoglobulin G to phospholipid vesicles by sonication. Biochemistry 18:1702-1707, 1979.
- 14. Chang, B.C. and **Huang, L.** Synthesis and characterization of a new fluorescent phospholipid. Biochim. Biophys. Acta 556:52-60, 1979.
- 15. Adrian, G. and **Huang, L.** Entrapment of proteins in phosphatidylcholine vesicles. Biochemistry 18:5610-5614, 1979.
- 16. West, L.K. and **Huang**, **L.** Transient permeability changes induced osmotically in membrane vesicles from Torpedo electroplax: a mild procedure for trapping small molecules. Biochemistry 19:4418-4423, 1980.
- 17. Lawman, M.J.P., Naylor, P.T., **Huang, L.**, Courtney, R.J. and Rouse, B.T. Cell mediated immunity to Herpes Simplex virus: induction of cytotoxic T lymphocyte responses by viral antigens incorporated into liposomes. J. Immunol. 126:304-308, 1980.
- 18. Huang, A., **Huang, L.** and Kennel, S.J. Monoclonal antibody covalently coupled with fatty acid: a reagent for in vitro liposome targeting. J. Biol. Chem. 255:8015-8018, 1980.
- 19. Huang, A., Kennel, S.J. and **Huang, L.** Immunoliposome labeling: a sensitive and specific method for cell surface labeling. J. Immunol. Meth. 46:141-151, 1981.
- 20. Lee, H.H. and **Huang**, L. Initiation of developmental biology in the People's Republic of China. J. Tenn. Acad. Sci. 56:110-111, 1981.
- 21. Grant, S.R., Babbitt, B.P., West, L. and **Huang, L.** A model system for studies of specific membrane interactions. Biochemistry 21:1274-1279, 1982.
- 22. West, L.K. and **Huang, L.** Acetylcholine receptor-mediated sodium ion efflux after rapid hypo-osmotic loading of radiotracer. Arch. Biochem. Biophys. 215:508-513, 1982.
- 23. Huang, A., Tsao, Y.S., Kennel, S.J. and **Huang, L.** Characterization of antibody covalently coupled to liposomes. Biochim. Biophys. Acta 716:140-150, 1982.
- 24. Ho, S.C. and **Huang, L.** Transfer of *Torpedo* acetylcholine receptors to mouse L-cell surface membranes by liposomes containing Sendai virus envelope proteins. Eur. J. Cell Biol. 27:221-229, 1982.

- 25. Naylor, P.T., Larsen, H.S., **Huang, L.** and B.T. Rouse. *In vivo* induction of anti-Herpes Simplex virus immune response by HSV-1 antigens and lipid A incorporated into liposomes. Infection and Immunity 36:1209-1216, 1982.
- 26. Shen, D.F., Huang, A. and **Huang, L.** An improved method for covalent attachment of antibody to liposomes. Biochim. Biophys. Acta 689:31-37, 1982.
- 27. Pool, G.L., French, M.E., Edwards, R.A., **Huang, L.** and Lumb, R.H. Use of radiolabeled hexadecyl cholesteryl ether as a liposome marker. Lipids 17:448-452, 1982.
- 28. Ho, S.C. and **Huang, L.** A novel cytochemical marker for liposome decomposition in lysosomes. J. Histochem. Cytochem. 31:404-410, 1983.
- 29. Carpenter-Green, S. and **Huang**, L. Incorporation of acylated wheat germ agglutinin into liposomes. Analyt. Biochem. 135:151-155, 1983.
- 30. Huang, A., Kennel, S.J. and **Huang, L.** Interactions of immunoliposomes with target cells. J. Biol. Chem. 258:14034-14040, 1983.
- 31. Connor, J., Yatvin, M.B. and **Huang, L.** pH-sensitive liposomes: acid induced liposome fusion. Proc. Natl. Acad. Sci. U.S.A. 81:1715-1718, 1984.
- 32. Babbitt, B.P., **Huang, L.** and Freire, E. Thermotropic and dynamic characterization of interactions of acylated alpha-bungarotoxin with phospholipid bilayer membranes. Biochemistry 23:3920-3926, 1984.
- 33. Wang, C.-Y. and **Huang**, L. Polyhistidine mediates an acid dependent fusion of negatively charged liposomes. Biochemistry 23:4409-4416, 1984.
- 34. Tsao, Y.-S. and **Huang, L.** Sendai virus-induced leakage of liposomes containing gangliosides. Biochemistry 24:1092-1098, 1985.
- 35. **Huang, L.** Incorporation of acylated antibody into planar lipid multilayers: characterization and cell binding. Biochemistry 24:29-34, 1985.
- 36. Babbitt, B.P. and **Huang, L.** α-bungarotoxin attached to and oriented on a lipid bilayer vesicle surface. Biochemistry 24:15-21, 1985.
- 37. Babbitt, B.P. and **Huang, L.** Effects of valency on thermodynamic parameters of specific membrane interaction. Biochemistry 24:2186-2194, 1985.
- 38. Sullivan, S.M. and **Huang, L.** Preparation and characterization of heat-sensitive immunoliposomes. Biochim. Biophys. Acta 812:116-126, 1985.
- 39. Connor, J. and **Huang, L.** Efficient cytoplasmic delivery of a fluorescent dye by pH-sensitive immunoliposomes. J. Cell Biol. 101:582-589, 1985.
- 40. Ho, R.J.-Y. and **Huang, L.** Interactions of antigen sensitized liposomes with immobilized antibody: a homogeneous solid-phase immunoliposome assay. J. Immunol. 134:4035-4040, 1985.

- 41. Kabalka, G.W., Varma, R.S., Jinaraj, V.K., **Huang, L.** and Painter, S.K. Synthesis of iodine-125 labeled wiodoundecyl cholesteryl ether. J. Labeled Compounds and Radiopharmaceuticals 22:333-338, 1985.
- 42. Norley, S.G., **Huang, L.** and Rouse, B.T. Targeting of drug loaded immunoliposomes to Herpes Simplex virus infected corneal cells--an effective means of inhibiting virus replication *in vitro*. J. Immunol. 136:681-685, 1986.
- 43. Tsao, Y.S. and **Huang, L.** Kinetic studies of Sendai virus-target membrane interactions: independent analysis of binding and fusion. Biochemistry 25:3971-3976, 1986.
- 44. Connor, J. and **Huang, L.** pH-sensitive immunoliposomes as an efficient and target-specific carrier for antitumor drugs. Cancer Res. 46:3431-3435, 1986.
- 45. Tsusaki, B.E., Kanda, S. and **Huang, L.** Stimulation of superoxide release in neutrophils by 1-oleoyl-2-acetylglycerol incorporated into pH-sensitive liposomes. Biochem. Biophys. Res. Commun. 136:242-246, 1986.
- 46. Ho, R.J.Y., Rouse, B. and **Huang, L.** Target-sensitive immunoliposomes: preparation and characterization. Biochemistry 25:5500-5506, 1986.
- 47. Wang, C.-Y., Hughes, K. and **Huang, L.** Improved cytoplasmic delivery to plant protoplasts via pH- sensitive liposomes. Plant Physiol. 82:179-184, 1986. PMCID 1056086
- 48. Sullivan, S.M. and **Huang, L.** Enhanced delivery to target cells by heat sensitive immunoliposomes. Proc. Natl. Acad. Sci. U.S.A. 83:6117-6121, 1986.
- 49. Ho, R.J.Y., Rouse, B.T. and **Huang, L.** Destabilization of target-sensitive immunoliposomes by antigen-binding- a rapid assay for virus. Biochem. Biophys. Res. Commun. 138:931-937, 1986.
- 50. Connor, J., Norley, N. and **Huang, L.** Biodistribution of pH-sensitive liposomes. Biochim. Biophys. Acta 884:474-481, 1986.
- 51. Hu, L.R., Ho, R. and **Huang, L.** Trypsin induced destabilization of liposomes composed of dioleoylphosphatidylethanolamine and glycophorin. Biochem. Biophys. Res. Commun. 141:973-978, 1986.
- 52. Kabalka, G., Buonocore, E., Hubner, K., Moss, T., Norley, N. and **Huang, L.** Gadolinium-labeled liposomes: targeted MR contrast agents for the liver and spleen. Radiology 163:255-258, 1987.
- 53. Gao, K. and **Huang, L.** Preparation of colloidal gold labeled agarose-gelatin microspherules for electron microscopic studies of phagocytosis in cultured cells. J. Histochem. Cytochem. 35:163-173, 1987.
- 54. Norley, S., Sendele, D., **Huang, L.** and Rouse, B. Inhibition of herpes simplex replication in the mouse cornea by drug containing immunoliposomes. Invest. Ophthalmol. Vis. Sci. 28:591-595, 1987.
- 55. Collins, D. and **Huang, L.** Cytotoxicity of diphtheria toxin A fragment to toxin-resistant murine cells delivered by pH-sensitive immunoliposomes. Cancer Res. 47:735-739, 1987.
- 56. Tsao, Y.-S., Freire, E. and **Huang, L.** Thermodynamic and phase characterizations of phosphatidylethanolamine and ganglioside GD1a mixtures. Biochim. Biophys. Acta 900:79-87, 1987.

- 57. Gao, K. and **Huang, L.** Solid core liposomes with encapsulated colloidal gold particles. Biochim. Biophys. Acta 897:377-383, 1987.
- 58. Houck, K.S. and **Huang, L.** The role of multivalency in antibody mediated liposome targeting. Biochem. Biophys. Res. Commun. 145:1205-1210, 1987.
- 59. Ho, R.J.Y., Rouse, B. and **Huang, L.** Target-sensitive immunoliposomes as an efficient drug carrier for antiviral activity. J. Biol. Chem. 262:13973-13978, 1987.
- 60. Ho, R.J.Y., Rouse, B. and **Huang, L.** Interactions of target-sensitive immunoliposomes with herpes simplex virus: the foundation of a sensitive immunoliposome assay for the virus. J. Biol. Chem. 262:13979-13984, 1987.
- 61. Wang, C.-Y. and **Huang, L.** pH-sensitive immunoliposome mediates a target cell-specific delivery and controlled expression of a foreign gene in mouse. Proc. Natl. Acad. Sci. USA 84:7851-7855, 1987.
- 62. Wang, C.-Y. and **Huang, L.** Plasmid DNA adsorbed to pH-sensitive liposomes efficiently transforms the target cells. Biochem. Biophys. Res. Commun. 147:980-985, 1987.
- 63. Kanda, S. and **Huang**, L. Enhanced neutrophil stimulation by phorbol ester encapsulated in pH-sensitive liposomes. J. Liposome Res. 1:63-79, 1988.
- 64. Pinnaduwage, P. and **Huang, L.** A homogeneous, liposome-based signal amplification for assays involving enzymes. Clin. Chem. 34:268-272, 1988.
- 65. Ho, R.J.Y., Ting-Beall, H.P., Rouse, R. and **Huang, L.** Kinetic and ultrastructural studies of interactions of target sensitive immunoliposomes with herpes simplex virus. Biochemistry 27:500-506, 1988.
- 66. Pinnaduwage, P. and **Huang, L.** Beta-Galactosidase induced destabilization of liposome composed of phosphatidylethanolamine and ganglioside GM<sub>1</sub>. Biochim. Biophys. Acta 939:375-382, 1988.
- 67. Kabalka, G., Buonocore, E., Hubner, K., Davis, M. and **Huang, L.** Gadolinium-labeled liposomes containing paramagnetic amphipathic agents: targeted MRI contrast agents for the liver. Magnetic Resonance in Medicine 8:89-95, 1988.
- 68. Klibanov, A., Bogdanov, A., Torchilin, V. and **Huang, L.** Biotin-bearing pH-sensitive liposomes: high-affinity binding to avidin layer. J. Liposome Res. 1:233-244, 1989.
- 69. Liu, D. and **Huang, L.** Role of cholesterol in the stability of pH-sensitive, large unilamellar liposomes prepared by detergent-dialysis method. Biochim. Biophys. Acta 981:254-260, 1989.
- 70. Liu, D. and **Huang**, **L.** Small, but not large, unilamellar liposomes composed of dioloeylphosphatidylethanolamine and oleic acid can be stabilized by human plasma. Biochemistry 28:7700-7707, 1989.
- 71. Liu, D., Zhou, F. and **Huang. L.** Characterization of plasma-stabilized liposomes composed of dioleoylphosphatidylethanolamine and oleic acid. Biochem. Biophys. Res. Commun. 162:326-333, 1989.

- 72. Tari, A. and **Huang, L.** Structure and function relationship of phosphatidylglycerol in the stabilization of phosphatidylethanolamine bilayer. Biochemistry 28:7708-7712, 1989.
- 73. Pinnaduwage, P., Schmitt, L. and **Huang, L.** Use of a quaternary ammonium detergent in liposome mediated DNA transfection of mouse L-cells. Biochim. Biophys. Acta 985:33-37, 1989.
- 74. Wang, C.-Y. and **Huang, L.** Highly efficient DNA delivery mediated by pH-sensitive immunoliposomes. Biochemistry 28:9508-9514, 1989.
- 75. Hughes, B.J., Kennel, S., Lee, R. and **Huang, L.** Monoclonal antibody targeting of liposomes to mouse lung *in vivo*. Cancer Res. 49:6214-6220, 1989.
- 76. Pinnaduwage, P. and **Huang, L.** The role of protein-linked oligosaccharide in the bilayer stabilization activity of glycophorin A for dioleoyl phosphatidylethanolamine liposomes. Biochim. Biophys. Acta 986:106-114, 1989.
- 77. Collins, D., Maxfield, F. and **Huang, L.** Immunoliposomes with different acid sensitivities as probes for the cellular endocytic pathway. Biochim. Biophys. Acta 987:47-55, 1989.
- 78. Holmberg, E., Maruyama, K., Litzinger, D.C., Wright, S., Davis, M., Kabalka, G.W., Kennel, S.J. and **Huang,** L. Highly efficient immunoliposomes prepared with a method which is compatible with various lipid compositions. Biochem. Biophys. Res. Commun. 165:1272-1278, 1989.
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Curriculum Vitae Leaf Huang, Ph.D. Page 57

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Curriculum Vitae 01/05/2023

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Dr. Huang also authored or co-authored more than 274 meeting abstracts since 1973.

### **GRANT FUNDING**

# Current Funding for Huang Lab:

Total <u>Direct Cost/y</u>	Years <u>Inclusive</u>	<b>Grant Number and Title</b>	<u>Source</u>
\$50,000	Ongoing	Fred Eshelman Distinguished Professorship	Eshelman School of Pharmacy

## **GRANT PROPOSALS PENDING**

Total Direct Cost Source