# CURRICULUM VITAE

# Vincent H.L. Lee, Ph.D., D.Sc.

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**CURRICULUM VITAE**

# Vincent H.L. Lee, Ph.D., D.Sc.

## PERSONAL INFORMATION


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|---|---|
| Business Address: | School of Pharmacy, Faculty of Medicine<br>826, 8/F, Lo Kwee-Seong Integrated Biomedical Sciences Building, Area 39<br>The Chinese University of Hong Kong<br>Shatin, N.T., Hong Kong SAR |
| Business Telephone: | (852) 3943 6862 |
| Fax: | (852) 2603 5295 |
| Email Address: | vincent.lee@cuhk.edu.hk |


## EDUCATION:

| | |
|---|---|
| 1978-79 | - University of Wisconsin, School of Pharmacy, Madison, Wisconsin, (Ph.D., Pharmaceutics; Minor: Physical Chemistry). |
| 1975-78 | - University of Wisconsin, School of Pharmacy, Madison, Wisconsin, (M.S., Pharmaceutics) |
| 1969-74 | - Ferris State College, School of Pharmacy, Big Rapids, Michigan, (B.S. Pharmacy) |

## PROFESSIONAL EXPERIENCE:

| | |
|---|---|
| 2016- 2018 | – **Honorary Director** of Pharmaceutical Sciences of Phase 1 Clinical Trial Centre, CUHK |
| 2014-present | - **Research Professor,** School of Pharmacy, Faculty of Medicine,The Chinese University of Hong Kong ) |
| 2009 – Jun 2018 | - **Professor (by courtesy),** Thematic Research Program, School of Biomedical Sciences, Faculty of Medicine, The Chinese University of Hong Kong (Oct 2, 2009 to June 30, 2012) |
| 2009 | - Expert Member, International Review of School of Pharmacy, Fudan University, Shanghai (Dec 11-13, 2009) |
| 2006 | - **Professor and Director**, School of Pharmacy, Faculty of |

Medicine, The Chinese University of Hong Kong (September 4, 2006 – July 31, 2014)

2004- 2006 - Associate Director, Office of Pharmaceutical Science, Center for Drug Evaluation and Research, Food and Drug Administration (since March 20, 2004)

2003 – present - Adjunct Professor of Pharmaceutical Sciences, School of Pharmacy, University of Southern California (since September 2003)

2003 - Vice President, Biological, Formulation, and Material Sciences, ALZA, Mountain View, California (April 14-August31)

2000 - Visiting Professor, University of Lausanne, Switzerland

1998-2003 - Associate Dean for Research and Graduate Affairs

1992-2003 - Professor of Ophthalmology (secondary appointment), Keck School of Medicine, University of Southern California

1991 - Guest Scholar, Kyoto University, Faculty of Pharmaceutical Sciences, Kyoto, Japan

1990-2003 - **Chairman**, Department of Pharmaceutical Sciences, School of Pharmacy, University of Southern California, Los Angeles, California

1989-2003 - Professor, School of Pharmacy, University of Southern California, Los Angeles, California

1988-2003 - Gavin S. Herbert Professor, School of Pharmacy, University of Southern California, Los Angeles, California

1988-1990 - **Director**, Division of Pharmaceutics, School of Pharmacy, University of Southern California, Los Angeles, California

1984-88 - Associate Professor of Pharmacy (Pharmaceutics), School of Pharmacy, University of Southern California, Los Angeles, California

1985-86 - **Acting Area Coordinator**, Pharmaceutics, University of Southern California, School of Pharmacy, Los Angeles, California

1979-84 - Assistant Professor of Pharmacy (Pharmaceutics), School of Pharmacy, University of Southern California, Los Angeles, California

1976 - Summer Scholar, Pharmacy Research, The Upjohn Company, Kalamazoo, Michigan

1974-75 - Instructor of Pharmacy, School of Pharmacy, Ferris State College, Big Rapids, Michigan

**PROFESSIONAL/HONORARY SOCIETIES:**

2013 – present - Member, College of Fellows, American Institute for Medical and Biological Engineering

2010–present - Member, Pharmaceutical Society of Hong Kong

| | | |
|---|---|---|
| 2007-present | - | Member, Hong Kong Pharmacology Society |
| 1994-present | - | Member, Association of Ocular Pharmacology and Therapeutics |
| 1988-present | - | Member, International Society of Eye Research |
| 1987-present | - | Member, Controlled Release Society |
| 1986-present | - | Member, American Association of Pharmaceutical Scientists |
| 1982-present | - | Member, Association for Research in Vision and Ophthalmology |
| 1982-present | - | Member, Association of American Colleges of Pharmacy |
| 1979-86 | - | Member, Academy of Pharmaceutical Sciences |
| 1979-present | - | Member, Sigma Xi Scientific Research Society |
| 1978-present | - | Member, New York Academy of Sciences |
| 1977-present | - | Member, American Association for the Advancement of Science |
| 1974-present | - | Member, Kappa Psi Pharmaceutical Society |
| 1973-present | - | Member, Rho Chi Honor Pharmaceutical Society |
| 1973-present | - | Member, Omicron Delta Kappa National Honor Leadership Society |

## COMMITTEE MEMBERSHIPS:

### The Chinese University of Hong Kong, School of Pharmacy

| | |
|---|---|
| 2016 Sep- 2018 Sep | - Member, Department Academic Personnel Committee (DAPC) , School of Pharmacy, CUHK |
| 2016 May | - Degree Honor Classification Panel, School of Pharmacy, CUHK |
| 2013 April | - Independent Third Party Reviewer, Technology and Busness Development Fund, CUHK |
| 2013 May | - Internal Examiner, PhD Thesis Examination Committee of Xiao Yajie, Faculty of Medicine |
| 2012 – present | - Mentor, Mentorship Programme, SHHO College |
| 2012- present | - User Committee on General Management of the Lo Kwee-Seong Integrated Biomedical Sciences Building. |
| 2012 – present | - BMSB Management Committee Meeting, Faculty of Medicine |
| 2012 May – present | - Catering Management Committee, SHHO College |
| 2012 Aug – 2014 Jul | - Medicial Panel, Faculty of Medicine, CUHK |
| 2012 Feb – present | - Master of Science in Pharmaceutical Manufacturing and Quality Committee, School of Pharmacy, CUHK |
| 2012 Jun – 2014 | - Catering Management Committee of S.H. Ho College |
| 2011 May – present | - Reviewer, Patent committee, CUHK |
| 2011 Feb – present | - Advisory Board Member, Prince of Wales Hospital Diabetes & Endocrine Centre |
| 2009 Mar - present | - Cabinet Member, S. H. Ho College, CUHK |
| 2009 Mar – present | - Member, S. H. Ho College Assembly of Fellow, CUHK |
| 2009 Mar | - Initial Fellows of S. H. Ho College, CUHK |
| 2008 -2010 | - Postgraduate Supervisor of a PhD student |

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|---|---|
| 2008 | - Internal Examiner, Postgraduate programme, School of Pharmacy |
| 2008 | - Internal Examiner, MD Programme, Faculty of Medicine |
| 2008 - present | - Member, Interview Board, BPharm Admission |
| 2008-2009 | - Category 2 Member, Board of Department of Pharmacology |
| 2008 - 2010 | - Member of Medicine Panel, Faculty of Medicine |
| 2007 – 2011 | - Member, Management Board of the Institute of Biotechnology |
| 2007 -2008 | - Member, Selection Committee, Faculty Position Recruitment |
| 2007 - present | - Member, Institute of Vascular Medicine |
| 2007 | - Member, Governance Task Force, Working Group on the Governance of Courses not Taught by the Host Department |
| 2007 – 2009 | - Director, Drug Development Centre |
| 2007 - present | - Member, Pharmacy Advisory Board |
| 2014 – present | - Member, Executive Committee |
| 2006 – 2014 | - Chairman, Executive Committee |
| 2006 - 2015 | - Chairman, Graduate Examination Panel |
| 2014 – present | - Member, Pharmacy Board |
| 2006 – 2014 | - Chairman, Pharmacy Board |
| 2006 - 2014 | - Member, Graduate Committee & Admissions Committee |
| 2006 - 2014 | - Member, Graduate Panel |
| 2006 - 2014 | - Member, Students Welfare & Scholarships Committee |
| 2006 - 2009 | - Affiliation Fellows of New Asia College, CUHK |

**University of Southern California, School of Pharmacy**

| | |
|---|---|
| 1999-2001 | - **Chair**, Steering Committee, Conference of Frontiers of Drug Development, Tokyo, Japan |
| 1998-99 | - **Chair,** Steering Committee, Conference of Frontiers of Drug Development |
| 1997-2003 | - **Chair**, Pharmaceutical Sciences Faculty Search Committee |
| 1996 | - **Chair**, Vision and Mission Committee |
| 1995-99 | - Member, Academic Budget Advisory Committee |
| 1991 | - **Chairman**, ad hoc Committee for Faculty Search |
| 1989 | - Member, Task Force on the Structure of Basic Sciences |
| 1988 | - **Chairman**, ad hoc Committee for Review of Promotion Dossier |
| 1988-2003 | - Member, Executive Committee |
| 1988-2003 | - Member, Committee on Appointments and Promotions |
| 1988 | - **Chairman**, ad hoc Committee for Faculty Search (Pharmaceutics) |
| 1987 | - Member, ad hoc Committee on Merit |
| 1986-87 | - **Chairman**, Research Space Utilization and Planning Committee |
| 1986-2003 | - Member, Pharm.D.-Ph.D. Committee |
| 1986-88 | - Member, ad hoc Committee for Faculty Search (Doheny Eye Hospital) |
| 1986-2003 | - Member, Committee on Post-graduate Education |

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|---|---|
| 1985-87 | - Member, Socrates Committee |
| 1985-86 | - **Chairman**, ad hoc Committee for Faculty Search (Pharmaceutics) |
| 1985-86 | - Member, ad hoc Committee on Appointments and Promotions Guidelines for Basic Science Faculty |
| 1985-86 | - Member, AACP Awards Committee |
| 1984-88 | - **Chairman**, Pharmaceutical Sciences Graduate Studies Committee |
| 1984-88 | - Member, ad hoc Committee on Peer Reviewed Performance for Basic Science Faculty |
| 1984-88 | - Member, ad hoc Committee for Faculty Search (Clinical Pharmacy) |
| 1984-2003 | - Member, Academic Budget Advisory and Planning Committee |
| 1984-86 | - Member, Faculty Meeting Agenda Committee |
| 1984-86 | - Member, ad hoc Committee of Faculty Caucus |
| 1982-84 | - Member, Curriculum Council |
| 1981-83 | - Member, ad hoc Committee for Faculty Search |
| 1981-83 | - Member, ad hoc Committee for Recruitment |
| 1981-83 | - Member, Student Affairs Committee |
| 1981-82 | - Coordinator, Seminar Series |
| 1981-82 | - Member, ad hoc Committee to Review BRSG Proposals |
| 1979-85 | - Member, Scholarship Standards Committee |
| 1980-81 | - Member, Support and Awards Subcommittee, Graduate Education and Research Council |

**University of Southern California, University-wide**

| | |
|---|---|
| 2001- 2002 | - Provost's Genomics Advisory Group |
| 1999-2000 | - **Co-Chair**, Patents and Technology Transfer Committee |
| 1998-2000 | - Member, Search Committee for the Director of the Alfred Mann Institute |
| 1998-2000 | - Member, Patent, Licensing, and Technology Transfer Council |
| 1997-98 | - **Co-Chair**, Patent and Technology Advisory Committee |
| 1990-96 | - Member, Vivaria Oversight Committee |
| 1993-1997 | - Patent Advisory Committee |
| 1996-97 | - Member, Search Committee for the Medical Director, Norris Comprehensive Cancer Center |

**Professional Societies**

| | |
|---|---|
| July 2016 | - Plenary Session Moderator, Controlled Release Society Annual Meeting 2016, Seattle, Washington, U.S.A. |
| June 2016 | - Keynote Speech Speaker, The 9th Annual Jarowski Symposium, St. John's University, New York. |

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|---|---|
| May 2016 | - Editorial Board Meeting Attendee, Investigative Ophthalmology & Visual Science Journal (IOVS) Editorial Board meeting at the 2016 Association of Research in Vision and Ophthalmology (ARVO) Annual Meeting, Seattle, Washington |
| Mar 2016 | - Guest Lecture Speaker, University of Southern California |
| Oct 2015 | - American Association of Pharmaceutical Association (AAPS) 2015 Annual Meeting and Exposition, organized by American Association of Pharmaceutical Association, Orlando, U.S.A. |
| 2015 Jul | - Plenary Lecture Speaker, 42th Annual Meeting & Exposition Controlled Release Society (CRS) 2015, Edinburgh |
| 2015 Apr-2016 Mar | - **Chairman**, Hong Kong Pharmacy Conference 2016 |
| 2013 Nov | - Member, Scientific Advisory Board of the Foundation Fighting Blindness, Post-ARVO Scinetific Advisory Board Meeting 2013 |
| 2012 – 13 | - Commissioner for NTU Self-Evaluation 2012-13, Graduate Institute of Clinical Pharmacy, National Taiwan University |
| 2012 – present | - Member, College of Fellows, American Institute for Medical and Biological Engineering |
| 2012 Nov | - Member, Organzing Committee, 2012 Joint Conference Drug Safety reseach Centres, Recognising and Preventing Adverse Drug Interactions. |
| 2012 Nov | - Member, Organzing Committee, Pre-Conference Meeting,A Systematic Approach to Improving Drug Safety and Effective Use, Hong Kong |
| 2012 Sep | - Session Chairman, Lohmann Therapie-Systeme (LTS) Academy Conference 2012. |
| 2012 May | - Member, The Association for Resarch in Vision and Opththalmology, Fort Lauderdale. |
| 2012 | - **External Examiner**, PhD Thesis Examination Committee of Ms. Zhangjieying, HKUST |
| 2011 Oct | - Member, American Association of Pharmceutical sciences Annual Meeting and Exposition Online Preliminary programme, Washington D.C. |
| 2011 Jul | - Session Chairman, International Symposium in BA/BE of Oral Drug Products, Kobe Japan |
| 2011 Feb | - **Chairman**, 15th International Symposium on Recent Advances in Drug Delivery Systems, Salt Lake City. |
| 2010 Sep | - **Panelist**, 6th International Conference on the Tear Film & Ocular Surface Basic Science and Clinical Relevance, Florence |
| 2010 Sep | - Platform Guest, Openning Ceremony of International Health Economics Conference 2010, Hong Kong |
| 2010 May | - **Chairman**, Lohnmann Therapie-Systeme Academy Symposium, New York. |

2010 Mar - Organizing Committee Member & Panel Chair, First Annual Symposium on Pharmacovigilance, Hong Kong

2009 Aug - Platform Guest, Openning Chairman Session, Drug Delivery Symposium, Germany.

2009 - Member, The Hong Kong Health Services Sector National Day Celebration Committee

2008 – present - Member, Board of Directors, Asian Association of Schools of Pharmacy

2008 March - **Chairman**, Primary Health Care Conference, School of Pharmacy, CUHK, Hong Kong

2007 Oct - Member, Fudan University Conference, Shanghai

2007 Oct - **Co-Chair**, LTS Symposium on Unmet Needs in Oral Drug Delivery, Cologne

2007 Sept - **Co-Chair**, Pharmaceutical Research Leadership Meeting, USA

2007 Sept - Co-**Chair**, Programming Committee, World Congress of Pharmacy & Pharmaceutical Sciences, Beijing

2006 - 07 - Member, USC/FDA Biomedical Imaging Science Initiative Workshop, USA

2006 - 07 - Member, Inaugural Conference, LTS Therapeutic Systems, Cologne, Germany

2004-present - Member, 7th World Congress of Chemical Engineering, Glasgow, United Kingdom

2004- present - Member, Scientific Programming Committee, Conference on Nasal and Pulmonary Drug Delivery, Pfeiffer, September 2005, Prague, Czech Republic

2001-02 - **Co-Chair**, Scientific Programming Committee, 25th Annual Meeting, Controlled Release Society, Korea, Seoul, 2002.

2001-04 - **Co-Chair**, Scientific Programming Committee, 2nd Pharmaceutical Sciences World Congress, Kyoto, Japan, May 2004.

2000 – 03 - **Chairman**, Scientific Programming Committee, Conference on Nasal and Pulmonary Drug Delivery, Pfeiffer, September, 2003, Barcelona, Spain

2000 - **Chair,** Pharmaceutical Sciences Section, American Association for the Advancement of Science

1999 - **Chair-Elect,** Pharmaceutical Sciences Section, American Association for the Advancement of Science

1999- - **Trustee,** Association of Ocular Pharmacology and Therapeutics

1998-1999 - **Chairman**, Scientific Programming Committee, Conference on Nasal and Pulmonary Drug Delivery, Pfeiffer, September 27-29, 1999, Rome, Italy

1998-2000 - Member, Scientific Programming Committee, World Conference of Pharmaceutical Sciences, April 2000, San Francisco

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| 1997-1999 | - | **Chairman**, Scientific Programming Committee, Asian Conference and Exhibition of Controlled Release, November 18-19, 1999, Hong Kong, China |
| 1997-98 | - | **Co-Chair**, Scientific Programming Committee, Drug Delivery and Pharmaceutical Technology Conference, April 1998, Tokyo, Japan |
| 1997 | - | **Chairman**, Scientific Programming Committee, Conference on Nasal and Pulmonary Drug Delivery, Pfeiffer, Stockholm, Sweden |
| 1997 | - | **Chairman**, Scientific Programming Committee, Workshop on Recent Advances in Drug Delivery Sciences and Technology, Controlled Release Society-Chinese Pharmaceutical Association, Beijing, China. |
| 1996 | - | **President**, American Association of Pharmaceutical Scientists |
| 1995 | - | **President-Elect,** American Association of Pharmaceutical Scientists |
| 1995 | - | Member, Organizing Committee and Scientific Advisory Board, 3rd Jerusalem Conference on Pharmaceutical Sciences and Clinical Pharmacology |
| 1995 | - | Member, Scientific Programming Committee, First Annual International Symposium on Experimental and Clinical Ocular Pharmacology and Pharmaceutics |
| 1995 | - | Member, Scientific Programming Committee, Association of Ocular Pharmacology and Therapeutics Annual Meeting |
| 1995 | - | Member, Scientific Programming Committee, International Association of Pharmaceutical Biotechnology Annual Meeting |
| 1994-96 | - | **Chairman**, Scientific Programming Committee, 1996 Controlled Release Society Annual Meeting |
| 1994- | - | Expert Member, Federation Internationale Pharmaceutique |
| 1993 | - | **Chairman,** Nominations Committee, Controlled Release Society |
| 1993 | - | **Chairman,** Awards Committee, Controlled Release Society |
| 1993 | - | **Chairman,** Founders Award Committee, Controlled Release Society |
| 1993 | - | **Immediate Past President,** Controlled Release Society |
| 1992-1993 | - | **President**, Controlled Release Society |
| 1992-1993 | - | **Chairman**, AAPS Fellows Selection Committee |
| 1991-1993 | - | Member-at-large, American Association of Pharmaceutical Scientists |
| 1991-1993 | - | Executive Council, American Association of Pharmaceutical Scientists |
| 1991-1992 | - | **Chairman**, Board of Governors, Controlled Release Society |
| 1991 | - | **Chairman**, Strategic Planning Committee, Controlled Release Society |
| 1991-1992 | - | **Chairman**, Committee on Scientific Excellence, American Association of Pharmaceutical Scientists |

1991 - **Chairman**, Fellows Selection Committee, Pharmaceutics and Drug Delivery Section, American Association of Pharmaceutical Scientists
1991 - Member, AAPS Fellows Selection Committee
1991 - Member, Nominations and Awards Committee, Pharmaceutics and Drug Delivery Section, American Association of Pharmaceutical Scientists
1991-1992 - **President-Elect**, Controlled Release Society
1990-1991 - **Vice President**, Controlled Release Society
1990 - Member, Executive Committee, Controlled Release Society
1990 - **Chairman**, Strategic Planning Committee, Pharmaceutics and Drug Delivery Section, American Association of Pharmaceutical Scientists
1990 - **Chairman**, Nominations and Awards Committee, Pharmaceutics and Drug Delivery Section, American Association of Pharmaceutical Scientists
1990 - **Chairman**, Fellows Selection Committee, Pharmaceutics and Drug Delivery Section, American Association of Pharmaceutical Scientists
1990 - **Past Chairman**, Pharmaceutics and Drug Delivery Section, American Association of Pharmaceutical Scientists
1989-1990 - **Program Chairman**, 17$^{th}$ International Symposium on Controlled Release of Bioactive Materials
1989-1990 - Member, Organizing Committee for the Tenth International Congress of Eye Research
1989 - **Chairman**, Pharmaceutics and Drug Delivery Section, American Association of Pharmaceutical Scientists
1988-1989 - Member, Program Committee for the 16$^{th}$ International Symposium on Controlled Release of Bioactive Materials
1988-1991 - Member, Board of Governors, Controlled Release Society
1988 - Member, U.S. Organizing Committee for the Fourth Japanese-American Conference on Pharmacokinetics and Biopharmaceutics
1988 - Member, International Advisory Board, International Conference on Pharmaceutical Sciences and Clinical Pharmacology, Jerusalem, Israel
1988 - Member, Organizing Committee for the Ninth International Congress of Eye Research
1988 - **Chairman-Elect**, Pharmaceutics and Drug Delivery Section, American Association of Pharmaceutical Scientists
1987 - Member, Executive Committee, Pharmaceutics and Drug Delivery Section, American Association of Pharmaceutical Scientists
1987 - Member, Strategic Planning Committee, Pharmaceutics and Drug Delivery Section, American Association of Pharmaceutical Scientists

1986-88 - **Chairman**, Program Committee, Pharmaceutics and Drug Delivery Section, American Association of Pharmaceutical Scientists Annual Meeting

1986-88 - Member, Program Committee, American Association of Pharmaceutical Scientists Annual Meeting

1987-88 - **Vice Chairman**, Pharmaceutics and Drug Delivery Section, American Association of Pharmaceutical Scientists Annual Meeting

1986-87 - **Vice Chairman-Elect**, Pharmaceutics and Drug Delivery Section, American Association of Pharmaceutical Scientists

1985-86 - **Vice Chairman-Elect**, Basic Pharmaceutics Section, Academy of Pharmaceutical Sciences

1985-87 - Member, Program Committee, Western Regional American Pharmaceutical Association Meeting

1980-86 - **Chairman**, Membership Committee, Basic Pharmaceutics Section, Academy of Pharmaceutical Sciences

1980, 1982 - **Program Chairman**, Western Regional American Pharmaceutical Association Meeting

**Others**

2015 Oct – 2018 Sep - Member, Joint Scientific Committee for Phase I Clinical Trials, Centre of Health Protection

2015 - present - Member, Biomedical Expert Panel, Hong Kong Science and Technology Parks Corp.

2015 – present - **Chair**, Organizing Committee, 2016 Hong Kong Pharmacy Conference

2014 – present - **Chair**, Task Force on Pre-Pharmacy Council, Hong Kong

2014-16 - Honorary Advisor of the Society of Hospital Pharmacists of Hong Kong and the Drug Education and Resources Centre

2013 - present - **Consultation Group,** Hong Kong Paediatric Foundation, Hong Kong Paediatric Foundation.

2013 Sep - **Expert Advisory Group** on Bioavailability and Bioequivalence Studies, Pharmacy and Poisons Board, Hong Kong

2013 Jul - **Expert Witness,** InSite Vision V Sandoz Inc. case trial , District of New Jersey

2012 – present - Member, Assessment Panel, Health and Medical Research Fund, Food and Health Bureau, HKSAR.

2012 Sep - 2018 - **Expert Committee** on Food Safety, Centre for Food Safety (CFS), appointed by Secretary for Food and Health

2011 – present - **Advisory Board**, Working Party on Testing of "Pharmaceutical Products", Hong Kong Accreditation Society

2011 – present - **Professional Consultant**, the Pharmaceutical Society of Macao in Pharmaceutical Research and Development

2010 – present - **External Academic Experts**, Macao Polytechnic Institute

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|---|---|---|
| 2005 – present | - | Editorial Advisory Board Member, Investigative Ophthalmology and Visual Science |
| 1977-79 | - | Member, Graduate Studies Committee, School of Pharmacy, University of Wisconsin |
| 1973-74 | - | **Vice President**, Student American Pharmaceutical Association, Ferris State College Chapter, Michigan |
| 1974 | - | **Program Co-Chairman**, Poison Prevention Week, Ferris State College, Michigan |
| 1972-74 | - | **Coordinator**, Drug Education Team, School of Pharmacy, Ferris State College, Michigan |

**JOURNAL EDITORSHIP:**

*Journal of Drug Targeting*, Founding Co-Editor-In-Chief, January 1992-2001
*Advanced Drug Delivery Reviews*, Editor-in-Chief, July 1994-2010
*Pharmaceutical Research*, Associate Editor, July-December 1994
*Pharmaceutical Research*, Editor-in-Chief, January 1995-2008 (until Dec 31, 2008)
*Drug Discovery Today*, *April 2007 Issue*, Guest Editor, April 2007

**JOURNAL REVIEWER:**

*American Association of Pharmaceutical Scientists Journal*
*American Journal of Ophthalmology*
*American Journal of Pathology*
*Analytical Chemistry*
*Antimicrobial Agents and Chemotherapy*
*Biochemical Pharmacology*
*Biochimica et Biophysica Acta*
*Biomaterials*
*Calcified Tissue International*
*Current Eye Research*
*Drug Metabolism and Disposition*
*European Journal of Pharmaceutics and Biopharmaceutics*
*European Journal of Pharmaceutical Sciences*
*Experimental Eye Research*
*International Journal of Pharmaceutics*
*Investigative Ophthalmology and Visual Science*
*Journal of Controlled Release*
*Journal of the American Chemical Society*
*Journal of Neurochemistry*
*Journal of Ocular Pharmacology and Therapeutics*
*Journal of Parenteral Science and Technology*
*Journal of Pharmaceutical Sciences*
*Journal of Pharmacology and Experimental Therapeutics*
*Life Sciences*
*Peptides*

*Molecular Pharmacology*
*Pharmaceutical Research*
*Proceedings of National Academy of Sciences*
*Science*
*Trends in Pharmacological Sciences*

**GRANT REVIEWER:**

American Diabetes Association
Department of Veterans Affairs
Israel Academy of Sciences and Humanities
Medical Research Council of Canada
National Eye Institute
National Institutes of Health, Special Study Section
National Institutes of Health, Pharmacology Study Section
National Institutes of Health, Toxicology Study Section
National Institutes of Health, Physiological Sciences Study Section
National Science Foundation
North Atlantic Treaty Organization
Alcohol, Drug Abuse, and Mental Health Administration
Innovation and Technology Fund, Hong Kong Special Administrative Region Government (as Panel of Assessor, Jan 2009- Dec 2010)

**EXTERNAL DOCTORAL THESIS EXAMINER:**

University of Uppsala, Uppsala, Sweden, 1987, 1988, 2000
University of Kuopio, Kuopio, Finland, 1992
HKUST, Hong Kong, 2012

**ACADEMIC PROGRAM REVIEWER:**

American Council on Pharmaceutical Education, 1990
National University of Singapore, Faculty of Science, 1999

**EDITORIAL BOARDS:**

*Advanced Drug Delivery Reviews*
*Biopharm*
*Drug Discovery Today*
*European Journal of Pharmaceutical Sciences*
*European Journal of Pharmaceutics and Biopharmaceutics*
*Journal of Ocular Pharmacology and Experimental Therapeutics*
*Pharmaceutical Research*
*AAPS Journal*

*Drugs and the Pharmaceutical Sciences Series, Marcel Dekker, New York, New York*
*Medical Progress*
*Hong Kong Pharmaceutical Journal*
*Investigative Ophthalmology & Visual Science*
*Journal of China Pharmacy*
*International Editorial Advisory Board, Therapeutic Delivery*
*Journal of the Asian Association of Schools of Pharmacy*
*Journal Clinical research and Regulatory Affairs*
*Current Pharamcology Reports (from 2015)*

**ADVISORY BOARDS:**

Advisory Committee, Hong Kong Institute of Diabetes and Obesity, 2010 - present
Scientific Advisory Board, Foundation Fighting Blindness, 2007-present
Advisory Board, Drug Development Centre, Chinese University of Hong Kong, 2007-present
Advisory Board, The Hong Kong Services Sector National Day Celebration Committee, 2007-present
Advisory Council, College of Pharmacy, Ferris State University, 1997-present
Advisory Committee for Pharmaceutical Science, U.S. Food and Drug Administration, 1999-2002
Pharmaceutical Scientific Advisor, Department of Health, Taiwan, 1999-2001
USP Advisory Panel on Ophthalmology, 1990-95, 1996-2000
NIH Pharmacology Study Section, 1994-97

**HONORS/AWARDS:**

ARVO Gold Fellow, The Association for Research in Vision and Ophthalmology, 2013
Fellow, The Inaugural CRS College of Fellows, 2010
Silver Fellow, The Assocation for Research in Vision and Ophthalmology, 2009
International Fellow of The Academy of Pharmaceutical Science and Technology, Japan (APSTJ), February 2009
The APSTJ Takeru & Aya Higuchi Memorial Lectureship Award, The Academy of Pharmaceutical Science and Technology, Japan (APSTJ), February 2009
Presidential Citation Award, American Association Pharmaceutical Scientists, Nov 2008
Distinguished Visitor, National University of Singapore, July 2004
Doctor of Science (honaris secoris), University of London, UK, 2003
Research Achievement Award in Pharmaceutics and Drug Delivery, American Association of Pharmaceutical Scientists, 2003
Citation of Merit, University of Wisconsin, March 2002

Fellow, American Institute for Medical and Biological Engineering, 1999
Distinguished Service Award, American Association of Pharmaceutical Scientists, 1998
PhRMA Award in Excellence in Pharmaceutics (inaugural awardee), 1998
Gordon A. Bergy Lecturer, West Virginia University, 1997
Pharmaceutical Scientist of the Year Award, Federation Internationale Pharmaceutique, 1995
Kenneth E. Avis Distinguished Visiting Professor, University of Tennessee, 1995
Alberta Heritage Foundation Lecturer, 1994
Frank A. Duckworth Visiting Emient Scholar, 1993
Canadian Medical Research Council Visiting Professor, 1993
Men of Achievement, 1993
Outstanding Paper, Journal of Controlled Release, 1991
Young Investigator Award, Controlled Release Society, 1991
Fellow, American Association for the Advancement of Science, 1991
Fellow, American Association of Pharmaceutical Scientists, 1988
Professor of the Year – Class of 1991, 1988
Professor of the Year – Class of 1990, 1987
Who's Who in the West, 1981
William F. Vilas Fellowship, University of Wisconsin, 1978-79
W.A.R.F. Fellowship, University of Wisconsin, 1975-77
Winner, National Rho Chi Graduate Scholarship, 1975
Who's Who Among Students in American Universities and Colleges, 1974
Winner, First and Third Places, Annual Student American Pharmaceutical Association Papers Review Forum, 1974
Dr. William C. Sunkes Memorial Award (for leadership and academic performance), 1974
Tau Kappa Epsilon Award, 1974
Merck Award, 1974
Willis J. Heyl Award in Pharmacognosy, 1974
Bristol Award, 1974
Kenneth E. Spoerk Memorial Award (for excellence in biology), 1973
Certificate of Achievement, American Chemical Society, 1972
Rho Chi Sophomore Award, 1970

## AREAS OF RESEARCH INTEREST:

Innovative drug delivery
Epithelial drug transport
Translational therapeutics

## RESEARCH SUPPORT:

### Federal

Preliminary studies on mucins and related proteins. BRSG, Department of Health, Education and Welfare, $4,000, 8/1/79-3/31/80.

Disposition of topical retinoids in albino rabbit eyes. BRSG, Department of Health, Education and Welfare, $2,347, 4/1/80-3/31/81.

Esterase distribution in the rabbit cornea and its variation with age. BRSG, Department of Health and Human Services, $1,105, 4/1/81-3/31/82.

Liposomes for topical ocular drug delivery. BRSG, Department of Health and Human Services, $3,068, 4/1/81-3/31/82.

Evaluation of esterase activity and prodrugs in the eye. 1 R01 EY03816, National Institutes of Health, $117,746, 3/1/82-2/28/85.

Mucins and stability of the tear film in rabbit eyes. 1 R01 EY03670, National Institutes of Health, $157,210, 3/1/82-8/31/85.

Intestinal transport of cyclosporine in vitro. BRSG, Department of Health and Human Services, $1,200, 4/1/84-3/31/85.

Ocular and systemic absorption of timolol prodrugs. Biomedical Research Support Grant BRSG S07 RR05792, $3,200, 4/1/85-3/31/86.

Evaluation of esterase activity and prodrugs in the eye. 2 R01 EY03816, National Institutes of Health, $278,655, 4/1/86-3/31/89. (Ranked 1 out of 57 applications recommended for approval.)

Aminopeptidase activity and peptide absorption in the eye. 1 RO1 EYO6169, National Institutes of Health, $306,423, 1/1/86-12/31/89.

A novel approach for peptide and protein delivery. BRSG, Department of Health and Human Services, $3,150, 4/11/86-3/31/87.

Minimizing blood to eye ratio of topical eye medications. 1 R01 EY7389, National Institutes of Health, $584,481, 4/1/88-3/31/94.

Cellular uptake and degradation of liposomes in liver. 1 R01 DK34013, National Institutes of Health, $393,622, 5/1/88-4/30/92.

Controlled release of liposomal contents in macrophages. 1 R01 CA37528, National Institutes of Health, $466,577, 12/1/86-11/30/91.

Role of reductases in ocular drug metabolism. BRSG, Department of Health and Human Services, $2,000, 4/1/87-3/31/88.

Evaluation of esterase activity and prodrugs in the eye. 1 RO1 EYO3816, National Institutes of Health, $610,046, 4/1/89-3/31/95.

Ion transport processes in the conjunctiva of the eye. 1 R01 EY10421, National Institutes of Health, $564,308, 12/1/94-11/30/98.

Paracellular peptide transport across the intestine. 1 R01 GM52812, National Institutes of Health, $562,388, 12/1/94-11/30/98.

Absorption mechanisms for peptide/protein drugs via lung. 1 R24 HL64365, National Institutes of Health, $2,103,722, 9/30/99-6/30/04 (Co-investigator)

Drug absorption via the peptide transporter in the eye. 1R01 EY12356, National Institutes of Health, $699,775, 8/1/00-7/31/04

PepT1: Structure-function, sorting, and modulation. 1 RO1 GM59297, National Institutes of Health, $1,406,144, 4/1/00-3/31/05

**Non-Federal**

Hydrophobicity of bovine submaxillary mucin. Sigma Xi, $600, 1/1/80-6/30/80.

Solution properties of tear mucins. Allergan Pharmaceuticals, $8,000, 1/1/80-12/31/80.

Culture of conjunctival goblet cells. Sigma Xi, $200, 1/1/81-6/30/81.

Retention of disodium cromoglycate in the albino rabbit eye. Fisons Limited, U.K., $8,200, James Swarbrick, co-principal investigator, 6/1/81-12/31/81.

Properties of conjunctival mucins: Ion binding and interaction with lysozyme. Allergan Pharmaceuticals, $12,634, 7/1/81-6/30/82.

Properties of conjunctival mucins: Ion binding and interaction with lysozyme. Allergan Pharmaceuticals, $12,634, 7/1/81-6/30/82.

Interaction of polypeptides and polysaccharides with the corneal surface. Allergan Pharmaceuticals, $31,410, 5/1/83-4/30/85.

Nasal and buccal aminopeptidase activity and its modulation by absorption enhancers. Lilly Research Laboratories, $36,256, 11/1/85-10/31/87.

Systemic drug absorption from topically applied solutions in the albino rabbit eye. Bausch and Lomb, $16,703, 9/30/85-8/31/87.

Efficiency and mechanisms by which fusidate protects insulin and human growth hormone from degradation in nasal homogenates. California Biotechnology, Inc., $37,750, 12/1/86-11/30/87.

Alternatives to blood sugar lowering assay for insulin. USP Fellowship Award, $12,000, 7/1/87-6/30/88.

A model to study mucosal insulin absorption. American Diabetes Association, $33,173, 7/1/87-6/30/88.

Site to site variation in the intestinal proteolysis of small peptides. Hässle AB, Sweden, $26,400, 1/1/88-12/31/88.

Ion-pair formation as a means to enhance ocular drug absorption. Allergan Pharmaceuticals, $4,625, 5/1/88-7/1/88.

Formulation influence on ocular drug absorption. Beiersdorf AG, West Germany, $24,259, 7/1/88-6/30/89.

Site to site variation in the intestinal proteolysis of small peptides. Hässle AB, Sweden, $27,720, 1/1/89-12/31/89.

Ocular hypotensive activity of rennin inhibitors. Carlbiotech, Copenhagen, Denmark, $23,640, 5/1/89-8/31/89.

Site to site variation in the intestinal proteolysis of small peptides. Hässle AB, Sweden, $30,000, 1/1/90-12/31/90.

Ocular hypotensive activity of rennin inhibitors. Carlbiotech, Copenhagen, Denmark, $21,263, 3/1/91-6/30/91.

Site to site variation in the intestinal proteolysis of small peptides. Hässle AB, Sweden, $70,000, 1/1/91-12/31/95.

Oral peptide absorption. Sandoz, $22,000, 8/1/91-7/31/93.

Ocular hypotensive activity of rennin inhibitors. Carlbiotech, Copenhagen, Denmark, $20,579, 12/1/91-11/30/92.

Oral delivery of polar and labile peptides. PMA Undergraduate Research Fellowship, $5,000, 12/1/91-11/30/92.

Biological approaches to drug delivery. Syntex, $30,000, 1/1/92-12/31/93.

Intestinal absorption of peptides. Hisamitsu, $30,000, 2/1/92-1/31/94.

Ocular hypotensive activity of rennin inhibitors. Carlbiotech, Copenhagen, Denmark, $42,010, 4/15/92-4/15/93.

Paracellular peptide transport across the rabbit intestine. PMA Advanced Predoctoral Fellowship in Pharmaceutics, $12,500, 1/1/93-12/30/93.

Oligonucleotide transport across cultured tracheal epithelium of the rabbit. PMA Undergraduate Research Fellowship, $5,000, 1/1/93-12/30/93.

Peptide absorption. Sandoz, $10,000, 8/1/93-7/31/94.

Protein transport across cultured respiratory epithelial monolayers. PMA Undergraduate Research Fellowship, $5,000, 1/1/94-12/31/94.

A tracheal cell culture model for standardization of antiviral drug activity. USP Fellowship, $15,000, 7/1/94-6/30/95.

A conjunctival cell culture model for drug toxicity screening. USP Fellowship, $15,000, 7/1/94-6/30/95.

A HPLC assay for vasopressin as an alternative to its bioassay and radioimmunoassay. USP Fellowship, $15,000, 7/1/94-6/30/95.

Peptide absorption. Sandoz, $12,000, 8/1/94-7/31/95.

Drug delivery research. Santen Pharmaceuticals, $50,000, 10/1/95-9/30/98

Nucleoside transport in airway epithelial cell culture monolayers. PhRMA Undergraduate Research Fellowship, $5,000, 2/1/95-1/31/96.

Conjunctival epithelial monolayer model for formulation efficacy and toxicity screening. Bausch and Lomb, $30,000, 9/1/94-8/31/95.

Site to site variation in intestinal peptide absorption. Astra Hässle, Mölndal, Sweden, $10,000, 1/1/96-12/31/96.

Monoclonal antibodies for the characterization of peptidomimetic drug transport. USP Fellowship, $15,000, 7/1/96-6/30/97.

Structure-function of the dipeptide transporter. PhRMA Undergraduate Research Fellowship, $5,000, 7/1/97 – 6/30/98.

Ocular drug transport mechanisms. Alcon Laboratories, $20,000, 12/1/97-11/30/98

Protein drug transport studies. Protein Delivery Inc., $8,000, 5/1/98-6/30/98

Ocular drug formulation and penetration studies. Orbon Corporation, $168,454, 6/1/98-12/31/99.

Transport and metabolism of topically applied purinergic analogs. Inspire Pharmaceuticals, $140,000, 9/1/99-8/31/2000.

Prodrugs for adenoviral eye infections. Biokeys (1 R42 EY12578-01A1), $57,445, 1/15/00-1/14/02

A cell culture model for screening topical ocular drug formulations. Alcon Research Ltd. $56,906, 10/1/00-12/31/02.

Modulation of drug absorption by excipients. Penwest Pharmaceuticals. $493,721, 2/1/02-1/31/05.

Toxicity and permeability using animal model. CDE, HK$217,876, 2007.

Toxicity study utilizing cell culture model on mecilizine and selected solvents. CDE, HK$180,000, 2007.

**CUHK Direct Grants**

Wong GSM, Chan YKT, Cheung MYB, Chui CMW, Lee, J, Wang H, Lee VHL, Leeder S, and Griffith S: The Impact home-vist, pharmacists-led medication management programme among single-living, hypertensive elderly with suboptimal compliance to multiple medications: a randomized controlled trial. Direct Grant 2011-12. CUHK.

**Lee VHL**, Lee VWY, Lee CP, Wing YK, Chan GMC and Yau W: Impact of an Interdisciplinary Approach on Symptom Management of Newly Diagnosed Depressive Patients. Direct Grant 2007-2008, CUHK.

**Other Research Grants**

Lyu MR, Wah B, **Lee VHL**, Lui S, Jie X, Cao J, Chao SC, Wong TT, King I: Intelligient Cyber-Life Fusion Technology Research and System Development. May 2011 – present

Lee VWY, Ewig C, **Lee VHL**: Health and Medication Safety Promotion Among the Home Alone Elders Through Telepharmacy and Outreach Services. Non-Research Health Promotion Projects and Seed Funding Scheme. Health Care and Promotion Fund. Apr 2011 – March 2012 (on application)

**Lee VHL:** Evaluation and Service Monitoring Mechanism of the Pilot Scheme on Visiting Pharmacist Services for Residential Care homes for the Elderly. Hong Kong Pharmaceutical Care Foundation. Jun 2010 – Jun 2012 [HK$93,600]

**Lee VHL**: Provision of Conducting a Systematic Review of Interaction of CHM with Drugs Acting upon the Central Nervous System. Hosptial Authority. Apr 2010 – Mar 2012 [HK$478,593]

Addressing the challenge of poverty, inequality and social disadvantage to healthcare provision in Hong Kong, 2009

**Lee VHL**: Chinese Medicine Research and Further Development. University Grants Committee. Apr 2008- Mar 2011 [HK$7,992,000]

**Lee VHL**: Provision of Clinical Research of Conducting a Human Study on Interaction of Oseltamivir and Chinese Medicine Formulae. Hospital Authority. Apr 2009 – Sep 10. [ HK$999,925]

Griffiths S, Lee PSN, Lee DTF, **Lee VHL,** Wong SYS, Tam GLF, Li DKT, Lo SV, Chan SSC, Wong TKS, Mercer S, Kung KKL: Addressing the Challenge of Poverty, Inequality and Social Disadvantage to Healthcare Provision in Hong Kong. RGC Strategic Public Policy Research 2008-2009.

Zuo JZ, Lau CBS, **Lee VHL**: A Bio-activity Guided in Vitro Pharmacokinetic Method to Improve the Quality Control of Chinese Medicines. Innovation and Technology Support Programme, ITF, Innovation & Technology Commission. Oct 2007- Sep 2008. [HK$942,034]

**PATENT:**

U.S. Patent 5,534,496: Method to enhance epithelial drug transport, July 9, 1996.

**PUBLICATIONS IN REFEREED JOURNALS:**

1. **Lee VHL** and Robinson JR: Mechanistic and quantitative evaluation of precorneal pilocarpine disposition in albino rabbits. J Pharm Sci 68: 673-684, 1979.

2. **Lee VHL** and Robinson JR: A preliminary examination of rabbit conjunctival mucins. J Pharm Sci 69:430-438, 1980.

3. **Lee VHL**, Hui HW and Robinson JR: Corneal metabolism of pilocarpine in pigmented rabbits. Invest Ophthalmol Vis Sci 9:210-213, 1980.

4. **Lee VHL**: Disposition of topically applied vitamin A in the albino rabbit eye. Int J Pharm 11:21-26, 1982.

5. **Lee VHL** and Robinson JR: Disposition of topically applied pilocarpine in the pigmented rabbit eye. Int J Pharm 11:155-165, 1982.

6. Lien EJ, Alhaider AA and **Lee VHL**: Phase partition: Its use in the prediction of membrane permeation and drug action in the eye. J Parent Sci Technol 36:86-93, 1982.

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11. Stratford Jr, RE, Redell MA, Yang DC and **Lee VHL**: Ocular distribution of liposome-encapsulated epinephrine and inulin in the albino rabbit. Curr Eye Res 2:377-386, 1983.

12. **Lee VHL**, Swarbrick J, Stratford Jr, RE and Morimoto KW: Disposition of topically applied sodium cromoglycate in the albino rabbit eye. J Pharm Pharmacol 35:445-450, 1983.

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298. **Lee VHL**: Corneal and conjunctival primary culture models for drug delivery and disposition. PharmSci Suppl 1: Symposium, 2000.

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300. Wu SK, Ann DK, and **Lee VHL**: Molecular cloning and tissue distribution of a novel form, an alternative splice variant (rbENT2A) of sodium-independent, nitrobenzylthioinosine-insensitive nucleoside transporters in rabbit trachea. PharmSci Suppl 1: 1214, 2000.

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303. Shen J and **Lee VHL**: Transcriptional expression of the organic cation transporter in the rabbit lung. PharmSci Suppl 1: 2115, 2000.

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317. Fandy TE, **Lee VHL**, Crandall ED, and Kim KJ: Transport characteristics of immunoglobulin G (IgG) across rat alveolar epithelial cell monolayers. Am J Respir Crit Care Med 163: A572, 2001.

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321. Wu SK, Ann DK, and **Lee VHL**: Molecular evidence for the existence of peptide transporters in rabbit cornea and conjunctiva. PharmSci Suppl 1: R5060, 2001.

322. Wu SK and **Lee VHL**: Functional regulation of basolateral nucleoside transport processes in rabbit tracheal epithelial cells. PharmSci Suppl 1: R5048, 2001.

323. Wu SK and **Lee VHL**: Gene regulation of equilibrative nucleoside transporters as key enzymes in homeostasis. PharmSci Suppl 1: R5050, 2001.

324. Wu SK, Ann DK, and **Lee VH**L: Functional characterization of a novel alternatively spliced variant (rbENT2A) of sodium-independent, nitrobenzylmercapto-purineribose (NBMPR)-insensitive nucleoside transporter (rbENT2) in rabbit trachea. PharmSci Suppl 1: R5051, 2001.

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331. Lin J-EC and **Lee VHL:** Predicting ocular drug absorption using a functional primary culture of rabbit corneal epithelial cell layers model. Invest. Ophthalmol Vis Sci Suppl 43:1675, 2002.

332. Kannan R, Gukasyan HJ, Kim KJ, Trousdale MD, and **Lee VHL:** Adenovirus 5 (Ad5) infection decreases glutathione (GSH) level and inhibits net GSH secretion in pigmented rabbit conjunctiva. Invest Ophthalmol Vis Sci Suppl 43:905, 2002.

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334. Gukasyan HJ, Kannan R, Kim KJ, Trousdale MD, and **Lee VHL**: Turnover and transport dynamics of glutathione in modulating ocular surface health. AAPSPharmSci Suppl 4: M1301, 2002.

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337. Zhang N and **Lee VHL**: Molecular and functional identification of OCTN2 in the rabbit conjuctival epithelium. Proceed Int'l Symp Control Rel Bioact Mater 29: 398, 2002.

338. Kim KJ, and **Lee VHL**: Transport of intact albumin across primary rat alveolar epithelial cell (AEC) monolayers. American Thorasic Society, Abstract 2979, 2003.

339. Uchiyama T, Fujita T, **Lee VHL**, Crandall ED, and Kim KJ: Cloning of amino acid transporter $B^{0,+}$ ($ATB^{0,+}$) in primary cultured rat pneumocytes. American Thorasic Society, Abstract 2978, 2003.

340. Zhang W, Gukasyan HJ, Trousdale MD, Neamati N, Kim KJ, Kannan R, and **Lee VHL**: cDNA microarray analysis of cytokine expression in an adenovirus type 5 infection model of primary cultured rabbit conjunctival epithelial cells. Invest Ophthalmol Vis Sci Suppl 44:B144, 2003.

341. Gukasyan HJ, Kannan R, Kim KJ, Farley RA, and **Lee VHL**: Mucosal glutathione restores $H_2O_2$-induced decrease in active ion transport across the pigmented rabbit conjunctiva. Invest Ophthalmol Vis Sci Suppl 44:B161, 2003.

342. Kannan R, Gukasyan HJ, **Lee VHL**, and Kim KJ: Interferon (IFNα/β/γ): Isozymes stimulate GSH efflux and γ-Glutamyltranspeptidase expression in primary cultured rabbit conjunctival epithelial cells. Invest Ophthalmol Vis Sci Suppl 44: B162, 2003.

343. Qaddoumi MG and **Lee VHL**: Binding and internalization of plant lectins in conjunctival epithelial cells: Potential for ocular drug delivery. Invest Ophthalmol Vis Sci Suppl 44: B496, 2003.

344. Kim KJ, Kannan R, Trousdale MD, Gukasyan HJ, and **Lee VHL**: Adenovirus type 5 infection induces nitric oxide (NO) in rabbit conjunctival epithelial cells (RCEC). FASEB J. 17: A1248, 2003.

345. Kulkarni AA, Haworth IS, and **Lee VHL**: Transmembrane segment 5 of the dipeptide transporter hPepT1 forms a part of the substrate translocation pathway. AAPSPharmSci Suppl 5. T2146, 2003

346. Patel LN, Uchiyama T, Kim KJ, Crandall ED and **Lee VHL**: Molecular evidence for expression of efflux pumps in primary cultured rat alveolar epithelial cells. AAPSPharmSci Suppl 5: T2165, 2003

347. Wo SK, Fok B, Tomlinson B, **Lee VHL**, Zuo Z: Investigation of glucuronide and sulfate metabolites formation after oral administration of paracetamol in heathy Hong Kong Chinese subjects. 10th International ISSX Meeting. 2013

348. Hu M, Fok B, Wo SK, Lee CHL, Zuo Z, Tomlinson B: Influence of Farnesoid X Receptor and Bile Acid Transporter Polymorphisms on the Pharmacokinetics of Ursodeoxycholic Acid. The 83th European Atherosclerosis Society Conference, Organized by European Atherosclerosis Society, 1pgs, Glasgow, United Kingdom, 2015

**INVITED CONFERENCE PRESENTATIONS:**

1. Potential routes of peptide absorption. Proteins and peptides as drugs symposium. Academy of Pharmaceutical Sciences, Miami Beach, Florida, November 1983.

2. Interaction of rabbit conjunctival mucin with tear protein and peptide analogs. International Tear Film Symposium, Lubbock, Texas, November 1984.

3. Recent advances in tear film constituents research. Tears and Contact Lens Symposium. Allergan Pharmaceuticals, Irvine, California, February 1985.

4. Anatomical, biochemical, and physiological constraints in topical ocular drug delivery. Ocular delivery of small and large molecular weight drugs symposium. Academy of Pharmaceutical Sciences, San Antonio, Texas, February 1985.

5. Enzymatic barrier in peptide delivery. Academy of Pharmaceutical Sciences Western Regional Meeting, Newport Beach, California, May 1985.

6. Strategies in peptide and protein delivery system design. Peptide and Protein Drug Delivery Symposium, Cetus Corporation, Emeryville, California, October 1985.

7. Impact of peptides and proteins in drug delivery research and development. Peptide and Protein Drug Delivery Symposium. Parenteral Drug Association, New York, New York, March 1986.

8. Enzymatic barrier to peptide and protein absorption and use of penetration enhances to modify absorption. NATO Advanced Research Workshop on Advanced Drug Delivery Systems for Peptides and Proteins, Copenhagen, Denmark, May 1986.

9. Ophthalmic route of peptide and protein delivery. Land O'Lakes Conference on Pharmaceutical Considerations in Peptide and Protein Delivery, Merrimac, Wisconsin, June 1986.

10. Transport and metabolism barriers to peptide and protein drug delivery. Symposium on Chronobiology and Chronopharmacology of Therapeutic Agents, Johnson and Johnson, East Brunswick, New Jersey, June 1986.

11. Enzymatic barriers to peptide delivery. Gordon Research Conference on Drug Carriers in Medicine and Biology, Plymouth State College, Plymouth, New Hampshire, July 1986.

12. Downstream developments in biotechnology. Symposium on Biotechnology in Drug Discovery, Therapeutics, and Pharmaceutical Research, American Association of Pharmaceutical Scientists Meeting, Washington, D.C., November 1986.

13. Balancing ocular against systemic absorption of topically applied drugs and peptides. Twentieth Annual Higuchi Research Seminar, Lake Ozark, Missouri, March 1987.

14. Implications of biotechnology in pharmacy practice. Symposium on Drugs, Drug Delivery Systems, and Diagnostics of the Future. Ohio State University, Columbus, Ohio, April 1987.

15. Practical issues in the development and assessment of topical ocular drug delivery systems. FDA Workshop on Targeted Delivery Systems, Boston, Massachusetts, June 1987.

16. Membrane transport and enzymatic barriers. Symposium on Nasal Delivery of Peptides and Proteins. American Association of Pharmaceutical Scientists, Boston, Massachusetts, June 1987.

17. Improved delivery of peptides and proteins by penetration enhances. Symposium on Formulation Development and Drug Delivery Systems for Pharmaceutical Proteins, American Chemical Society Fall Meeting, New Orleans, August 1987.

18. Routes of administration of protein drugs. Workshop on Formulation Development of Pharmaceutical Proteins and Drug Delivery Systems for Protein Drugs, American Chemical Society Fall Meeting, New Orleans, August 1987.

19. Membrane transport and metabolic barriers as related to proteins. Workshop on Formulation Development of Pharmaceutical Proteins and Drug Delivery Systems for Protein Drugs, American Chemical Society Fall Meeting, New Orleans, August 1987.

20. Pharmacokinetics and pharmacodynamics of protein drugs. Workshop on Formulation Development of Pharmaceutical Proteins and Drug Delivery Systems for Protein Drugs, American Chemical Society Fall Meeting, New Orleans, August 1987.

21. Peptidase activities in various absorptive mucosae. Symposium on Disposition and Delivery of Peptide Drugs, University of Leiden, Center for Bio-Pharmaceutical Sciences, Leiden, The Netherlands, September 1987.

22. Barrier properties of intestinal membranes. Symposium on Gastrointestinal Drug Absorption, Hassle, Gothenburg, Sweden, September 1987.

23. Gastrointestinal absorption of peptides. Symposium on Gastrointestinal Drug Absorption, Hassle, Gothenburg, Sweden, September 1987.

24. Prodrug and formulation approaches to maximize the ocular to systemic absorption ratio of timolol. Symposium on Ocular Drug Therapy, University of Turku, Department of Ophthalmology, Turku, Finland, September 1987.

25. Peptide and protein drug delivery systems. Symposium on Peptide and Protein Drugs: Formulation and Delivery Approaches, PharmTech Conference, East Rutherford, New Jersey, September 1987.

26. Transport and metabolic barriers. Symposium on Nasal Administration of Peptide and Protein Drugs, Pfeiffer, Princeton, October 1987.

27. Strategies to promote peptide and protein absorption from the gastrointestinal tract. Tenth Eino Nelson Memorial Conference (attendance by invitation only), Maui, Hawaii, November 1987.

28. Transport and metabolic barriers to peptide and protein absorption across mucosal surfaces. The Japanese-United States Congress of Pharmaceutical Sciences, Honolulu, Hawaii, December 1987.

29. Role of ketone reductase in the ocular metabolism of levobunolol. Twenty-first Annual Higuchi Research Seminar, Lake Ozark, Missouri, March 1988.

30. Optimization of ophthalmic drug delivery by polymers and prodrugs. Materials Research Society Meeting, Reno, Nevada, April 1988.

31. Proteolytic barriers to oral peptide and protein absorption. INSERM (National Institutes of Health and Nutrition), Paris, France, April 1988.

32. Mucosal peptide delivery: barriers and delivery systems. AAPS Eastern Regional Meeting, Atlantic City, New Jersey, June 1988.

33. Peptide and protein drug delivery systems. Symposium on Latest Developments in Drug Delivery Systems, Philadelphia, Pennsylvania, June 1988.

34. -Parenteral drug delivery. Fifteenth International Symposium on Controlled Release of Bioactive Materials, Basel, Switzerland, August 1988.

35. Proteolytic barriers to peptide and protein delivery. Conference on Peptide and Protein Drug Delivery, Monsanto, St. Louis, Missouri, August 1988.

36. Nasal delivery of peptides and proteins. Conference on Peptide and Protein Drug Delivery, Monsanto, St. Louis, Missouri, August 1988.

37. Parenteral delivery of peptides and proteins. Conference on Peptide and Protein Drug Delivery, Monsanto, St. Louis, Missouri, August 1988.

38. Chemical means to facilitate ocular drug penetration. Symposium on Mechanisms and Facilitation of Ocular Drug Penetration, Eighth International Congress of Eye Research, San Francisco, California, September 1988.

39. Organizer and Discussion Leader, Workshop on Methods to Study Ocular Drug Penetration, Eight International Congress of Eye Research, San Francisco, California, September 1988.

40. Use of prodrugs and penetration enhances to improve peptide absorption. Symposium on Formulation Strategies and Drug Delivery Systems for Pharmaceutical Proteins, 196th National American Chemical Society Meeting, Los Angeles, California, September 1988.

41. Routes of administration of protein drugs. Workshop on Formulation Development of Pharmaceutical Proteins and Drug Delivery Systems for Protein Drugs, American Chemical Society Fall Meeting, Los Angeles, California, September 1988.

42. Membrane transport and metabolic barriers as related to proteins. Workshop on Formulation Development of Pharmaceutical Proteins and Drug Delivery Systems for Protein Drugs, American Chemical Society Fall Meeting, Los Angeles, California, September 1988.

43. Pharmacokinetics and pharmacodynamics of protein drugs. Workshop on Formulation Development of Pharmaceutical Proteins and Drug Delivery Systems for Protein Drugs, American Chemical Society Fall Meeting, Los Angeles, California, September 1988.

44. Practical ocular drug delivery. Third International Conference on Drug Absorption, Edinburgh, Scotland, September 1988.

45. Systemic drug absorption: a complicating factor in ocular drug delivery and therapy. David Guttman Memorial Lecture, University of Kentucky, College of Pharmacy, Lexington, Kentucky, October 1988.

46. Improving the safety of eye medications by prodrugs. Symposium on New Technologies and Concepts for Reducing Drug Toxicities. Association of Government Toxicologists, Rockville, Maryland, October 1988.

47. Biological processing of peptides for drug delivery purposes. Conference on Fundamentals of Biotechnology, Parenteral Drug Association, East Rutherford, New Jersey, November 1988.

48. Bioadhesives and other advanced materials for ophthalmic drug delivery. Conference on Ophthalmic Drug Formulation Technologies, High Technology Associates, Pittsburgh, Pennsylvania, December 1988.

49. G.I. variables that affect dosage form performance. Symposium on In Vitro and In Vivo Testing and Correlation for Oral Controlled/Modified Release Dosage Forms, U.S. Food and Drug Administration/American Association of Pharmaceutical Scientists/Federation Internationale Pharmaceutique/United States Pharmacopeial Convention, Washington, D.C., December 1988.

50. Peptidase activities in absorptive mucosae. Symposium on Peptide Drug Delivery, London, United Kingdom, December 1988.

51. Peptide and protein drug delivery technology. Conference on Peptide and Protein Drug Delivery, 3M, St. Paul, Minnesota, February 1989.

52. Mechanisms and facilitation of corneal drug penetration. Fourth International Symposium on Recent Advances in Drug Delivery Systems, Salt Lake City, Utah, February 1989.

53. Drug delivery of growth factors into the eye. Visions in Wound Healing Symposium, Tarpon Springs, Florida, March 1989.

54. Membrane transport and metabolic barriers as related to proteins. Workshop on Formulation Development of Pharmaceutical Proteins and Drug Delivery Systems for Protein Drugs, American Chemical Society, Chicago, Illinois, May 1989.

55. Pharmacokinetics and pharmacodynamics of protein drugs. Workshop on Formulation Development of Pharmaceutical Proteins and Drug Delivery Systems for Protein Drugs, American Chemical Society, Chicago, Illinois, May 1989.

56. Nasal delivery technologies. The 1989 NDA Pipeline Conference, Washington D.C., May 1989.

57. Delivery of peptides and proteins. American Association of Pharmaceutical Scientists Midwest Regional Meeting, Chicago, Illinois, May 1989.

58. Drug targeting in the eye. Advanced Methods of Pharmacokinetics and Pharmacodynamic Systems Analysis, Marina del Rey, California, May 1989.

59. Problems and solutions in peptide and protein drug delivery. Peptides, Peptoids and Proteins. The Fifth Annual Pittsburgh Pharmacodynamic Conference, Pittsburgh, Pennsylvania, May 1989.

60. Alternative routes of mucosal delivery of growth factors, hormones and other products. Drug Delivery of Proteins, Boston, Massachusetts, June 1989.

61. Peptidase inhibitors and penetration enhances as approaches to modify peptide absorption. Second International Symposium on Disposition and Delivery of Peptide Drugs, Leiden University, Leiden, The Netherlands, September 1989.

62. Optimization of ocular drug delivery through manipulation of drug input rate. Symposium on Drug Delivery and Pharmacologic Effects, American College of Clinical Pharmacology, Baltimore, Maryland, October 1989.

63. Problems of drug delivery in modifying ocular wound healing - a pharmacologist's view. Symposium on Ocular Wound Healing and its Pharmacologic Manipulation,

American Academy of Ophthalmology Annual Meeting, New Orleans, Louisiana, November 1989.

64. Anatomical, physiological, and pharmacokinetics considerations in non-oral routes of drug delivery. Arden House Conference, American Association of Pharmaceutical Scientists, Harriman, New York, January 1990.

65. Nasal peptide degradation. Conference on Drug Delivery and the Respiratory Tract, Davos, Switzerland, March 1990.

66. New directions in the optimization of ocular drug delivery. International Symposium on Ocular Pharmacology, National Taiwan University, Taiwan, March 1990.

67. Bioavailability issues as they relate to proteins and alternative routes of administration of peptide and protein drugs. Workshop on Formulation Development of Therapeutic Proteins and Drug Delivery Systems for Peptide and Protein Drugs. American Chemical Society Annual Meeting, Boston, Massachusetts, April 1990.

68. Membrane transport and metabolic barriers as related to peptides and proteins. Workshop on Formulation Development of Therapeutic Proteins and Drug Delivery Systems for Peptide and Protein Drugs. American Chemical Society Annual Meeting, Boston, Massachusetts, April 1990.

69. Enzymatic and penetration barriers — an update. Conference on Nasal and Pulmonary Delivery of Peptide and Protein Drugs, Pfeiffer Metered Dosage Systems, Princeton, New Jersey, May 1990.

70. Trends in peptide and protein drug delivery. Biopharm Conference, San Francisco, California, June 1990.

71. Pharmaceutical considerations in the development and formulation of peptides and proteins. Symposium on Peptides, Proteins, and Drug Therapy, American Association of Colleges of Pharmacy Annual Meeting, Salt Lake City, Utah, July 1990.

72. Overview of drug formulations. Drug Formulations Symposium, 9th International Congress of Eye Research, Helsinki, Finland, July 1990.

73. In vitro models and correlations with in vivo data. Symposium on Models for Ocular Drug Studies, 9th International Congress of Eye Research, Helsinki, Finland, July 1990.

74. Ocular drug delivery systems are essential to the successful treatment of glaucoma and other eye diseases. Keynote Speaker, International Symposium on Ocular Pharmacology and Therapeutics, New Delhi, India, August 1990.

75. Fundamentals of design and formulation of controlled drug delivery systems. Fifth International Pharmaceutical Technology Symposium, Ankara, Turkey, September 1990.

76. Oral delivery of peptide and protein drugs: What are the barriers? 18th International Symposium on Controlled Release of Bioactive Materials, Amsterdam, The Netherlands, July 1991.

77. Biochemical and biophysical approaches to improve mucosal peptide penetration. Symposium on Peptides, Peptide Mimetics and Bioavailability. American Chemical Society Annual Meeting, New York, New York, August 1991.

78. Ocular drug delivery. Third International Conference on Drug Delivery and Targeting. IBC Ltd., London, December 1991.

79. Physical, chemical, and immunological properties. Conference on Selected Delivery of Therapeutic Polypeptides, Proteins, and Oligonucleotides. IBC Ltd., Annecy, France, March 1992.

80. Administration routes and systems. 2. Oral. Conference on Selected Delivery of Therapeutic Polypeptides, Proteins, and Oligonucleotides. IBC Ltd., Annecy, France, March 1992.

81. Paracellular transport as a means to promote intestinal penetration of labile peptides. Twenty-Fifth Annual Higuchi Research Seminar, Lake Ozark, March 1992.

82. Bioavailability issues as they relate to proteins and alternative routes of administration of peptide and protein drugs. Workshop on Formulation Development of Therapeutic Proteins and Drug Delivery Systems for Peptide and Protein Drugs. American Chemical Society, San Francisco, California, April 1992.

83. Membrane transport and metabolic barriers as related to peptide and protein drugs. Workshop on Formulation Development of Therapeutic Proteins and Drug Delivery Systems for Peptide and Protein Drugs. American Chemical Society, San Francisco, California, April 1992.

84. Nasal and pulmonary delivery of peptide and protein drugs. Conference on Nasal and Pulmonary Delivery of Peptide and Protein Drugs, Pfeiffer Metered Dosage Systems, Danueschingen, Germany, April 1992.

85. New advances in peptide and protein drug delivery. Conference on Drug Delivery of Biopharmaceuticals III, Technology Management Group, San Diego, California, April 1992.

86. Novel strategies to enhance mucosal peptide and protein penetration. Conference on Drug Delivery and Therapeutics in the Twenty-First Century, University of Maryland at Baltimore, Baltimore, Maryland, May 1992.

87. Applications of liposomes in ocular drug delivery. First International Symposium on Liposomes in Ophthalmology and Dermatology. Brussels, Belgium, May 1992.

88. Oral route of peptide and protein drug delivery. BioPharm Conference, San Francisco, California, June 1992.

89. Chrontherapy--timing and drug dosing. Drug Therapy and Pharmacy Practice for the 90's, Maui, Hawaii, August 1992.

90. Drug targeting to the brain. Drug Therapy and Pharmacy Practice for the 90's, Maui, Hawaii, August 1992.

91. Self-regulating drug delivery systems. Drug Therapy and Pharmacy Practice for the 90's, Maui, Hawaii, August 1992.

92. Transdermal drug delivery systems. Drug Therapy and Pharmacy Practice for the 90's, Maui, Hawaii, August 1992.

93. Improving drug safety in the eye. Drug Therapy and Pharmacy Practice for the 90's, Maui, Hawaii, August 1992.

94. Oral delivery of insulin and other polypeptides. Drug Therapy and Pharmacy Practice for the 90's, Kaui, Hawaii, August 1992.

95. Nasal drug delivery. Drug Therapy and Pharmacy Practice for the 90's, Kaui, Hawaii, August 1992.

96. Peptide and protein drug absorption: biochemical and biophysical aspects. Sixth International Pharmaceutical Technology Symposi-um, Ankara, Turkey, September 1992.

97. Modelling of ocular pharmacokinetics processes. Tenth Interna-tional Congress of Eye Research, Stresa, Italy, September 1992.

98. Chronopharmacokinetic considerations in the design of ocular drug delivery systems. Tenth International Congress of Eye Research, Stresa, Italy, September 1992.

99. Major issues in peptide and protein drug delivery. Conference on Problemes Lies Aux Medicaments Peptidiques, Zermatt, Switzerland, September 1992.

100. Proteolytic barriers and protease inhibitors. Conference on Problemes Lies Aux Medicaments Peptidiques, Zermatt, Switzerland, September 1992.

101. Pharmacokinetics. Conference on Problemes Lies Aux Medicaments Peptidiques, Zermatt, Switzerland, September 1992.

102. Parenteral routes. Conference on Problemes Lies Aux Medicaments Peptidiques, Zermatt, Switzerland, September 1992.

103. Nasal route. Conference on Problemes Lies Aux Medicaments Pepti-diques, Zermatt, Switzerland, September 1992.

104. Pulmonary route. Conference on Problemes Lies Aux Medicaments Peptidiques, Zermatt, Switzerland, September 1992.

105. Delivery of peptides and proteins. Sixth Annual Symposium of the Johnson and Johnson Drug Delivery Subcommittee, New Brunswick, New Jersey, October 1992.

106. Ocular drug delivery. Seventh Annual Meeting of the American Pharmaceutical Scientists Meeting, San Antonio, Texas, November 1992.

107. How to become an outstanding academic pharmaceutical scientist? Seventh Annual Meeting of the American Pharmaceutical Scientists Meeting, San Antonio, Texas, November 1992.

108. Current problem areas in drug delivery. Twelfth Eino Nelson Memorial Conference, Palm Springs, California, December 1992.

109. Barriers to oral absorption of peptide and protein drugs. Conference on Advances in Delivery of Therapeutic and Diagnostic Agents. Sydney, Australia, December 1992.

110. Paracellular peptide transport in the rabbit intestine. PMA Foundation Annual Awardee Meeting, Washington DC, February 1993.

111. Paracellular peptide transport: an opportunity for oral peptide absorption. Sixth International Symposium on Recent Advances in Drug Delivery Systems, Salt Lake City, Utah, February 1993.

112. Active ion transport in the rabbit conjunctiva: mechanisms and modulation. West Coast Salt and Water Club, Morro Bay, California, February 1993.

113. Targeted and self-regulating delivery as means to reduce drug toxicity. Topics in Clinical Toxicology, American Pharmaceutical Association 140th Annual Meeting, Dallas, Texas, March 1993.

114. Pz-peptide: A polar, labile peptide with good mucosal transport characteristics. 1993 Capsugel Symposium, Tokyo, Japan, May 1993.

115. Peptide and protein drug delivery: Which route? Third TDS Technology Symposium, Nichiban Cygnus, Tokyo, Japan, May 1993.

116. Mucosal peptide and protein drug delivery: A decade of progress. Second DDS Conference, University of Shizuoka, Shizuoka, Japan, June 1993.

117. In vitro approaches to assess drug delivery. Symposium on In Vitro Models for Drug Evaluation and Testing, Congress on Cell and Tissue Culture, San Diego, CA, June 1993.

118. Peptide and protein drug delivery systems. 1993 AFPC Pharmaceutical Biotechnology Conference, Vancouver, British Columbia, August 1993.

119. Means to improve ocular drug penetration. Ocular Pharmacology Symposium, Novi, Michigan, August 1993.

120. Peptide and protein penetration across the conjunctiva. Ocular Pharmacology Symposium, Novi, Michigan, August 1993.

121. Ocular peptide delivery. Symposium on Methods to Overcome Biological Barriers in Drug Delivery, Kuopio, Finland, August 1993.

122. Colon as an absorption site: possibilities for colon specific systems. Symposium on Methods to Overcome Biological Barriers in Drug Delivery, Kuopio, Finland, August 1993.

123. Key to success of peptides and proteins as pharmaceuticals. Symposium on Delivery of Protein Drugs: The Next 10 Years, Kyoto, Japan, September 1993.

124. Peptide and protein drug delivery: promises and realities. First European Pharmaceutical Technology Conference, Düsseldorf, Germany, September 1993.

125. Bioavailability issues as they relate to proteins as therapeutics and alternative routes of administration of peptide and protein drugs. ACS Workshop on Formulation Development of Therapeutic Proteins and Drug Delivery Systems for Peptide and Protein Drugs, Chicago, Illinois, September 1993.

126. Membrane transport and metabolic barriers related to delivery of peptides and proteins. ACS Workshop on Formulation Development of Therapeutic Proteins and Drug Delivery Systems for Peptide and Protein Drugs, Chicago, Illinois, September 1993.

127. Oral route of peptide and protein drug delivery. Symposium on Pharmacokinetics of orally given proteins (enzymes), Münich, Germany, September 1993.

128. Recent advances in drug delivery systems. Keynote Lecture. Fourth International Kyoto Symposium on Biomedical Engineering, Kyoto, Japan, October 1993.

129. Routes for administration and absorption of peptides. Keynote Lecture. Swedish Annual Pharmaceutical Congress, Stockholm, Sweden, November 1993.

130. Microparticles for drug and peptide delivery. Scheele Symposium, Swedish Academy of Pharmaceutical Sciences, Uppsala, Sweden, November 1993.

131. Forming a strategic alliance with ion transport for facilitation of peptide transport. Third European Symposium on Controlled Drug Delivery, Noordwijk ann Zee, The Netherlands, April 1994.

132. Pre-corneal clearance and corneal transport: Factors in ocular drug delivery system design. Sixth Symposium on Materials Science and Chemistry, University of Missouri-St. Louis and LSU Eye Center, New Orleans, Louisiana, April 1994.

133. Bioavailability issues as they relate to proteins as therapeutics and alternative routes of administration of peptide and protein drugs. ACS Workshop on Formulation Development of Therapeutic Proteins and Drug Delivery Systems for Peptide and Protein Drugs, Chicago, Illinois, May 1994.

134. Membrane transport and metabolic barriers related to delivery of peptides and proteins. ACS Workshop on Formulation Development of Therapeutic Proteins and Drug Delivery Systems for Peptide and Protein Drugs, Chicago, Illinois, May 1994.

135. Respiratory and oral routes of peptide and protein drug delivery. Biopharm Conference, San Francisco, California, June 1994.

136. Peptide and protein drug delivery: which route? Conference on Commercializing Peptide and Peptidomimetic Drugs, International Business Communications, Coronado, California, July 1994.

137. Bioavailability issues as they related to proteins as therapeutics and alternative routes of administration of peptide and protein drugs. ACS Workshop on Formulation Development of Therapeutic Proteins and Drug Delivery Systems for Peptide and Protein Drugs, Chicago, Illinois, October 1994.

138. Membrane transport and metabolic barriers related to delivery of peptides and proteins. ACS Workshop on Formulation Development of Therapeutic Proteins and Drug Delivery Systems for Peptide and Protein Drugs, Chicago, Illinois, October 1994.

139. Overcoming the barriers of oral delivery of peptide and protein drugs. Conference on the Cutting Edge of Drug Delivery, Strategic Research Institute, San Francisco, California, October 1994.

140. Trends and accomplishments in mucosal delivery of peptide and protein drugs. Symposium on Non-parenteral Delivery of Peptides and Proteins, AAPS Ninth Annual Meeting and Exposition, San Diego, California, November 1994.

141. Clinical aspect. Seventh International Symposium on Recent Advances in Drug Delivery Systems, Salt Lake City, Utah, February 1995.

142. Oral absorption of Pz-peptide, a paracellularly transported drug. Twenty-eighth Annual Higuchi Research Seminar, Lake Ozark, Missouri, March 1995.

143. Nasal drug delivery: A decade of progress. Conference on Nasal and Pulmonary Drug Delivery, Münich, Germany, March 1995.

144. Overcoming the barriers of oral delivery of peptide and protein drugs. Conference on Drug Delivery Systems, Strategic Research Institute, Arlington, Virginia, April 1995.

145. Nasal aerosol delivery. Workshop on Pharmaceutical Aerosols Technology, Institute of Pharmaceutical Sciences, East Brunswick, New Jersey, April 1995.

146. Pulmonary aerosol delivery. Workshop on Pharmaceutical Aerosols Technology, Institute of Pharmaceutical Sciences, East Brunswick, New Jersey, April 1995.

147. Bioavailability issues as they related to proteins as therapeutics and alternative routes of administration of peptide and protein drugs. ACS Workshop on Formulation Development of Therapeutic Proteins and Drug Delivery Systems for Peptide and Protein Drugs, Chicago, Illinois, May 1995.

148. Membrane transport and metabolic barriers related to delivery of peptides and proteins. ACS Workshop on Formulation Development of Therapeutic Proteins and Drug Delivery Systems for Peptide and Protein Drugs, Chicago, Illinois, May 1995.

149. Strategies to overcome epithelial membrane barriers. Fifth International Symposium on Delivery and Targeting of Peptides, Proteins, and Genes. Leiden/Amsterdam Center for Drug Research, Leiden, The Netherlands, May 1995.

150. Delivery strategies in peptide drug therapeutics. Fourteenth American Peptide Symposium, American Peptide Society, Columbus, Ohio, June 1995.

151. Oral route of peptide and protein drug delivery. Drug Information Association Annual Meeting, Orlando, Florida, June 1995.

152. Peptide and protein drug therapeutics: Fantasy or reality? German-American Frontiers of Science Symposium, U.S. National Academy of Sciences and Alexander von Humboldt Stiftung Foundation, Dresden, Germany, June 1995.

153. Paracellular transport of peptides from the gastrointestinal tract. CRS Ireland Special Symposium on Current Topics in Peptide Delivery, Dublin, Ireland, September 1995.

154. Oral route of peptide and protein drug delivery. Conference on Effective Delivery of Proteins and Peptides, IBC USA Conferences, San Diego, California, September 1995.

155. Oral delivery systems. Conference on Formulations and Drug Delivery, Americal Chemical Society, Boston, Massachusetts, October 1995.

156. Current developments on drug delivery in ophthalmology. Ophthalmic Drug Delivery Symposium, Alcon, Forth Worth, Texas, October 1995.

157. Scientific writing. 143rd Annual Meeting and Exposition of the American Pharmaceutical Association, Nashville, Tennessee, March 1996.

158. Promising developments in oral peptide and protein drug delivery. AAPS Western Regional Meeting, San Francisco, California, March 1996.

159. Pharmaceutical sciences at a crossroads. **Keynote address**. 116th Annual Meeting of the Pharmaceutical Society of Japan, Kanazawa, Japan, March 1996.

160. Liposomes for delivery of biotechnology products. Seventh Annual Biopharm Conference, Boston, Massachusetts, May 1996.

161. Administration routes and drug targeting. Symposium on Biotechnology: From the Gene to Finished Product, Swedish Academy of Pharmaceutical Sciences, Stockholm, Sweden, May 1996.

162. Oral absorption of peptides and proteins. AAPS Midwestern Regional Meeting, Chicago, Illinois, May 1996.

163. Ocular drug delivery. CRS 23rd Annual Meeting, Kyoto, Japan, July 1996.

164. Nasal and pulmonary delivery of peptide and protein drugs. Fine Particle Society, Chicago, Illinois, July 1996.

165. Nasal, buccal and oral routes. Workshop on Protein/Peptide Controlled Release Delivery, Controlled Release Society, Baltimore, Maryland, August 1996.

166. Ocular delivery of peptide, protein and oligonucleotide drugs. Third Jerusalem Conference on Pharmaceutical Sciences and Clinical Pharmacology, Jerusalem, Israel, September 1996.

167. Excipients to enhance stability and oral absorption of peptides. Third European Congress of Pharmaceutical Sciences, Edinburgh, United Kingdom, September 1996.

168. Peptide and protein transport in the rabbit conjunctiva. XII International Congress of Eye Research, Yokohama, Japan, September 1996.

169. Ion transport processes in the pigmented rabbit conjunctiva. XII International Congress of Eye Research, Yokohama, Japan, September 1996.

170. Bioavailability issues as they related to proteins as therapeutics and alternative routes of administration of peptide and protein drugs. ACS Workshop on Formulation Development of Therapeutic Proteins and Drug Delivery Systems for Peptide and Protein Drugs, Chicago, Illinois, October 1996.

171. Membrane transport and metabolic barriers related to delivery of peptides and proteins. ACS Workshop on Formulation Development of Therapeutic Proteins and Drug Delivery Systems for Peptide and Protein Drugs, Chicago, Illinois, October 1996.

172. Opportunities in peptide and protein drug delivery. Conference on Drug Delivery Systems, Washington DC, October 1996.

173. Structure-function of the intestinal dipeptide transporter PepT1. Thirtieth Annual Higuchi Research Seminar, Lake Ozark, Missouri, March 1997.

174. Bioavailability issues as they related to proteins as therapeutics and alternative routes of administration of peptide and protein drugs. ACS Workshop on Formulation Development of Therapeutic Proteins and Drug Delivery Systems for Peptide and Protein Drugs, Chicago, Illinois, May 1997.

175. Membrane transport and metabolic barriers related to delivery of peptides and proteins. ACS Workshop on Formulation Development of Therapeutic Proteins and Drug Delivery Systems for Peptide and Protein Drugs, Chicago, Illinois, May 1997.

176. Challenges in peptide and protein drug delivery. Conference on Maximizing Product Value and Extending Product Life Through Drug Delivery Systems. Institute for International Research, Philadelphia, Pennsylvania, May 1997.

177. The conjunctiva as a gateway to retinal drug access. Conference on the Impact of Pharmacokinetics in Modern Drug Development. UCSF, San Francisco, California, May 1997.

178. Unraveling the mysteries in oral and mucosal peptide drug delivery. ***Keynote address.*** Conference on the Very Latest Innovations in Oral and Mucosal Delivery Systems for Macromolecules. European Centre for Pharmaceutical Information, London, United Kingdom, May 1997.

179. Biopharmaceutics of oral, pulmonary, and ocular peptide and protein drug administration. The Alfred Benzon Symposium #43. Peptide and Protein Drug Delivery, Copenhagen, Denmark, August 1997.

180. New drug developments. FIP World Congress, Vancouver, Canada, September 1997.

181. Biological considerations in modern drug delivery. Conference on Cell Culture and Ex-Vivo Models for the Development and Quality Assessment of Pharmaceutical Formulations, Universität des Saarlandes, Saarbrücken, Germany, September 1997.

182. Mucosal routes of drug delivery. Workshop on Recent Advances in Drug Delivery Sciences and Technology, Controlled Release Society-Chinese Pharmaceutical Association, Beijing, China, September 1997.

183. Challenges in oral peptide delivery systems. Symposium on Recent Advances in Drug Delivery and Biomaterials, Controlled Release Society-Korean Society of Pharmaceutics, Seoul, Korea, September 1997.

184. Drug transporters as platforms for respiratory drug delivery. Conference on Nasal and Pulmonary Drug Delivery, Pfeiffer-Astra, Stockholm, Sweden, September 1997.

185. Structure, function, and molecular modeling approaches to the study of the intestinal dipeptide transporter PepT1. Conference on Formulations and Drug Delivery II, American Chemical Society, La Jolla, California, October 1997.

186. Promising developments in peptide and protein drug delivery. Conference on The Very Latest Technologies for Delivery of Proteins, Peptides, and Genes, London, Great Britain, December 1997.

187. Nurturing Nature's transport mechanisms for optimizing peptide absorption. 2nd Annual Drug Delivery Systems Conference, Institute for International Research, San Francisco, California, February 1998.

188. Epithelial transporter proteins. Conference on Biological Barriers: A Challenge to Drug Delivery Research, CRS Local Chapter Germany, Saarbrücken, Germany, March 1998.

189. Biological considerations in ophthalmic drug delivery. 24th Annual Meeting of the Society for Biomaterials, San Diego, California, April 1998.

190. Structure-function of the intestinal dipeptide transporter. AAPS Western Regional Meeting, South San Francisco, California, April 1998.

191. Challenges in the development of drug delivery systems for proteins. Workshop on Formulation Development and Drug Delivery Systems for Protein and Peptide Drug Products, American Chemical Society, Chicago, Illinois, May 1998.

192. Bioavailability issues and alternate routes of delivery of proteins and peptide drug products. Workshop on Formulation Development and Drug Delivery Systems for Protein and Peptide Drug Products, American Chemical Society, Chicago, Illinois, May 1998.

193. Working with Mother Nature to improve drug absorption. AAPS Southern California Discussion Group, Costa Mesa, California, June 1998.

194. Biopharmaceutics of transmucosal peptide and protein drug administration. Conference on Challenges for Drug Delivery and Pharmaceutical Technology, Tokyo, Japan, June 1998.

195. The oral route: A wealth of drug delivery opportunities. Minisymposium on Innovative Aspects of Controlled Drug Release, CRS Annual Meeting, Las Vegas, Nevada, June 1998.

196. Drug transporters in the conjunctiva as platforms for topical drug delivery to the posterior segment. Symposium on Optimization of Drug Delivery, XIII International Congress of Eye Research, Paris, France, July 26-31, 1998.

197. Peptide delivery-pitfalls and possibilites. 135th British Pharmaceutical Conference, Eastbourne, United Kingdom, September 1998.

198. Challenges in oral peptide delivery systems. WorldPharm 98, Phildelphia, Pennsylvania, September 1998.

199. Nurturing Nature's transport mechanisms for optimizing peptide absorption. Conference on Merging Protein/Peptide Pharmaceuticals & Drug Delivery Systems, Washington DC, October 1998.

200. The dawning of a new era in drug absorption: The pivotal role of drug transporters. National Defense Medical Center Pharmaceutics Symposium, Taipei, Taiwan, November 1998.

201. Current challenges in protein and peptide drug delivery systems. Conference on Protein and Peptide Drug Delivery Technologies, San Diego, California, December 1998.

202. Means to enhance peptide and protein absorption. Conference on Drug Delivery Systems, San Francisco, California, February 1999.

203. Challenges in ocular drug delivery. Ninth International Symposium on Recent Advances in Drug Delivery Systems, Salt Lake City, Utah, February 1999.

204. Modulation of dipeptide transport activity in the conjunctiva. Thirty-second Annual Higuchi Research Seminar, Lake Ozark, Missouri, March 1999.

205. Towards drug delivery leadership in the new millennium. 3M Drug Delivery Systems, St. Paul, Minnesota, April 1999.

206. Towards drug delivery leadership in the new millenium. 3M Drug Delivery Systems, Birmingham, United Kingdom, May 1999.

207. Challenges in bioavailability and bioequivalence determination. Workshop on Regulatory Issues Related to Drug Products for Oral Inhalation and Nasal Delivery, AAPS/FDA/USP, Washington DC, June 1999.

208. Nasal drug delivery. Workshop on Pharmaceutical Aerosol Technology, Institute of Pharmaceutical Sciences, East Brunswick, New Jersey, June 1999.

209. Pulmonary drug delivery. Workshop on Pharmaceutical Aerosol Technology, Institute of Pharmaceutical Sciences, East Brunswick, New Jersey, June 1999.

210. Opportunities in respiratory route of drug delivery. Frontiers in Drug Discovery and Development Symposium, R.W. Johnson, Doylestown, Pennsylvania, July 1999.

211. Vaccine delivery route. Conference on Vaccines and Immunisation into the Next Millennium, Manchester, United Kingdom, September 1999.

212. Latest developments in nasal and pulmonary drug delivery. Nasal and Pulmonary Drug Delivery Conference, Rome, Italy, September 1999.

213. Mucosal drug transporters. 4th Jerusalem Conference on Pharmaceutical Sciences and Clinical Pharmacology, Jerusalem, Israel, October 1999.

214. -Routes of administration of protein drugs. Workshop on Formulation Development of Pharmaceutical Proteins and Drug Delivery Systems for Protein Drugs, American Chemical Society, Chicago, Illinois, October 1999.

215. -Membrane transport and metabolic barriers as related to proteins. Workshop on Formulation Development of Pharmaceutical Proteins and Drug Delivery Systems for Protein Drugs, American Chemical Society, Chicago, Illinois, October 1999.

216. -Pharmacokinetics and pharmacodynamics of protein drugs. Workshop on Formulation Development of Pharmaceutical Proteins and Drug Delivery Systems for Protein Drugs, American Chemical Society, Chicago, Illinois, October 1999.

217. Biological basis of peptide and protein drug delivery. Keynote address. Global Chinese Symposium on Biomaterials and Controlled Release, Taipei, Taiwan, October 1999.

218. Challenges in ocular drug delivery. Dutch Retina Foundation Meeting, Utrecht, The Netherlands, January 2000.

219. Biological considerations in controlled drug delivery. 21st Annual Eino Nelson Memorial Conference, St. Petersburg, Florida, January 2000.

220. Molecular biology, drug design, and drug delivery: Bringing it all together. Conference on Log P2000, Lausanne, Switzerland, March 2000.

221. Nasal drug delivery. Workshop on Pharmaceutical Aerosol Technology, Institute of Pharmaceutical Sciences, Amsterdam, The Netherlands, April 2000.

222. Pulmonary drug delivery. Workshop on Pharmaceutical Aerosol Technology, Institute of Pharmaceutical Sciences, Amsterdam, The Netherlands, April 2000.

223. Pharmaceutical development at a crossroads. Conference on Interaction Between Compound and Product Design, Swedish Academy of Pharmaceutical Sciences, Åre, Sweden, April 2000.

224. Peptide transport across membranes. Millennial World Congress in Pharmaceutical Sciences, San Francisco, California, April 2000.

225. Mucosal drug delivery. Conference on Mucosal Injuries in Cancer Patients: New Strategies for Research and Treatment, Bethesda, Maryland, May 2000.

226. Membrane drug transporters. Thirty-fourth Journées Galéniques, Gattefossé, Saint-Rémy de Provence, France, June 2000.

227. Modulation of drug transporters. International Symposium on Biomaterials and Drug Delivery Systems. Cheju, Island, Korea, August 2000.

228. Biological considerations in modern drug delivery. **Plenary Lecture.** Associazione Docenti e Ricercatori Italiani di Technologie e Legislazione Farmaceutiche, Catania, Italy, October 2000.

229. Mucosal delivery of peptide and protein drugs: Barriers. Workshop on Formulation Development of Pharmaceutical Proteins and Drug Delivery Systems for Protein Drugs, American Chemical Society, Chicago, Illinois, October 2000.

230. Mucosal delivery of peptide and protein drugs: Strategies. Workshop on Formulation Development of Pharmaceutical Proteins and Drug Delivery Systems for Protein Drugs, American Chemical Society, Chicago, Illinois, October 2000.

231. Drug transport processes in the conjunctiva. Symposium on "The Conjunctiva: Mucins with a Touch of Ions. A Recipe for the Millenium." International Congress of Eye Research ICER XIV, Santa Fe, New Mexico, October 2000.

232. Drug transporters along the GI tract: Implications for MR products. International Symposium on Bioavailability and Bioequivalence: Scientific and Regulatory Issues for the International Pharmaceutical Market, Bangkok, Thailand, November 2000.

233. Drug transporters along the GI tract: Implications for MR products. International Symposium on Bioavailability and Bioequivalence: Scientific and Regulatory Issues for the International Pharmaceutical Market, Taipei, Taiwan, December 2000.

234. Drug transporters along the GI tract: Implications for MR products. International Symposium on Bioavailability and Bioequivalence: Scientific and Regulatory Issues for the International Pharmaceutical Market, Seoul, Korea, December 2000.

235. Pharmaceutical sciences in 2010. Thirty-third Annual Pharmaceutics Graduate Student Research Meeting, Madison Wisconsin, June 2001.

236. Epithelial drug transporters: structure-function, sorting, and modulation. Symposium on Tissue Barriers. Controlled Release Society Annual Meeting, San Diego, California, August 2001.

237. Pharamacogenomics of drug transporters: The next drugdelivery challenge. Thirty-fifth Journées Galéniques, Gattefossé, Saint-Rémy de Provence, France, June 2001.

238. The road less traveled. AAPS Meeting, Salt Lake City, Utah, October 2003

239. Drug delivery targets: On the verge of a revolution in the paradigm of drug design. Plenary lecture, University of Michigan, Ann Arbor, Michigan, March 2004.

240. Drug delivery approaches: State-of-the-art and unmet needs. The First International Symposium on Translational Clinical Research for Inherited and Orphan Retinal Diseases. National Neurovision Research Institute, Washington DC, November 2004.

241. Golden era in therapeutics: Convergence of bio-, nano-, and information technology. Pharmaceutical Sciences Fair and Exhibition, Nice, France, June 2005.

242. Formulation approach to alter drug bioavailability: risk vs. benefit. Controlled Release Society 32nd Annual Meeting, Miami Beach, Florida, June 2005.

243. Targeting membrane transporters for facilitating epithelial drug transport. 2005 AAPS National Biotechnology Conference, San Francisco, California, June 2005.

244. The pharmaceutical enterprise. On the verge of a revolution ? Plenary Lecture, 5th World Meeting on Pharmaceutics, Biopharmaceutics and Pharmaceutical Technology, Geneve, Switzerland, April 2006.

245. The pharmaceutical enterprise : On the verge of a revolution ? Nano Meets Bio Nanotechnology Symposium, Frankfurt, June 2007

246. Topical ocular drug delivery : There has to be a better way. LTS Academy Conference, Cologne, October 2007.

247. A system approach to targeted drug delivery : The eye as a case study. The 3rd International Pharmaceutical Symposium, Shanghai, October 2007.

248. Dosage forms of the 21st century as the engine for transforming the pharmaceutical culture. 2007 AAPS Annual Meeting and Exposition, San Diego, November 2007.

249. Editor's perspective on scientific integrity. 2007 AAPS Annual Meeting and Exposition, San Diego, November 2007.

250. A Team-based Approach to Optimize Drug Therapy. Primary Health Care : A Symphonic Approach, Hong Kong, March 2008.

251. Regulatory Reform : The Key to Innovations in Drug Delivery. LTS Delivery Technology Asia 2008, Seoul, October 2008.

252. Challenges and Opportunities in Drug Delivery in the Age of Personalized Medicine. International Conference of the Korean Society ofPharmaceutical Sciences and Technology, Seoul, November 2008.

253. Education and Health Care Reform. Hong Kong Pharmacy Conference 2008, November 2008.

254. Innovations in Pharmaceutical Research: Impact on Translational Medicine. 2008 American Association of Pharmaceutical Scientists Annual Meeting and Exposition, Atlanta, November 2008.

255. Optimising Pharmacotherapy for Smoking Cessation. International Symposim on Tobacco Use and Dependence, Hong Kong, February 2009

256. Ethics in Research: What Are the Boundaries and Whose Responsibility is It? Ethics Session at the American Association for Cancer Research meeting, Denver, April 2009

257. Pharmaceutical and Pharmacokinetic Considerations in Formulatin Ocular Drug Delivery Systems based on Naotechnology, Hong Kong Nanotechnology Symposium 2009, May 2009.

258. Challenges and Opportunities in Drug Delivery in the Era of Personalized Medicine. Taipei Biotech Association, Taipei, June 2009.

259. Pharmacovigilance of Generic Drugs, First Annual Symposium on Pharmacovigilance, Hong Kong, March 2010

260. Introduction: The Need for More Personalized Therapy – Raising the Bar, The 6$^{th}$ LTS Academy Symposium on "Unmet Needs in Personalized Medicines", New York City, May 2010.

261. Overview on general challenges in the regulatory approval of products directed to the ocular surface, 6$^{th}$ International Conference on the Tear Film & Ocular Surface Basic Science and Clinical Relevance, Florence, September 2010

262. Formulation strategies with emphasis on class 4 compounds – good case stories, CRS product development forum, Miami, January, 2011

263. Drug delivery: trends and perspectives on emerginig technologies for small molecules and macromolecules, AAPS Drug Delivery Workshop "Emerging oral delivery strategies and technologies to enable biopharmaceutical performance of BCS II, III and IV molecules, Baltimore, April, 2011.

264. Closing remarks, building a safe medication use system in residential care homes, 2011 Seminar on Medicaton Safety in the Elderly, Hong Kong, April, 2011

265. Unmet needs in Ophthalmic Drug Delivery, 31st Japanese Society for Ocular Pharmacology, Matsue City, Japan, September 2011

266. The Right Drug Product for the Right Patient at the Right Time: What Would It Take? 2nd Asia Pacific Pharmacy Education Workshop & Asean Federation for Pharmaceutical Scieneces Conference, Kuala Lumpur, December 2011.

267. Pharmaceutical Research and Education in the Genomics Era: The Challenge of Managing Complexity, 28th Annual Research Meeting in Pharmaceutical Sciences, Chula Thailand, January 2012

268. Unmet Needs in Ocular Drug Delivery for the Elderly, 6th International Symposium on Intelligent Drug Delivery System (ISIDDS), Korea, March 2012.

269. The next frontier in ocular drug delivery: Harnessing biological diversity, managing therapeutic complexity, Association in Research in Vision and Ophthalmology Eye Research Conference 2012, Denver, June 2012.

270. BA/BE: from Generics to Biosimilars. 12th Asian Conference on Clinical Pharmacy, Hong Kong, Jul 2012.

271. Transforming Drug Delivery. 1st Conference of Frontiers in Translational Medicine, Beijing, Nov 2012.

272. Investigation of Glucuronide and sulfate metabolites formation after oral administration of paracetamol in healthy Hong Kong Chinese Subjects. 10th International ISSX Meeting in Toronto, May 2013.

273. Customized Drug Delivery: A Personal Odyssey. The 42th Annual Meeting & Exposition Controlled Release Society (CRS) 2015, organized by Controlled Release Society, Edinburg, July 2015.

274. Gold Fellow, Association for Research in Vision and Ophthalmology (ARVO), Seattle

**INVITED NON-CONFERENCE LECTURES**

1. Synthesis of methyl 11a, 17ß-dihydroxy-3, 20-dioxo-1, 4-pregnadiene-21-oate, and evaluation of disposition of U-34, 865 in hairless mice skin. Upjohn Company, Kalamazoo, Michigan, August 1976.

2. Fractionation of rabbit conjunctival mucins. Allergan Pharmaceuticals, Irvine, California; Estelle Doheny Eye Foundation, Los Angeles, California, September 1979.

3. Roles of conjunctival mucins in tear film stability. University of Washington School of Pharmacy, Seattle, Washington, June 1980; Pfizer Central Research, Groton, Connecticut, August 1980.

4. Role of ocular esterase activity in prodrug design. Schering-Plough Corporation, Bloomfield, New Jersey, November 1980

5. Determination of ocular esterase activity with a long-term view to prodrug design. Ohio State University, Columbus, Ohio, February 1981.

6. Esterase activity and its relationship to drug biotransformation in the rabbit eye. Upjohn Company, Kalamazoo, Michigan, June 1981.

7. Esterase activity and its relationship to drug biotransformation in the rabbit eye. Alcon Laboratories, Fort Worth, Texas, August 1981.

8. Constraints on ocular drug bioavailability, Verdugo Hills Pharmacists Associa-tion, Glendale, California, October 1981.

9. Effects of topically applied liposomes on ocular drug disposition. University of North Carolina at Chapel Hill, Chapel Hill, North Carolina, March 1982.

10. Factors influencing the absorption of drugs into the eye. East Los Angeles College, Monterey Park, California, October 1982.

11. Influence of liposomes on corneal absorption of high molecular weight compounds. Allergan Pharmaceuticals, Irvine, California, November 1982.

12. Alterations in ocular absorption of inulin by liposomes. Boehrengher-Ingelheim Ltd., Ridgefield, Connecticut, November 1982.

13. Alteration of corneal absorption of high molecular weight substances by liposomes. Alcon Laboratories, Fort Worth, Texas, February 1983.

14. Interaction of polypeptides and polysaccharides with the corneal surface. Allergan Pharmaceuticals, Irvine, California, April 1983.

15. Effects of liposomes on ocular drug absorption. American Critical Care, Waukegan, Illinois, July 1983.

16. Esterase activity and its relationship to ocular drug biotransformation. American Critical Care, Waukegan, Illinois, July 1983.

17. Effects of liposomes on ocular drug absorption. Upjohn Company, Kalamazoo, Michigan, July 1983.

18. Effects of liposomes on ocular drug absorption. Abbott Laboratories, North Chicago, Illinois, July 1983.

19. Mechanistic studies on the corneal absorption of large molecules from topically applied liposomes. University of Arizona, Tuczon, Arizona, November 1983.

20. Corneal absorption of inulin from topically applied liposomes. State University of New York at Buffalo, Amherst, New York, December 1983.

21. Recent advances in controlled drug delivery. Federal Food and Drug Administration, Los Angeles, California, January 1984.

22. Tear biochemistry, corneal hydration, corneal toxicity, and aqueous humor dynamics. Institute for Applied Pharmaceutical Sciences, East Brunswick, New Jersey, September 1984.

23. Mechanisms of ocular drug disposition. Institute for Applied Pharmaceutical Sciences, East Brunswick, New Jersey, September 1984.

24. Drug property influence on ocular drug disposition. Institute for Applied Pharmaceutical Sciences, East Brunswick, New Jersey, September 1984.

25. Advanced ocular drug delivery systems. Center for Professional Advancement, East Brunswick, New Jersey, September 1984.

26. Ocular absorption and hydrolysis of topically applied enkephalins in the albino rabbit. Smith, Kline and French Laboratories, Philadelphia, Pennsylvania, October 1984.

27. Ocular peptidase activity and its influence in the ocular disposition of enkephalins in the albino rabbit. Allergan Pharmaceuticals, Irvine, California, October 1984.

28. Ocular aminopeptidase activity: Implications in ocular and systemic peptide delivery. INTERx Corporation, Lawrence, Kansas, December 1984.

29. Ocular drug bioavailability from topically applied liposomes. Alcon Laboratories, Forth Worth, Texas, December 1984.

30. Role of polymer properties in controlled drug release. Institute for Applied Pharmaceutical Sciences, East Brunswick, New Jersey, January 1985.

31. Evaluation and assessment of controlled drug release systems. Institute for Applied Pharmaceutical Sciences, East Brunswick, New Jersey, January 1985.

32. Liposomes in targeted drug delivery. Institute for Applied Pharmaceutical Sciences, East Brunswick, New Jersey, January 1985.

33. Topical and systemic peptide delivery: Implications of ocular aminopeptidase activity. Rutgers -- The State University of New Jersey, Piscataway, New Jersey, January 1985.

34. Design and assessment of parenteral controlled drug delivery systems. International Minerals and Chemical Corporation, Terre Haute, Indiana, April 1985.

35. Tear biochemistry, corneal hydration, corneal toxicity, and aqueous humor dynamics. Institute for Applied Pharmaceutical Sciences, Amsterdam, The Netherlands, May 1985.

36. Mechanism of ocular drug disposition. Institute for Applied Pharmaceutical Sciences, Amsterdam, The Netherlands, May 1985.

37. Ocular drug metabolism. Institute for Applied Pharmaceutical Sciences, Amsterdam, The Netherlands, May 1985.

38. Drug property influence in ocular drug disposition. Institute for Applied Pharmaceutical Sciences, Amsterdam, The Netherlands, May 1985.

39. Advanced ocular drug delivery systems: inserts and liposomes. Institute for Applied Pharmaceutical Sciences, Amsterdam, The Netherlands, May 1985.

40. Effect of ocular aminopeptidase activity in peptide absorption. Royal Danish School of Pharmacy, Copenhagen, Denmark, May 1985.

41. Ocular delivery of cyclosporine. Sandoz Ltd., East Hanover, New Jersey, June 1985.

42. Anatomical, physiological, and biochemical considerations in ocular drug delivery system design. Bausch and Lomb, Rochester, New York, June 1985.

43. The eye as a model to assess peptide delivery. Eli Lilly and Company, Indianapolis, Indiana, July 1985.

44. Tear protein organization at ocular surfaces. Institute for Applied Pharmaceutical Sciences, East Brunswick, New Jersey, September 1985.

45. Mechanisms of aqueous humor dynamics and design of antiglaucoma drugs. Institute for Applied Pharmaceutical Sciences, East Brunswick, New Jersey, September 1985.

46. Mechanisms of precorneal and intraocular drug disposition. Institute for Applied Pharmaceutical Sciences, East Brunswick, New Jersey, September 1985.

47. Influence of ocular esterases on prodrug design and evaluation. Institute for Applied Pharmaceutical Sciences, East Brunswick, New Jersey, September 1985.

48. Ocular peptide absorption and hydrolysis. Institute for Applied Pharmaceutical Sciences, East Brunswick, New Jersey, September 1985.

49. Liposomes for topical ocular drug delivery. Institute for Applied Pharmaceutical Sciences, East Brunswick, New Jersey, September 1985.

50. Tear protein organization at ocular surfaces. Pharmacia Health Care, Uppsala, Sweden, September 1985.

51. Mechanisms of aqueous humor dynamics and design of antiglaucoma drugs. Pharmacia Health Care, Uppsala, Sweden, September 1985.

52. Mechanisms of precorneal and intraocular drug disposition. Pharmacia Health Care, Uppsala, Sweden, September 1985.

53. Influence of ocular esterases on prodrug design and evaluation. Pharmacia Health Care, Uppsala, Sweden, September 1985.

54. Ocular peptide absorption and hydrolysis. Pharmacia Health Care, Uppsala, Sweden, September 1985.

55. Liposomes for topical ocular drug delivery. Pharmacia Health Care, Uppsala, Sweden, September 1985.

56. Elements of peptide and protein drug delivery. University of Uppsala, Biomedical Center, Uppsala, Sweden, September 1985.

57. Mucosal aminopeptidases as a barrier to peptide delivery. Syntex Research, Palo Alto, California, October 1985.

58. Current status in topical ocular drug delivery. Ciba Geigy, Summit, New Jersey, December 1985.

59. Recent developments in topical ocular drug delivery. Ciba Geigy, Summit, New Jersey, December 1985.

60. Future challenges in topical ocular drug delivery. Ciba Geigy, Summit, New Jersey, December 1985.

61. Opportunities in glaucoma medications research. Ciba Geigy, Summit, New Jersey, December 1985.

62. Aminopeptidase barrier considerations in the selection of a route for peptide and protein delivery. 3M Center, St. Paul, Minnesota, March 1986.

63. Obstacles and challenges in peptide and protein drug delivery. Institute for Pharmaceutical Sciences, East Brunswick, New Jersey, March 1986.

64. Enzymatic constraints in peptide and protein drug delivery. Institute for Pharmaceutical Sciences, East Brunswick, New Jersey, March 1986.

65. Potential routes of peptide and protein drug delivery. Institute for Pharmaceutical Sciences, East Brunswick, New Jersey, March 1986.

66. Oral route of peptide and protein drug delivery. Institute for Pharmaceutical Sciences, East Brunswick, New Jersey, March 1986.

67. Aminopeptidase barrier considerations in the selection of a route for peptide and protein delivery. Pennwalt Corporation, King of Prussia, Pennsylvania, March 1986.

68. Peptides and proteins as ocular drugs of the future: Obstacles in delivery. Alcon Laboratories, Forth Worth, Texas, April 1986.

69. Peptides and proteins as ocular drugs of the future: Opportunities in delivery. Institute of Ocular Pharmacology, Texas A & M University, College Station, Texas, April 1986.

70. Enzymatic barriers to peptide and protein drug delivery: Implications in delivery route selection and delivery system design. AMGEN, Thousand Oaks, California, April 1986.

71. Enzymatic barriers to peptide and protein drug delivery: Implications in delivery route selection and delivery system design. Abbott Laboratories, North Chicago, Illinois, May 1986.

72. Ocular liposomes studies. Ciba-Geigy, Summit, New Jersey, May 1986.

73. Oral peptide and protein drug delivery: Obstacles and possible solution. KabiVitrum, Stockholm, Sweden, June 1986.

74. Barriers to ocular absorption of peptides: Implications in systemic delivery of peptides and proteins. Pharmacia Health Care, Uppsala, Sweden, June 1986.

75. Liposomes as ocular drug vehicles: a critical assessment. Ethicon, Somerville, New Jersey, July 1986.

76. Metabolic barriers to peptide delivery from non-parenteral routes. University of Kentucky, College of Pharmacy, Lexington, Kentucky, July 1986.

77. Metabolic and transport barriers to peptide absorption from nasal and other non-parenteral routes. Nelson Research, Irvine, California, August 1986.

78. Enzymatic barriers to peptide delivery from non-parenteral routes. ALZA Research, Palo Alto, California, September 1986.

79. Peptides and proteins as new drugs: Opportunities and challenges in delivery. National Taiwan University, School of Pharmacy, Taipei, Taiwan, September 1986.

80. Peptides and proteins as ocular drugs of the future: Opportunities and challenges. Meijo University, Faculty of Pharmacy, Nagoya, Japan, September 1986.

81. Barriers to the ocular absorption of topically applied peptides. Kyoto Pharmaceutical University, Kyoto, Japan, September 1986.

82. Peptides and proteins as drugs of the future: Opportunities and challenges. Kyowa Hakko Kogyo Co., Pharmaceuticals Research Laboratory, Mishima, Japan, October 1986.

83. Key elements in the design of strategies to deliver peptides and proteins. Travenol Laboratories, Morton Grove, Illinois, October 1986.

84. Inhibition of protease activity by penetration enhancers. California Biotechnology, Mountain View, California, November 1986.

85. Strategies to balance ocular against systemic absorption of topically applied timolol. University of California, Department of Ophthalmology, San Francisco, California, December 1986.

86. Key elements in the delivery of peptides and proteins. American Cyanamid, Pearl River, New York, January 1987.

87. Prodrug approach to improve therapeutic index of timolol and other topical beta blockers. Allergan Pharmaceuticals, Irvine, California, February 1987.

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