CURRICULUM VITAE

Gregory Thomas Knipp

**Personal Information:**

**Present Position:** Associate Professor

**Work Address:** Department of Industrial and Physical Pharmacy

 School of Pharmacy and Pharmaceutical Sciences

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**professional & Academic Research Appointments**:

**Aug. 2008–Present Associate Professor,** Department of Industrial and Physical Pharmacy, College of Pharmacy, Purdue University. My research focus since joining Purdue is highlighted below, with the exception that we have been increasingly working on the preclinical evaluation of antiviral new chemical entities. We have also recently developed a novel triculture model of the Blood Brain Barrier.

**Jan. 2006–Aug. 2008** **Assistant Professor**. Department of Industrial and Physical Pharmacy, School of Pharmacy, Purdue University. My research focus since joining Purdue has been on the elucidating the molecular and functional characteristics of fatty acid and oligopeptide transport phenomena across biological barriers. In addition, my laboratory is interested in developing *in vitro* and *in vivo* relationships between epithelial and endothelial transport of therapeutic agents as a function of dosage form design. We utilize the rat and porcine models for assessing *in vivo* pharmacokinetic modeling of dosage form effects on absorption.

*Center and Academic Appointments, Memberships*

Jan. 2016-Present *Member,* Integrative Neuroscience Center

Jan. 2010-Present *Director and Co-Founder*, Indiana Center for Translational Sciences Institute - Purdue Translational Pharmacology Core Facility

Sept. 2008-Present *Member*, Bindley Biosciences Center

May 2008–Present *Member,* PurdueAutism Network

Jan. 2008–Present *Member*, Purdue Lipids Discussion Group

Aug. 2006–Oct. 2018 *Associate Director*, The Dane O. Kildsig Center for Pharmaceutical Processing Research.

Oct. 2006-2012 *Member*, Regenstrief Healthcare Engineering Center.

**March 1999–Dec. 2005** **Assistant Professor**, Department of Pharmaceutics, Ernest Mario School of Pharmacy, Rutgers, The State University of New Jersey. My research focus is on the investigation of transport phenomena across biological barriers, with particular emphasis in fatty acid and oligopeptide transport.

 *Center and Academic Appointments*

Jan. 2003–Dec. 2005 The Center for Childhood Neurotoxicology and Exposure Assessment

Aug. 2002–Dec. 2005 The New Jersey Center for Biomaterials

July 2001–Dec. 2005 The Environmental and Occupational Health Sciences Institute

June 1999–Dec. 2005 Graduate Faculty Member, Graduate School of New Brunswick, Graduate Program in Pharmaceutical Sciences

**Mar. 1997–Mar. 1999** **Postdoctoral Fellow**, Department of Molecular and Integrative Physiology, The University of Kansas Medical Center. Mentor: Dr. Michael J. Soares. The focus of my research was on proteins involved in the regulation of fatty acid transfer across the rat placenta.

**Aug. 1991–Mar. 1997 Doctoral Research**, Department of Pharmaceutical Chemistry, The University of Kansas, Lawrence, KS. Advisor: Dr. Ronald T. Borchardt. Thesis: “The Effect of Conformation on the Passive Diffusion of Peptides Across Cell Culture Models of the Intestinal Mucosa and the Blood Brain Barrier.”

**Oct. 1987–July 1991 Research Associate**, Physical Pharmacy, Pharmaceutics R&D, Bristol-Myers Squibb, New Brunswick, NJ. Supervisor: Dr. Abu Serajuddin. Performed preformulation and formulation support studies on proprietary compounds.

**June–Aug. 1997** **Microbiology Research Assistant**, Quality Control Department, Hoechst-Rousell Pharmaceuticals, Somerville, NJ. Supervisor: Robert Tomaselli. Performed analytical microbiological assays to assess the potency of antibiotic containing animal feed products.

**Oct. 1986–May 1987 Research Assistant**, Analytical R&D, E.R. Squibb & Sons, New Brunswick, NJ. Supervisor: Dr. Harry Brittain. Performed solid state characterization analytical assays to support the research and development of proprietary compounds.

**Adjunct Professorships**

**July 2006-Present Adjunct Professor of Pharmaceutics**, Faculty of Pharmacy, School of Pharmacy, Universidad Autonoma del Estado de Morelos, Cuernavaca, Morelos, Mexico

**Education:**

**Mar. 1997–Mar. 1999** **Postdoctoral Fellow**,Department of Molecular and Integrative Physiology, The University of Kansas Medical Center, Kansas City, KS.

**Jan. 1994–Mar. 1997** **Ph.D. in Pharmaceutical Chemistry**,Department of Pharmaceutical Chemistry, University of Kansas, Lawrence, KS.

**Jan. 1991–Jan. 1994** **M.S. in Pharmaceutical Chemistry**,Department of Pharmaceutical Chemistry, University of Kansas, Lawrence, KS.

**Sept. 1989–May 1991**  **Nonmatriculated Graduate Studies**, Rutgers, The State University of New Jersey, New Brunswick, NJ

**Sept. 1985–Oct. 1988** **B.S. in** **Biochemistry**,Cook College, Rutgers, The State University of New Jersey, New Brunswick, NJ

**Sept. 1984–May 1985** **Department of Biology**, Rutgers-Newark University, Newark, NJ

**Fellowships, Awards and Honors:**

**July 2020 Journal of Pharmaceutical Sciences, Editors Selected Manuscript for the Virtual Issue: Most Original and Most Significant Scientific Findings in June 2020**, **[https://www.jpharmsci.org/most-original]** M. Lavan and **G.T. Knipp.** Considerations for Determining Direct Versus Indirect Functional Effects of Solubilizing Excipients on Drug Transporters for Enhancing Bioavailability. *J. Pharm. Sci.* 109(6):1833-1845 (2020).

**January 2013-March 2013 Journal of Pharmaceutical Sciences Editors Selected Manuscript**: W.J. Roth, D.J. Lindley, S.M. Carl and **G.T. Knipp**. The Effects of Intra-Laboratory Modifications to Media Composition and Cell Source on the Expression of Pharmaceutically Relevant Transporters and Metabolizing Genes in the Caco-2 Cell Line. *J. Pharm. Sci.* 101(10):3962-3978 (2012).

**July 2012-Sept. 2012 Journal of Pharmaceutical Sciences Editors Selected Manuscript and Top Ten Most Downloaded Article (April-June 2012)**: A. Newman, **G. Knipp** and G. Zografi. Commentary: Assessing the Performance of Amorphous Solid Dispersions. *J. Pharm. Sci.* 101:1355–1377 (2012)

**July 2012-Sept. 2012 Journal of Pharmaceutical Sciences Editors Selected Manuscript and Top Ten Most Downloaded Article (April-June 2012)**: D.J. Lindley, W.J. Roth, S.M. Carl and **G.T. Knipp**. The Effects of Media on Pharmaceutically Relevant Transporters in the Human HT-29 Adenocarcinoma Cell Line: Does Culture Media Need to be Controlled? *J. Pharm. Sci.* 101(4):1616-1630 (2012).

**March 2010 Rho Chi Pharmacy Honors Society,** Alpha Zeta Pharmacy Chapter, Purdue University

**October 2008 Université Louis Pasteur**, **Strasbourg, France**-The Faculty of Pharmacy Louis Pasteur Distinguished Service Medal. Presented by Dean Jean-Yves Pabst.

**Jan. 2001–Dec. 2001** **Pharmaceutical Research Manufacturers of America Foundation**. New Investigator Award.

**Dec. 2000–Nov. 2001** **American Association of Colleges of Pharmacy New Investigators Program Award**. New Investigator Award.

**July 1998–Mar. 1999 The American Heart Association**-The University of Kansas Medical Center, Department of Molecular and Integrative Physiology, Postdoctoral Fellowship (Individual, KS-98-F-3).

**Mar. 1997–July 1998** **National Institutes of Health**-The University of Kansas Medical Center, Department of Molecular and Integrative Physiology, Reproductive Biology Institutional Postdoctoral Trainee (Institutional, 5T32HD07455).

**January 1997** **Rosenfeld Scholarship Recipient**-The University of Kansas, Department of Pharmaceutical Chemistry.

**January 1996** **Graduate Honors Seminarian**-The University of Kansas, Department of Pharmaceutical Chemistry**.**

**July 1992–June 1995 National Institutes of General Medical Sciences­**-­­The University of Kansas, Department of Pharmaceutical Chemistry Pharmaceutical Aspects of Biotechnology Predoctoral Fellowship (Institutional, 5T32GM08359).

**Scientific Service positions:**

**Mar. 2023 National Institute of Child Health and Human Development,** Chair, ZHD1 DSR-L (50), RFA-HD-23-003, Review Entitled “Elucidation and Validation of the role of Transporters in the Placenta, Lactating Mammary Gland, Developing Gut, and Blood Brain Barrier (UC2 Clinical Trial Not Allowed)”

**June 2022 US Army Medical Research and Development Command Congressionally Directed Medical Research Programs (CDMRP)-Toxic Exposures Research Program (TERP),** Ad-Hoc Member, Fiscal Year 2022 Virtual Stakeholders Meeting. The aim of this two-day meeting was to prioritize research areas for a RFP on neurotoxin exposure faced by military personnel.

**Aug. 2020 National Institute of Child Health and Human Development**,Ad-Hoc Member and Alternate Chair, 2020/10 ZRG1 MDCN-C (50), PAR-17-193, Review Entitled “Development of Appropriate Pediatric Formulations and Pediatric Drug Delivery Systems (R01).”

**Dec. 2019 National Institute of Diabetes and Digestive and Kidney Diseases**,Ad-Hoc Member, ZDK1 GRB-J J2, PAR-18-108, Review Entitled “NIDDK Exploratory Clinical Trials for Small Business (R44),”

**May 2019 National Institute of Child Health and Human Development**,Ad-Hoc Member 2019/01 ZRG1 ETTN-G (50) R, PAR-17-193, Review Entitled “Development of Appropriate Pediatric Formulations and Pediatric Drug Delivery Systems.”

**Apr. 2019 National Institute of Diabetes and Digestive and Kidney Diseases**,Ad-Hoc Member 2019/05 ZDK1 GRB-M (M5) B, PAR-18-108, Review Entitled “Digestive Clinical SBIR Applications.”

**Mar. 2019 National Institute of Allergy and Infectious Diseases,** Ad-Hoc Member ZAI1 JBS-A (M1), AI-18-006, Review Entitled “Sustained Release Innovation for HIV (SRI) (R61/R33 Clinical Trial Optional).”

**Oct. 2018 National Institute of Child Health and Human Development**,Ad-Hoc Member 2019/01 ZRG1 ETTN-G (50) R, PAR-17-192, Review Entitled “Development of Appropriate Pediatric Formulations and Pediatric Drug Delivery Systems.”

**May 2018 National Institute of Allergy and Infectious Diseases,** Ad-Hoc Member ZAI-SM-M-C2 (Task Area B), RFP-NIAID-DMID-NIHAI 2017091, Review Entitled "In Vitro Assessments of Antimicrobial Activity."

**Jan. 2018 National Institute of Allergy and Infectious Diseases** Ad-Hoc Member ZAI1 ESB-M (C1), RFA (PHS-2016-1), Review Entitled “Topic 38: Innovative Oral Formulations for Anti-Infective Drugs.”

**Nov. 2017 National Institute of Environmental Health Sciences**,Ad-Hoc Member ZES1-JAB-D R1, RFA (ES-17-005), Review Entitled “ES-17-05: Environmental influences on Placental Origins of Development (ePOD).”

**Oct. 2017 National Institute of Diabetes and Digestive and Kidney Diseases**, Ad-Hoc Member ZDK1 GRB-M (J2) B, Review Entitled: “Clinical Nephrology Small Business Applications”

**Sept. 2017 National Institute of Child Health and Human Development**, Ad-Hoc Member ZHD1 DSR-K CS 1, RFP (NIH-NICHD-CRB-2017-04) Review Entitled: “Chemical Synthesis Facility”

**June 2017 National Cancer Institute**, Ad-Hoc Member ZCA1 SRB-2 (A1), PARs (16-084, P20s and 15-103, U54s) Review Programs Entitled: “1) Feasibility Studies to Build Collaborative Partnerships in Cancer Research; and 2) Comprehensive Partnerships to Advance Cancer Health Equity (CPACHE).”

**June 2017 National Institute of Child Health and Human Development**, Ad-Hoc Member ZHD1 DSR-K CS 1, RFP (NIH-NICHD-CRB-2017-04) Review Entitled: “Chemical Synthesis Facility”

**Jan. 2016 National Institute of Allergies and Infectious Diseases**, Ad-Hoc Member, 2016/05 ZAI1 TC-M (C1) 1, RFP (SBIR, NIH/NIAID 038), NIAID Peer Review Meeting Entitled: “Innovative Oral Formulations for Anti-Infective Drugs.”

**June 2015 National Institute of Child Health and Human Development**, Ad-Hoc Member ZHD1 DSR-K (BT), RFP (NIH-NICHD-CDDB-2015-10A) Review Entitled: “Biological Testing Facility”

**March 2015 Purdue Cancer Center,** Ad-Hoc Grant Reviewer.

**June-July 2014 Kathlique Universite, Leuven, Belgium, Research Grant Reviewer.**

**June 2013, 2014, 2015 Indiana CTSI CTR Grant Reviewer,** Ad-Hoc Member of the Review Committee

**Dec. 2012 Canadian Collaborative Health Research Project Review**, Ad-Hoc Member, Pilot Grant Program.

**Oct. 2012-Dec. 2015 National Institute of Child Health and Human Development U.S. Pediatric Formulations Initiative (PFI) Ontogeny of Transporters Task Specific Group,** Ad-Hoc Member and Chair of the Organ Extrapolation Working Group.Organized by the NICHD and the FDA to address issues pertaining to ontogenic changes in tissue specific expression of drug transporters.

**July 2012 National Institute of Child Health and Human Development**, Ad-Hoc Member, RFP (NIH-NICHD-CPR-2012-07) Review Entitled: “Maintenance and Operation of a Chemical Synthesis Facility.”

**June 2012 National Institutes of Health,** Ad-Hoc Member, Emerging Technologies and Training in Neurosciences, SBIR/STTR Review Panels 2012/05 ZRG1 ETTN-P (11) B.

**June 2012 National Institutes of Health,** Chair and Ad-Hoc Member, PAR-09-259 and PAR-09-260: Optimization of Small Molecule Probes for the Nervous System, SBIR/STTR Review Panels 2012/05 ZRG1 ETTN-P (51) R.

**May 2012 National Institutes of Health,** Ad-Hoc Member, PAR11-301-303: Pediatric Drug Formulations And Drug Delivery, SBIR/STTR Review Panel ZRG1 ETTN-S 50 R.

**March 2012 National Institutes of Health,** Ad-Hoc Member, PAR-11-304: Development of Appropriate Pediatric Formulations and Drug Delivery Systems, SBIR/STTR Review Panel 2012/05 ZRG1 ETTN-P (50) R.

**March 2012 National Institutes of Health,** Ad-Hoc Member, Emerging Technologies and Training in Neurosciences, SBIR/STTR Review Panels 2012/05 ZRG1 ETTN-P (11) B.

**March 2012 National Institutes of Health,** Chair and Ad-Hoc Member, PAR-09-259 and PAR-09-260: Optimization of Small Molecule Probes for the Nervous System, SBIR/STTR Review Panels 2012/05 ZRG1 ETTN-P (51) R.

**December 2011 National Institute of Child Health and Human Development**, Ad-Hoc Member, RFP Review for: “ZHD1 DSR-K, “Synthesis and Testing of Non-Steroidal and Non-Hormonal Contraceptive Agents.”

**April 2011-Dec. 2013 U.S. Pediatric Formulations Initiative (PFI) Biopharmaceutical Classification System (BCS) Task Specific Group, Chair of the ADME Subsection.** Organized by the NICHD and the FDA to address issues pertaining to pediatric formulation development.

**December 2010 National Institute of Child Health and Human Development**, Ad-Hoc Member, RFP Review for: “ZHD1 DSR-K K1 1, Maintenance and Operation of Chemical Synthesis Facility.”

**June 2010 National Institutes of Health,** Ad-Hoc Member, Recovery Act Limited Competition: NIH Director’s Opportunity for Research in Five Thematic Areas (RC4)

**March 2010 National Institutes of Health,** Ad-Hoc Member, Emerging Technologies and Training in Neurosciences 11, SBIR/STTR Review Panel.

**December 2008 National Institute of Child and Human Development**, Ad-Hoc Member, RFP Entitled: “Maintenance and Operation of a Synthetic Peptide Facility”

**April 2004–Dec. 2005 New Jersey Stem Cell Research Endowment Foundation.** Chair of the Academic Grant Review Committee for the NJSCREF/ BioMedZone.

**April 2004 National Institutes of Health**, Ad-Hoc Member, NIGMS

Quantitative Methods in Pharmacology.

**Nov. 2001-Present National Cancer Institute**, Ad-Hoc Member.

Oct. 2015 Omnibus P01 SEP-4 Review, ZCA1 RPRB-O (J1)

Mar. 2015 Omnibus SEP-4 Review, ZCA1 SRB-2 (M1)

Mar. 2014 Cancer Prevention Research Small Grant Program

Oct. 2013 R01 Research Answers to Provocative Questions

Oct. 2012 Cancer Prevention Research Small Grant Program

July 2011 Cancer Prevention Research Small Grant Program

Mar. 2011 Cancer Prevention Research Small Grant Program

Oct. 2010 Cancer Prevention Research Small Grant Program

June 2009 Cancer Prevention Research Small Grant Program

Mar. 2009 Cancer Prevention Research Small Grant Program

Oct. 2008 Cancer Prevention Research Small Grant Program

June 2008  Cancer Prevention Research Small Grant Program

Mar. 2006 Cancer Prevention Research Small Grant Program

Nov. 2005 Cancer Prevention Research Small Grant Program

Nov. 2003 RO1 Molecular Targets of Nutrients in Prostate Cancer.

July 2003Innovative Toxicology Models for Drug Evaluation.

Mar. 2003 Cancer Prevention Research Small Grant Program.

Nov. 2002 RO1 Molecular Targets of Nutrients in Prostate Cancer.

Mar. 2002 Innovative Toxicology Models for Drug Evaluation.

Nov. 2001 Cancer Prevention FLAIR SBIR/STTR Review.

**2000–2003 South African National Research Foundation**. Ad-Hoc Member.

**Research & Teaching grants:**

*Active*

**May 2023-Apr. 2027 Department of Defense,** (Expansion Award)**, $824,400 (Purdue co-I; Bentley PI),** “Preclinical Testing of a TRPV4 Antagonist for the Treatment of Hydrocephalus in a Porcine Model.”

**Aug. 2020-July 2024 Environmental Protection Agency, (PI) $790,441, OSAPE Star Grant** (RD-84002701-0)**,** “Integrated Blood Brain Barrier-Computational Model Development to Predict Doses of Concern for Compound Linked Neurotoxicity.”

**Aug. 2019-Aug. 2023 National Institute of Allergy and Infectious Diseases** (R01 AI128364-01A1)**, $3,194,158, (Purdue Co-PI; Davisson PI),** “Antiviral Lead Identification to Treat Filovirus Infections.”

**July 2019-June 2024 National Institute of Neurological Disorders and Stroke-CounterACT Centers of Excellence** (U54 NS079201-06A1)**, Brigham and Women’s Hospital, Purdue Direct $2,048,000, (Purdue Co-I),** “Discovery and Development of Novel Classes of Cyanide Countermeasure.”

**Sept. 2010-Present** **The Indiana Clinical Translational Sciences Institute, (PI)**, “Establishment of the Purdue Porcine Translational Pharmacology Core.”

**May 2018–Present** **The Dane O. Kildsig Center for Pharmaceutical Processing Research. Associate Site Director of the Center.**

*Completed*

**Mar. 2021-May 2022 TRASK Trust Fund, $47,010.40, (Co-PI, Arun Bhunia-PI),** “Authentication of Listeria Adhesion Protein (LAP)-mediated Drug Delivery across the Epithelial Barrier.”

**Oct. 2020- July 2021 Elanco, Co. (PI) $3,780.86, Contract.** Entitled: “Elanco Antibody Discovery Immunization Studies.”

**Nov. 2018-Oct. 2020 Purdue University, the Institute for Drug Discovery (PIDD), $100,000, Programmatic Area Grant, (Co-I)**, “The Development of Novel FLT3 Inhibitors for the Treatment of Acute Myeloid Leukemia.”

**Nov. 2018-Oct. 2020 Purdue University, the Institute for Drug Discovery (PIDD), $100,000, Programmatic Area Grant, (Co-PI)**, “Development of a Novel BBB-on-a-chip Model to Improve Selection of Therapeutics.”

**June 2016-Oct. 2020 The Dane O. Kildsig-Center for Pharmaceutical Processing Research, $90,000, Research Grant,** “Evaluating the Ontogenic Performance of a BCS/BDDCS Class II Formulations in the Porcine Model.”

**Aug. 2006–May 2018**  **The Dane O. Kildsig Center for Pharmaceutical Processing Research. Associate Director of the Center.**

**July 2016-June 2017 Major Scientific Equipment Program, Office of Provost Purdue University, $104,908, (Co-I), “**Biomek Cell Workstation for Pharmaceutical Sciences Research.”

**March 2016 SSCI-AMRI,** Equipment donation (Thermogravimetric Analysis Unit, TA Instruments) **$1,500.**

**Feb.2016-Jan. 2017 TRASK Trust Fund, $12,812, (Co-I),** “Phosphate Esters of Glucagon.”

**Feb.2016-Jan. 2017 Purdue University EVPR Seed Award, $9,900, (Co-I),** “Antiviral Lead Identification to Treat Filovirus Infections.”

**June 2015-May 2016 CTSI Project Development Grant, $10,000, (Co-I),** “Pharmacokinetics, analgesic efficacy and side effects of transdermal fentanyl solution in pigs.” This project was funded by a Clinical and Translational Sciences Award grant (NIH #UL1 TR001108) from the National Center for Advancing Translational Sciences.

**February 2015 The Chao Center**, Equipment donation (HPLC, 3 Milli-Q water purification systems, and miscellaneous equipment) **$5,950**

**Feb. 2014-Aug. 2016 CTSI Project Development Grant, $10,000, (PI),** “Porcine Pharmacokinetics of Novel Sorafenib Amorphous Dispersions.” This project was funded by a Clinical and Translational Sciences Award grant (NIH #UL1 TR001108) from the National Center for Advancing Translational Sciences.

**Aug. 2014-Oct. 2015 Defense Threat Reduction Agency** (FRBAA09-3 Topic F-2-0224)**, Omm Scientific, $110,000, (Purdue PI),** “SaliPhe, a Broad Spectrum Antiviral for Encephalitic Alphaviruses.”

**Sept. 2014-Aug. 2015 CTSI Project Development Grant, $9,176.20, (Co-PI),** “Combination therapy for NPC.” This project was funded by a Clinical and Translational Sciences Award grant (NIH #UL1 TR001108) from the National Center for Advancing Translational Sciences.

**January 2014 Boehringer-Ingelheim, $9,995, Gift in Kind.**

**Jan. 2012–May 2016 The Dane O. Kildsig-Center for Pharmaceutical Processing Research, $70,000, Research Grant,** “PEG(5000)-cHSA: A Solubility Enhancing Excipient With Multiple Applications”

**Jan. 2014-Dec. 2014 Phytoption LLC., NSF STTR #IIP-1346431, $100,000, (Purdue PI),** “Evaluating new pharmaceutical excipients for dissolving poorly water soluble drugs.”

**Jan. 2014-Dec. 2014 Purdue University, $68,540, Equipment Purchase Grant (PI),** “(2) Culex Cart Rodent Systems; Dual Species Cage; Culex System; Laptop Computer and Arm Option; Optional Small Carousel for Large Fraction Collector, Pyrex Urinal, Pfa Coated Stainless Steel Funnel Rat Funnel, Culex Icup Reusable Chilling Chamber for Scintillation.”

**Jan. 2014-Dec. 2014 Purdue University, $99,499, Equipment Purchase Grant (Co-I; Hockerman PI),** “IONFLUX 16 System: Automated Voltage Clamp.”

**Oct. 2012-April 2014 Food and Drug Administration, $100,000, Research Contract (FDA-SOL-1105044, 106195 Knipp),** "Pharmacokinetic Studies of Pediatric Dosage Forms in Juvenile Pigs."

**Jan. 2009–Dec. 2013 The Dane O. Kildsig-Center for Pharmaceutical Processing Research, $70,000 *(additional $7,000 granted in October 2010)*, Research Grant,** “Establishing the PigTurn Model Monitor Human Clinical Impact of Process Variation”

**Dec. 2011–Dec. 2013 Bristol-Myers Squibb, (PI) $90,000, Grant,** “The Effect of Conformation on the Permeation of Oligopeptides.”

**July 2012–June 2013 Catalent Pharma Solutions, $17,042, Research Grant,** "Comparison of dissolution times between contrast filled Vegi-Capsules and Gel Capsules via CT scan in the porcine model."

**Nov. 2011–Nov. 2012 Eli Lilly and Company, (PI) $41,447, Research Grant,** “Pharmacokinetic Studies on Hyperglycemic Agents in Immediate and Modified Release Formulations in Pigs.”

**June 2011–May 2012 2011 Purdue Research Foundation, (PI) $17,059, Graduate Fellowship Support for Lori Karpes,** “The Effects of DEHP Exposure on Fatty Acid Homeostasis Across the Immortalized Human Blood Brain Barrier Cell Line, hCMEC/D3.”

**June 2010–May 2012 The Indiana Clinical Translational Sciences Institute, (Co-PI) $75,000, CBR/CTR Pilot Grant,** “Engineering Multifunctional Micellar Nanoparticles to Overcome Drug Resistance in Multiple Myeloma.”

**Mar. 2011–Dec. 2011 National Institute of Pharmaceutical Technology Education, (Co-PI) $22,705,** “Reviewer Education in State of the Art Pharmaceutical Manufacturing Technology.”

**Oct. 2010–Dec. 2011 Eli Lilly and Company, (PI) $41,237, Research Grant,** “Pharmacokinetic Studies on Glipizide Immediate and Modified Release Formulations in Pigs.”

**Mar. 2009–Feb. 2011 The Indiana Clinical Translational Sciences Institute, (Co-PI) $75,000, CBR/CTR Pilot Grant,** “Development of Novel Pediatric Formulations for the Treatment of Infectious Diseases.”

**June 2009–Dec. 2010 2009 Purdue Research Foundation Research Grant, (PI) $16,795, Graduate Fellowship Support for David Lindley and Stephanie Mowery,** “Evaluating Cell Culture Conditions on Cell Growth and Differentiation Characteristics in the Human Adenocarcinoma HT-29 and Caco-2 Cell Lines.”

**July 2007–Jan. 2010** **National Institutes of Health/Bioanalytical Systems, Inc. (Co-I) $75,048 SBIR/R44 RR 022489-02.** “Movement-Responsive Cage for Simultaneous Pharmacology Studies in Minipigs.”

**September 2008 Purdue Research Foundation International Travel Grant, $1000. Leuven, Belgium.** “Globalization of Pharmacy Education Network (GPEN 2008).

**June 2006–Dec. 2007 Purdue Alumni Association Foundation: Faculty Development Incentive Grants Program (PI) $1,000.** “The Role of Peptide/Histidine Transporters in Histamine Biogenesis”

**May 2005 Rutgers University Advisory Committee for Instructional Computing Funds**, **(PI)** **$30,000**. “Enhancing Instruction in Web Based Prescription Preparation and Processing”

**June 2004** **Ernest Mario School of Pharmacy (Co-PI) $20,000**. **“**Development of a Didactic Training Program in Translational Medicine”

**Sept. 2003–Mar. 2004** **St. Barnabas Hospital (PI)** **$7,500**. “Measuring Interleukin 10 levels in Vaginal Smears of Normal and Pre-term Labor Mothers.”

**July 2003–June 2005** **National Alliance for Autism Research** **(Co-PI)** **$120,000**. “Placental Metabolism and Fatty Acid Homeostasis in Fetal Imprinting of Autism and ASD.”

**May 2003–Dec. 2009** **National Institutes of General Medical Sciences** **(PI)** **R01-GM65448-01A1**. **$1,197,350 ($770,000 direct funds)**. “Characterization of Human GI Oligopeptide Transporters.”

**Nov. 2002** **The Blanche and Irving Laurie Foundation,** **$5,000**. Grant in Aid.

**Sept. 2002** **CVS Pharmacy, $300,000,** **(Co-PI)**, “CVS Prescription Processing and Dispensing Laboratory.”

**Aug. 2002-Dec. 2005** **Fujisawa Healthcare**. **(Co-PI). $131,000 allocated, ($10,000 Direct Based on Limited Patient Enrollment)** “Optimizing tacrolimus therapy in maintainance allografts study: and conversion of cyclosporine to tacrolimus-based immunosuppression to induce cytokines and gene-products which beneficially impact atherogenesis.”

**Jan. 2002** **The Blanche and Irving Laurie Foundation,** **$7,500**. Grant in Aid.

**Jan. 2002** **Research Division of Physicians in Transplantation and Kidney Disease**, **$5,000**. Grant in Aid. “Human Hematopoietic Stem Cells Derived from Umbilical Cord Blood as Vehicles for Restoring Glucose Homeostasis, a Proof of Principle: Initial Characterization of Glucose Responsiveness of CD34+/AC133 Cells.”

**Mar. 2001** **Rutgers University Advisory Committee for Instructional Computing Funds**, **(PI)** **$40,000**. “Development of a Virtual Laboratory for Drug Delivery.”

**Jan. 2001–Dec. 2001** **Pharmaceutical Research Manufacturers of America Foundation**. **(PI)** **$25,000**. New Investigator Award. “Molecular and Functional Characterization of the Novel Human Peptide/Histidine Transporter.”

**Dec. 2000–Nov. 2001** **AACP New Investigators Program Award** **(PI) $10,000**. “Newly Identified Human Intestinal Peptide Transporter (PTR3): Regional and Functional Characterization."

**July 2000–June 2001** **Bristol-Myers Squibb (PI)**, **$33,200**. *“In Vitro* Models for the Delineation of Peptide Transport.”

**GRADUATE STUDENT AWARDS**:

**Aug. 2022-Dec. 2022 Matthew Behymer,** Counter Cyanide Educational Core Graduate Research Assistantship

**Oct. 2018 Kelsey Lubin,** Herbert A. Lieberman Award for outstanding service as a graduate student and teaching assistant, $500

**Jan.-May 2018 Monika Lavan,** The Appino Graduate Support Fellowship, 0.25 Graduate Student Support for the semester.

**Oct. 2017 Kelsey Lubin,** Dr. Albert V. Kienly Graduate Teaching Award, $500

**Aug. 2017 Monika Lavan,** Ronald W. Dollens Graduate Scholarship in Life Sciences, $5,800

**Apr. 2017 Aimable Ngendahimana,** Teaching Academy Graduate Teaching Award, Purdue University Center for Instructional Excellence (CIE), $500

**Apr. 2017 Monika Lavan,** Herbert A. Lieberman Award for outstanding service as a graduate student and teaching assistant, $500

**Dec. 2016 Monika Lavan,** Dr. Albert V. Kienly Teaching Award, $500

**Feb. 2016 Monika Lavan,** Graduate Student Scholarship,Lab instructor, Sustainable Medicines in Africa program at the Kilimanjaro School of Pharmacy in Moshi, Tanzania, Africa.

**Feb. 2016 Monika Lavan,** Teaching Academy Graduate Teaching Award, Purdue University Center for Instructional Excellence (CIE), $500

**Oct. 2015 Aimable Ngendahimana,** Ronald W. Dollens Graduate Scholarship in Life Sciences, $5,800.

**Oct. 2015 Christopher Kulczar,** Dr. Albert V. Kienly Teaching Award, $500.

**Aug. 2015 Aimable Ngendahimana,** Graduate Student Scholarship,Lab instructor, Sustainable Medicines in Africa program at the Kilimanjaro School of Pharmacy in Moshi, Tanzania, Africa.

**Aug. 2015 Christopher Kulczar,** Graduate Student Scholarship,Lab instructor, Sustainable Medicines in Africa program at the Kilimanjaro School of Pharmacy in Moshi, Tanzania, Africa.

**2013 Christopher Kulczar,** Selected as one of five students using their Purdue education to help move the world forward as part of Purdue’s “Purdue “5 Students Who… Move the World Forward” campaign.

**2013-2015 Christopher Kulczar,** Migliaccio/Pfizer Graduate Fellowship in Pharmaceutical Sciences, Full Tuition Support**.**

**Oct. 2013 Wyatt J. Roth,** The 2013 Dr. Herbert Lieberman Award in Industrial and Physical Pharmacy, $500.

**Sept. 2013 Christopher Kulczar,** Ronald W. Dollens Graduate Scholarship in Life Sciences, $5,000**.**

**Aug 2013 Christopher Kulczar,** Graduate Student Scholarship,Lab instructor, Sustainable Medicines in Africa program at the Kilimanjaro School of Pharmacy in Moshi, Tanzania, Africa.

**Aug 2011-May 2012 Christopher Kulczar,** Ross Graduate Student Fellowship in Industrial and Physical Pharmacy.

**Nov. 2011 Wyatt J. Roth,** The 2011 Dr. Herbert Lieberman Award in Industrial and Physical Pharmacy, $500.

**Nov. 2011 Wyatt J. Roth,** Kienly Teaching Award, $750**.**

**Aug. 2011-May 2012 Wyatt J. Roth,** Ronald Dollens Graduate Student Scholarship in Life Sciences, $5,000**.**

**Aug. 2011 Wyatt Roth,** Graduate Student Scholarship,Lab instructor, Sustainable Medicines in Africa program at the Kilimanjaro School of Pharmacy in Moshi, Tanzania, Africa.

**April 2011-June 2012 Wyatt Roth,** 2011 Lilly Endowment Graduate Fellowship in the Optimization of Drug Manufacturing Specialization, $35,000.

**April 2011 Li Fang Pan,** The Center for the Education of Teaching Assistants (CETA) Award, $750.

**April 2011 Lori Karpes,** Graduate School Summer Research Grant

**Dec. 2010-May 2011 Li Fang Pan,** Bilsland Dissertation Fellowship. $6,500.

**October 2010 Lori Karpes,** The Kienly Teaching Award in IPPH, $750.

**Aug. 2010-May 2011 Lori B. Ward,** Ronald Dollens Graduate Student Scholarship in Life Sciences, $5,000.

**March 2010 Lori Karpes,** The Center for the Education of Teaching Assistants (CETA) Award, $750.

**Aug. 2011 Wyatt Roth,** Graduate Student Scholarship,Lab instructor, Sustainable Medicines in Africa program at the Kilimanjaro School of Pharmacy in Moshi, Tanzania, Africa.

**June 2009-July 2009 Stephanie Mowery,** Graduate School Summer Research Grant. $2,626.

**March 2009 David J. Lindley,** Schering-Plough Science and Innovation Award. $5000.

**Dec. 2008-May 2009 Stephen M. Carl,** Bilsland Dissertation Fellowship.

**Aug. 2008-May 2009 Stephanie Mowery,** Ronald Dollens Graduate Student Scholarship, $5,000.

**Aug. 2008-May 2009 Lori B. Ward,** Ronald Dollens Graduate Student Scholarship, $5,000.

**Aug. 2007-May 2008 Stephen M. Carl,** Ronald Dollens Graduate Student Scholarship, $6,250.

**Aug. 2007-May 2008 Li-Fang Pan,** Ronald Dollens Graduate Student Scholarship, $6,250.

**June 1999- Mar. 2002** **Dea Herrera-Ruiz**, **Ph.D. Fulbright-Conacyt Fellowship, Stipend and Tuition Support, “**Investigations into the Molecular and Transport Characteristics of Established and Putative Peptide Transporters.”

*Travel Awards*

**2010 Stephanie Mowery,** Graduate Student Travel Award, American Association of Pharmaceutical Sciences 2010 FIP Meeting, New Orleans, LA

**2008 Li-Fang Pan,** Purdue Graduate Student International Travel Support for the 2008 GPEN meeting in Leuven, Belgium

**2007 Stephen M. Carl,** BIOTEC Section Graduate Student Travel Award, American Association of Pharmaceutical Sciences 2007 Annual Meeting, San Diego, CA

**2006** **Yan Xu,** Graduate Student Travel Award, Society of Toxicology

**2001 Dea Herrera-Ruiz,** Graduate Student Travel Award, American Association of Pharmaceutical Sciences Pharmaceutical Congress of the Americas, Orlando, FL.

*Best Presentation Awards*

**Best Poster Award** **Christopher Kulczar, Wyatt Roth**, 2012 Pharmaceutical Graduate Student Research Meeting, University of Nebraska Medical Center, Omaha, NE.

**Best Poster Award Wyatt Roth**, 2011 AAPS Indiana/Ohio Discussion Group-Pharma Industry Challenges/Perspectives Symposium, Indianapolis, IN. (2011).

**Excellent Poster Award Song Jin**, Society of Chinese Bioscientists in America (SCBA-Bio/Pharm) 2003 Annual Conference, Busch Campus Center, Rutgers University, Piscataway, NJ, (2003).

**Best Poster Award Qing Wang**, 2000 AAPS Eastern Regional Meeting, Parsippany, NJ (2000).

**Best Poster Award Dea Herrera-Ruiz**, 2000 GRASP Meeting, Hosted by the University of Maryland, Baltimore, MD. (2000).

**Publication Service positions:**

**Jan. 2013–June 2015 American Association of Pharmaceutical Sciences Online Journal**.Associate Editor of Theme Issue entitled: “Challenges and Opportunities in Pediatric Drug Development.”

**Dec. 2010–Dec. 2016 Revista Mexicana de Ciencias Farmaceuticas (Mexican Journal of Pharmaceutical Sciences).** Board of Editors.

**July 2009–Nov. 2012 American Association of Pharmaceutical Sciences Pharmaceutical Technology**. Editorial Advisory Board.

**Nov. 2007–Nov. 2011 American Association of Pharmaceutical Scientists**

Member of the AAPS Publications Committee.

**April 2004–Dec. 2005**  **The NJSCREF Journal of Stem Cell Research**. Pharmacy/Pharmacology Editor.

**Jan. 2003–Present** **Journal of Pharmaceutical Sciences**. Editorial Advisory Board.

**Jan. 2001– Dec. 2008** **American Association of Pharmaceutical Sciences Online Journal/AAPS Journal**.Editorial Advisory Board.

**Mar. 2001– Dec. 2004 American Association of Pharmaceutical Sciences Online Journal**.Associate Editor of Theme Issue entitled: “Volume 3, Membrane Transporters: Pharmacological and Physiological Relevance.”

**Reviewer for the Following Selected Journals:**

AAPS Journal of Pharmaceutical Sciences and Journal of Pharmaceutical Technology

American Journal of Physiology

American Journal of Respiratory Cell and Molecular Biology

American Journal of Transplantation Archives of Toxicology

Biochemical Pharmacology Biochimie

Biochimica et Biophysica Acta Biomedical Research International

Current Medicinal Chemistry European Journal of Biochemistry

Environmental Health Sciences Perspective Integrative Biology

European Journal of Pharmaceutical Sciences Frontiers in Pharmacogenomics

International Journal of Pharmaceutical Sciences

Journal of Biochemistry Journal of Controlled Release

Journal of Endocrinology Journal of Neurochemistry

Journal of Pharmaceutical Sciences

Journal of Pharmacology and Experimental Therapeutics

Molecular and Cellular Biochemistry Molecular Pharmaceutics

Pharmaceutical Research Placenta

PLOSOne PPAR Research

Prostaglandins & Other Lipid Mediators Toxicology

Toxicological Sciences Toxicology *In Vitro*

Transplantation Xenobiotica

**Professional & Scholastic Memberships**:

**2019-Present Sigma Xi Scientific Research Honors Society**

**2011–2 Safety Pharmacology Society**

 2012 Member of the Abstract Review Committee

**2007–2008, 2010–2013** **American Chemical Society**

**2006–Present International Society for the Study of Xenobiotics**

**2000–Present** **American Physiological Society**

**1999–2011 New York Academy of Sciences**

**1999–2008, 2010–Present American Association of Colleges of Pharmacy**

###### 1998–Present International Federation of Placental Associations

**1989–Present American Association of Pharmaceutical Scientists**

2007-2011 Appointed Member of the AAPS Publications Committee.

2007-2011 Member at Large of the Student/Postdoc Outreach and Development Committee.

2006-2007 Immediate Past-Chair of the Student/Postdoc Outreach and Development Committee (SPODC); Head of the H.S. Outreach Committee.

2005-2006 Chair of the SPODC.

June 2005 Moderated the Student Mentoring Breakfast at the National Biotechnology Conference.

2004-2005 Chair-Elect of the SPODC.

2003–2006 Biotechnology Representative on the Student/Postdoc Outreach and Development Committee.

2003–2004 Chair of the Biotechnology Abstract Reviewing Committee.

2001–2002 Vice Chair of the Biotechnology Abstract Reviewing Committee.

2000 Eastern Regional Planning Committee for Meeting. Chair of Contributed Papers Section.

1999-Present National Meeting(s) Abstract Reviewer for the BIOTEC, PDD and/or PPDM Committees

1999–2000 Faculty Advisor for the Rutgers AAPS Student Chapter.

1995–1996 Graduate Student Liaison, Kansas City Discussion Group.

1994 Graduate Student Representative, National Task Force for the organization and formation of Student Chapters.

1994–1995 Committee Chair for the formation of the first Student Chapter at The University of Kansas.

Teaching:

*Graduate Teaching*

**Spring 2012, 2014-2023 Advanced Biopharmaceutics,** Course Coordinator, Presented 25 (75 minute) lectures on the biology and physiology of the epithelial and endothelial barriers, biological transport processes, and cellular pharmaceutics as they pertain to drug delivery.

**Fall 2011-2018, 2020 Fundamentals of Pharmaceutical Engineering,** Lecturer, Presented 2 (75 minutes) lectures on the effects of physiology and processing on bioavailability and *in vivo* drug performance.

**Spring 2011 Advanced Biopharmaceutics,** Course Coordinator, Presented 26 (75 minute) lectures on the biology and physiology of the epithelial and endothelial barriers, biological transport processes, and cellular pharmaceutics as they pertain to drug delivery.

**Fall 2010 Fundamentals of Pharmaceutical Engineering,** Lecturer, Presented 2 (75 minutes) lectures on the effects of physiology and dosage form processing on the biopharmaceutics of therapeutic entities.

**Spring 2010 Advanced Biopharmaceutics,** Course Coordinator, Presented 25 (75 minute) lectures on the biology and physiology of the epithelial and endothelial barriers, biological transport processes, and cellular pharmaceutics as they pertain to drug delivery.

**Fall 2009 Fundamentals of Pharmaceutical Engineering,** Lecturer, Presented 2 (75 minutes) lectures on the effects of physiology and dosage form processing on the biopharmaceutics of therapeutic entities.

**Spring 2009 Advanced Biopharmaceutics,** Course Coordinator, Presented 25 (75 minute) lectures on the biology and physiology of the epithelial and endothelial barriers, biological transport processes, and cellular pharmaceutics as they pertain to drug delivery.

**Fall 2008 Advanced Pharmaceutics, *Université Louis Pasteur***, ***Strasbourg, France***. Dr. Thierry Vandamme’s Course, Lecturer, Presented 1 (2 hour) lecture on the effects of physiology and dosage form processing on the biopharmaceutics of therapeutic entities.

**Fall 2008 Analytical Chemistry,** ***Université Louis Pasteur***, ***Strasbourg, France***. Dr. Eric Marchioni’s Course, Lecturer, Presented 4 (2 hour) lectures on protein and peptide biophysics, drug design, formulation and immunogenicity.

**Fall 2008 Fundamentals of Pharmaceutical Engineering,** Lecturer, Presented 1 (180 minutes) lecture on the effects of physiology and dosage form processing on the biopharmaceutics of therapeutic entities.

**Fall 2007 Advanced Biopharmaceutics,** Course Coordinator, Presented 30 (75 minute) lectures on the biology and physiology of the epithelial and endothelial barriers, biological transport processes, and cellular pharmaceutics as they pertain to drug delivery.

**Fall 2007 Fundamentals of Pharmaceutical Engineering,** Lecturer, Presented 2 (75 minutes) lectures on the effects of physiology and dosage form processing on the biopharmaceutics of therapeutic entities.

**Spring 2007 Advanced Biopharmaceutics,** Course Coordinator, Presented 48 (50 minute) lectures on the biology and physiology of the epithelial and endothelial barriers, biological transport processes, and cellular pharmaceutics as they pertain to drug delivery.

**Spring 2007 Fundamentals of Pharmaceutical Engineering,** Lecturer, Presented 1 (75 minute) lecture on biopharmaceutics.

**Spring 2006 Fundamentals of Pharmaceutical Engineering,** Lecturer, Presented 1 (55 minute) lecture on biopharmaceutics.

**Spring 2005** **Peptide Delivery**, Course Coordinator. 8 (3 hour) lectures protein and peptide biophysics, drug design and formulation.

**Fall 2004 Advanced Pharmaceutics I**, Lecturer. Presented 2 (3 hour) lectures on aspects of pharmaceutical solid and solution-state stability.

**Fall 2003 Graduate Seminar in Pharmaceutical Sciences**, Course Coordinator.

**Spring 2003** **Molecular and Functional Genomic Aspects of Membrane Transport**, Lecturer. Presented 2 (3 hour) lectures on fatty transport, metabolism and regulation processes across cellular barriers.

**Fall 2002 Advanced Pharmaceutics I**, Lecturer. Presented 2 (3 hour) lectures on aspects of pharmaceutical solid and solution-state stability.

**Spring 2002 Molecular and Cellular Pharmaceutics**, Lecturer. Presented 1 (3 hour) lecture on fatty transport processes across cellular barriers.

**Fall 2001 Therapeutic Peptide and Protein Drug Delivery**, Course Coordinator. 12 (3 hour) lectures protein and peptide biophysics, drug design and formulation.

**Fall 2000 Molecular and Cellular Pharmaceutics**, Course Coordinator. Presented 5 (3 hour) lectures on the biology and physiology of the epithelial and endothelial barriers, biological transport processes, protein biophysics, and cellular pharmaceutics.

**Fall 2000** **Advanced Pharmaceutics I**, Lecturer. Presented 2 (3 hour) lectures on aspects of pharmaceutical solid and solution-state stability.

**Spring 1999– Graduate Seminar in Pharmaceutical Sciences**,

 **Spring 2000** Course Coordinator.

*Undergraduate Teaching (80 minutes/Lecture)*

**Fall 2014-2022 Biotechnology and Advanced Parenteral Dosage Forms**, Presented 1 lecture (2.5 hours) on protein structure, formulation, and PK/PD.

**Spring 2014-2017 PHRM 84700 Principles of Pharmacogenomics**, Presented 6 lectures on pharmacogenomic issues related to drug transporters, metabolizing enzymes, PK, PD, and adverse drug responses.

**Fall 2016-2021 Dosage Forms I**, Presented 9 lectures on drug delivery, development and pharmacokinetics

**Fall 2013- 2015 Dosage Forms I**, Course Coordinator, Presented 18 lectures on drug delivery, development and pharmacokinetics.

**Fall 2011, 2012 Dosage Forms I**, Presented 9 lectures on drug delivery, development and pharmacokinetics

**Fall 2011 Dosage Forms I**, Course Coordinator, Presented 6 lectures on drug development and pharmacokinetics.

**Spring 2012 Basic Pharmaceutics II**, Lecturer. Presented 4 lectures on biotechnology drug delivery and development.

**Spring 2011 Basic Pharmaceutics II**, Lecturer. Presented 4 lectures on biotechnology drug delivery and development.

**Spring 2010 Basic Pharmaceutics II**, Lecturer. Presented 5 lectures on biotechnology drug delivery and development.

**Spring 2009 Basic Pharmaceutics II**,, Lecturer. Presented 4 lectures on biotechnology drug delivery and development.

**Spring 2007 Basic Pharmaceutics II**, Lecturer. Presented 4 lectures on physiological aspects that influence effective drug delivery.

**Spring 2006 Basic Pharmaceutics II**,, Lecturer. Presented 2 lectures on physiological aspects that influence effective drug delivery.

**Fall 2005 Drug Delivery II**, Lecturer. Presented 2 lectures on placental physiology and drug delivery.

**Spring 2005 Drug Delivery I**, Course Coordinator. Presented 13 lectures on drug delivery systems, solids, oral and parenteral drug delivery.

**Fall 2004 Drug Delivery II**, Lecturer. Presented 2 lectures on placental physiology and drug delivery.

**Spring 2004 Drug Delivery I**, Course Coordinator. Presented 20 lectures on drug delivery systems, solids, oral and parenteral drug delivery.

**Fall 2003 Drug Delivery II**, Lecturer. Presented 2 lectures on placental physiology and drug delivery.

**Spring 2003 Drug Delivery I**, Course Coordinator. Presented 25 lectures on drug delivery systems, solids, oral and parenteral drug delivery.

**Spring 2002 Drug Delivery I**, Course Coordinator. Presented 18 lectures on drug delivery systems, solids, oral and parenteral drug delivery.

**Fall 2001 Drug Delivery II**, Course Coordinator. Presented 22 lectures on drug delivery systems, solids, oral and parenteral drug delivery.

**Fall 2001 Introduction to Pharmaceutics**, Lecturer. Presented 2 lectures on the Solid-state characterization of drugs.

**Spring 2001** **Drug Delivery II**, Lecturer. Presented 3 lectures on novel drug delivery systems.

**Fall 2000 Drug Delivery I**, Course Coordinator. Presented 27 lectures on drug delivery systems, solids, oral and parenteral drug delivery.

**Spring 2000 Drug Delivery II**, Lecturer. Presented 2 lectures on protein and polymer drug delivery

**Fall 1999 Drug Delivery I**, Course Coordinator. Presented 27 lectures on drug delivery systems, solids, oral and parenteral drug delivery.

**Spring 1999 Drug Delivery II**, Lecturer. Presented 12 lectures on transdermal and novel drug delivery systems.

**Spring 1999 Introduction to Pharmacokinetics**, Lecturer. Presented 6 lectures on absorption phenomena and multiple dosing pharmacokinetics.

*Curriculum Development*

**July 2012 Introduction to the Utility of Absorption Modeling,** Participated with Drs. Manuel Vincente Felix-Sanchez and John Rose from Eli Lilly and Company, and Dr. Michael Bolger of Simulations Plus to develop a short course introducing the basic concepts of modeling drug absorption focused primarily on the GastroPlus 8.0 software program.

**Spring 2007 Advanced Biopharmaceutics,** Course Coordinator, Developed a course focused on delineating the physiological barriers to drug delivery and their interplay with the physicochemical properties of the drug and the formulation that control bioavailability and therapeutic effect.

**Fall 2005 Translational Medicine**, Collaborated with Dr. A. Scott Mathis in the development of a didactic training program in Translational Medicine for the Pharm. D. and Ph.D. students. Course is proposed and under consideration with the Dean’s support.

**Fall 2001 Therapeutic Peptide and Protein Drug Delivery**, Course Coordinator. Developed a course highlighting protein and peptide biophysics, absorption, drug design and formulation.

**Fall 2000 Molecular and Cellular Pharmaceutics**, Course Coordinator. Developed a team taught course focused on elucidating the biology and physiology of epithelial and endothelial barriers, biological transport processes, targeted drug delivery, protein biophysics, and cellular pharmaceutics.

**Postdoctoral AssociateS ADVISED:**

**Aug. 2008-Jan. 2009 Jonathan Goole,** Ph.D. in Pharmaceutics, Jonathan investigated the effects of excipients and their variation in dosage forms on the bioavailability of therapeutic agents that are substrates for active transporters.

**July 2006-July 2007 Minguang Li,** Ph.D. in Pharmaceutics. Minguang worked on establishing Peptide/Histidine Transporter 1 stably transfected Caco-2, N87 and HT-29 cells for drug screening.

**June 2003–Oct. 2005 Rajinder K. Bhardwaj,** Ph.D. in Pharmaceutical Sciences. Raj’s main project was the molecular and functional characterization of human oligopeptide transporters of the human intestinal tract. Raj had also worked on a collaborative project investigating the uptake and transport of quercetin compounds isolated from cranberry.

**Visiting Scientists:**

**May 2010-Oct. 2010 Sophia Hannou,** Pharm. D./Visiting Clinical Fellow from the School of Pharmacy, University of Strasbourg, France. Investigated the effects of dosage form variation on the pharmacokinetics of rifampicin in the porcine model.

**Technician:**

**Aug. 2020-present Charlie Zhang,** expertise in neuronal cell culture and cellular and molecular biology methodologies. Is currently working on the novel Blood-Brain Barrier model to elucidate neuroactivity effects.

**Students Advised & Graduated:**

*Graduate Students-Primary Advisor*

***Completed Degree***

**April 2023** **Matthew Behymer,** Ph.D. in Industrial and Physical Pharmacy, “Insights into the Organometallic and Metabolite Cyanide Countermeasures.”

**August 2019 Kelsey Lubin,** Ph.D. in Industrial and Physical Pharmacy, “Design of Experiment Based Optimization of a Direct Contact Blood-Brain Barrier *In Vitro* Model for Neuroactivity Screening.”

**August 2018 Monika Lavan,** Ph.D. in Industrial and Physical Pharmacy, “Formulation Strategies and Optimization of Poorly Water-Soluble Drugs for Preclinical and Clinical Applications.

**Dec. 2017 Aimable Ngendahimana,** Ph.D. in Industrial and Physical Pharmacy, “Development of a Direct-Contact Triculture Model of the Human Blood-Brain Barrier and Potential Applications as a Preclinical Drug Screening Tool.”

**Aug. 2016 Christopher Kulczar,** Ph.D. in Industrial and Physical Pharmacy, “The Development of Preclinical Strategies for Facilitation of Lead Candidate Selection.”

**Oct. 2012 Wyatt Roth**: Ph.D. in Industrial and Physical Pharmacy, Thesis entitled: “Characterization of Human Oligopeptide Transporters and Pediatric Formulations.”

**Dec. 2011 Lori Ward**: Ph.D. in Industrial and Physical Pharmacy, Thesis entitled: “Characterization of Basal and Di-(2-Ethylhexyl) Phthalate Altered Fatty Acid Transport Across the Human Immortalized Blood-Brain-Barrier Cell Line, hCMEC/D3.”

**Aug. 2011 Li-Fang Pan**: Ph.D. in Industrial and Physical Pharmacy, Thesis entitled: “Delineating the Potential Effects of Bisphenol A on Placental Fatty Acid Homeostasis.”

**Aug. 2011 Stephanie Mowery**: Ph.D. Industrial and Physical Pharmacy, Thesis: “Characterization, Expression, and Functional Analysis of Proton-Dependent Oligopeptide and Pharmaceutically Relevant Transporters.”

**Dec. 2009** **David Lindley**: Ph.D. in Industrial and Physical Pharmacy, Thesis: “Expression and Functional Analysis of Proton-Dependent Oligopeptide Transporter Members.”

**May 2009** **Stephen Carl**, Ph.D. in Industrial and Physical Pharmacy, Thesis: Investigations into the Molecular and Functional Characteristics of Human Peptide/Histidine Transporter 1.

**May 2008** **Debanjan Das**: Non-Thesis M.S. in Industrial and Physical Pharmacy, Performed research investigating the effects of phthalate esters on fetal and postnatal brain development, with an emphasis on delineating the roles of phthalates on brain fatty acid homeostasis.

**Dec. 2006** **Melissa Yarde**: M.S. in Pharmaceutics, Thesis: The Role of Histamine in Gastrointestinal Disorders.

**April 2006** **Yan Xu**, Ph.D. in Pharmaceutical Sciences, Co-Advised with Dr. Thomas Cook, Thesis: The Role of Di-(2-Ethylhexyl)-Phthalate and its Metabolites on Fatty Acid Homeostasis in the Rat Placenta.

**Dec. 2005** **Erin Oliver**: Non-Thesis M.S. in Pharmaceutical Sciences, Her research interests were regulatory issues surrounding the development of follow-on biologics.

**Sept. 2005** **Song Jin**, **M.S.** Non-Thesis M.S. in Pharmaceutics, His research focused on the effects of immunosuppressive agents on atherogenic potential in macrophages as a predictor of clinical outcomes.

**April 2003** **Qing Wang**, Ph.D. in Pharmaceutics, Thesis: The Regulation and Initial Functional Characterization of Long-Chain Fatty Acid Transport.

**Mar. 2002** **Dea Herrera-Ruiz**, Ph.D. in Pharmaceutics, Thesis: Investigations into the Molecular and Transport Characteristics of Established and Putative Peptide Transporters.

**Aug. 2000** **Qi Li**, Non-Thesis Masters in Pharmaceutics.

***Current Student(s) in My Laboratory***

**Aug. 2022–Present** **Zhuangyan Xu,** Graduate Student in Industrial and Physical Pharmacy, she is currently engaged in research aimed at understanding how novel and established agents traverse the blood brain barrier.

***Visiting Student***

**Sept. 2007–Dec. 2007** **Adriana Sandoval Ocampo,** UAEM, Cuernavaca, Mexico.Investigated the molecular expression differences of Peptide/Histidine (PHT) transporters throughout several human gastrointestinal tract tissue samples. Also spent some time learning how to perform permeability assays across PHT1 stably transfected HT-29 cells.

***Thesis Committee Member***

**May 2026 Laura Sanford**, Graduate Student in Medicinal Chemistry and Molecular Pharmacology, Advisor: Dr. V. Jo Davisson

**May 2025 Xinyu Wu**, Graduate Student in Industrial and Physical Pharmacy, Advisor: Dr. Sandro Matosevic

**Aug. 2024 Amr Elkabbany**, Graduate Student in Medicinal Chemistry and Molecular Pharmacology, Advisor: Dr. V. Jo Davisson.

**Dec. 2022 Tram Dao**, Ph.D. Candidate in Industrial and Physical Pharmacy, Advisor: Dr. Sandro Matosevic.

**Dec. 2022 Manalee Samaddar,** Ph.D. Candidate in Food Science, Advisor: Dr. Arun Bhunia

**May 2023 Toe Ein Kyawt**, Non-Thesis M.S. Student in Industrial and Physical Pharmacy, Advisor: Hyun-Young Jeong

*Completed*

**Dec. 2022 Ruochen Yang**, Ph.D. in Industrial and Physical Pharmacy, Advisor: Dr. Lynne Taylor. Thesis Entitled: “Release Mechanisms of Amorphous Solid Dispersions.”

**Dec. 2022 Catherine Weatherd**, Ph.D. in Biomedical Engineering, Advisor: Dr. Elsje Pienaar. Thesis Entitled: “Multiscale Spatiotemporal Modeling for Human Disease: Agent Based Models for Nontuberculous Mycobacterium Infections and Alzheimer's Disease.”

**Aug. 2022 Shan Lu**, Ph.D. in Industrial and Physical Pharmacy, Advisor: Dr. Tonglei Li. Thesis Entitled: “Understanding CYP related Drug-Drug interaction with MEMS and deep learning.”

**May 2022 Kyle Lupo**, Ph.D. in Industrial and Physical Pharmacy, Advisor: Dr. Sandro Matosevic. Thesis Entitled: “Generation and Genetic Engineering of Natural Killer Cells Derived from Induced Pluripotent Stem Cells for Immunotherapy of Solid Tumors.”

**Aug. 2021 Eunbi Cho,** Ph.D. in Industrial and Physical Pharmacy, Advisor: Dr. Elizabeth Topp. Thesis Entitled: “Solid-state Stability of Antibody-drug Conjugates.”

**May 2021 Fudan Zheng**, Ph.D. from the PULSE Program, Advisor: Dr. Tonglei Li. Thesis Entitled: “Mechanism-Driven, Physiologically-Based Pharmacokinetic Modelling of Oral and Subcutaneous Administration.”

**July 2020 Rajashekar Kammari,** Ph.D. in Industrial and Physical Pharmacy, Advisor: Dr. Elizabeth Topp. Thesis Entitled: “Solid-State Hydrogen-Deuterium Exchange Mass Spectrometry of Lyophilized Peptides.”

**December 2019 Ahmed Elkhabaz,** Ph.D. in Industrial and Physical Pharmacy, Advisor: Dr. Lynne Taylor. Thesis Entitled: “Characterization of the Phase Behavior of Supersaturated Solution in Simulated and Aspirated Human Fluids.”

**August 2019 Lin Liu,** Ph.D. in Chemistry, Advisor: Dr. Alexander Wei. Thesis Entitled: “I. Antimicrobial Photodynamic Inactivation Targeting Multidrug Resistance with Gallium-Hemoglobin-Coated Silver Nanoparticles II. Synthesis and Properties of Magnetic Gold Nanoparticles.”

**May 2018 Hwee Jing Ong,** Ph.D. Candidate in Industrial and Physical Pharmacy, Advisor: Dr. Rodolfo Pinal. Thesis Entitled: “Drug Solubilization by Means of a Surface-Modified Biopolymer Enabled by Hot Melt Extrusion.”

**Aug. 2017 Jing Ling,** Ph.D. in Industrial and Physical Pharmacy, Advisor: Dr. Rodolfo Pinal. Thesis Entitled: “Crystallization Control Using Fabricated Polymeric Materials.”

**Aug. 2017 Ying Yie,** Ph.D. in Food Science, Advisor: Dr. Yuan Yao. Thesis Entitled: “Octenylsuccinate Hydroxypropyl Phytoglycogen, A Potent and Non-Specific Solubilizer for Poorly Water-Soluble Active Ingredients.”

**May 2017 Allison Lange,** Ph.D. in Chemistry, Advisor: Dr. Christine Hyrcyna**.** Thesis Entitled: “Overcoming P-glycoprotein and ABCG2 as Obstacles to Therapeutic Delivery Through Dimeric Substrate-Based Prodrugs.

**Dec. 2016 Ehab Moussa,** Ph.D. in Industrial and Physical Pharmacy, Advisor: Dr. Elizabeth Topp. Thesis Entitled: “Conformational Analysis of Monoclonal Antibodies in Lyophilized and Spray Dried Solids.”

**Dec. 2016 Ansul Mishra,** Non-Thesis M.S. in Industrial and Physical Pharmacy, Advisor: Dr. Elizabeth Topp.

**Dec. 2016 Haichen Nie,** Graduate Student in Industrial and Physical Pharmacy, Advisor: Dr. Stephen Byrn. Thesis Entitled: “Acid-Base Reactions in Different Solid-State Forms.”

**Aug. 2016 Rubayat Khan,** Non-Thesis M.S. in Industrial and Physical Pharmacy, Advisor: Dr. Tonglei Li.

**May 2016 Jainik Panchal,** Ph.D. in Industrial and Physical Pharmacy, Advisor: Dr. Elizabeth Topp. Thesis Entitled: “Characterizing Protein Aggregates at Particulate and Molecular Scale.”

**Aug. 2015 Lavanya Iyer,** Ph.D. Candidate in Industrial and Physical Pharmacy, Advisor: Dr. Elizabeth Topp. Thesis Entitled: “High-Resolution Mass Spectrometric Approaches to Study Protein Structure and Environment in Lyophilized Solids.”

**July 2015 Saradha Chandrasekhar,** Ph.D. Candidate in Industrial and Physical Pharmacy, Advisor: Dr. Elizabeth Topp. Thesis Entitled: “Thiol-Disulfide Exchange in Human Growth.”

**June 2015 Daniel Beck,** Ph.D., in Medicinal Chemistry and Molecular Pharmacology, Advisor: Dr. Mark Cushman. Thesis entitled: “Design, Synthesis, and Biological Evaluation of Novel Indenoisoquinolines as Potential Anticancer Agents.”

**April 2015 Biplob Mitra,** Ph.D., in Industrial and Physical Pharmacy, Advisor: Dr. James Lister. Thesis entitled: “The Impact of Stress History of Deformable Dry Granules on the Mechanical Properties of Tablets.”

**May 2014 Crystal Shin,** Ph.D. in Industrial and Physical Pharmacy, Advisor: Dr. Kinam Park. Thesis entitled: “Development of *In Vitro* Three Dimensional Tumor Models.”

**May 2014 Kevin Boksa,** Ph.D. in Industrial and Physical Pharmacy, Advisor: Dr. Rodolfo Pinal. Thesis entitled: “Matrix-Assisted Cocrystallization: The Simultaneous Production and Formulation of Pharmaceutical Cocrystals Using Melt Extrusion.”

**Dec. 2013 Jonathan Mehtala,** Ph.D. in Chemisty, Advisor: Dr. Alexander Wei, Thesis entitled: “Gold Nanorod Mediated Mild Hyperthermia and Pegylated Human Serum Albumin Drug Delivery for Cancer Therapies.”

**May 2013 Yan Zhang,** Ph.D. in Industrial and Physical Pharmacy, Advisor: Dr. Rodolfo Pinal, Thesis entitled: “Kinetic Driven Effects of Phase Transformations in Mechanically Activated Powders.”

**April 2013 Hillary Kaylin Ashley Holback,** Ph.D. Candidate in Industrial and Physical Pharmacy, Advisor: Dr. Yoon Yeo. Thesis entitled: “The Cytotoxic Effect of Nanoparticles delivered to the Periphery of 3-Dimensional Tumor Models.”

**Oct. 2012 Yen Ng,** Ph.D. in Industrial and Physical Pharmacy, Advisor: Dr. Mark Green. Thesis Entitled: “Development and Validation of Radiochemical Methods for the Preparation and Use of PET Radiopharmaceuticals.”

**June 2012 Emily Gugliotti,** Ph.D. in Biomedical Engineering, Advisor: Dr. Yoon Yeo, Thesis entitled: “Peritumorally Activatable Nanoparticles for Delivery of Paclitaxel to Multidrug Resistant Ovarian Cancer Cells.”

**May 2012 Jeffrey Bell,** Ph.D. in Health and Kinesiology. Advisor: Dr. Sean Newcomer, Thesis entitled: “Peripheral Arterial Disease in Spinal Cord Injured Individuals.”

**Apr. 2012 Xin Chen,** Ph.D. in Industrial and Physical Pharmacy, Advisor: Dr. Stephen Byrn, Thesis entitled: “Estimation of Miscibility of Pharmaceutical Compounds. with Poly(vinylpyrrolidone) and A Pediatric Solid Dispersion Formulation of Efavirenz.”

**Apr. 2012 Jamie Brugnano,** Ph.D. in Biomedical Engineering, Advisor Dr. Alyssa Panitch, Thesis entitled: “Characterization and Intracellular Delivery of MK2-Inhibitor Peptides for Inflammatory Applications.”

**Apr. 2012 Rush Bartlett,** Ph.D. in Biomedical Engineering, Advisor: Dr. Alyssa Panitch. Thesis entitled: “Poly(NIPAm-AMPS) Nanoparticles for Targeted Delivery of Anti-Inflammatory Cell Penetrating Peptides”

**Nov 2011 Zohreh Amoozgar,** Ph.D. in Industrial and Physical Pharmacy, Advisor: Dr. Yoon Yeo. Thesis entitled: “Bioadhesive Polymeric Drug Delivery Systems for Tumor Targeting and Tissue Repair.”

**Nov. 2011 Jutarat Kitsongsermthon,** Ph.D. in Industrial and Physical Pharmacy, Advisor: Dr. Kinam Park. Thesis entitled: “The Development of Particle-Coated Stents and Balloons.”

**May 2011 Aaron Conovaloff,** Ph.D. in Biomedical Engineering, Advisor Dr. Alyssa Panitch, Thesis entitled: “A Novel Chondroitin Sulfate Hydrogel for Nerve Repair.”

**Jan. 2011 Ryan McCann**, Ph.D. in Industrial and Physical Pharmacy, Advisor: Dr. Rodolfo Pinal. Thesis: “Investigating the Density Distribution of Roller Compacted Ribbons.”

**Nov. 2010 Kerry Loader**,M.S. in Industrial and Physical Pharmacy-Regulatory and Quality Compliance, Advisors: Drs. Stephen Byrn and Michael Schmidt, Thesis: “A Quality Assurance Auditor Training Manual Project.”

**Sept. 2010 David Alonzo**, Ph.D. in Industrial and Physical Pharmacy, Advisor: Dr. Lynne Taylor. Thesis: “Maintenance of Super-saturation of Amorphous Formulations *in vitro/in vivo*.”

**July 2010 Toni Wright-Glinsey**, M.S. in Industrial and Physical Pharmacy-Regulatory and Quality Compliance, Advisor: Dr. Stephen Byrn, Thesis: “Implementing the Requirements of the Revised General <467> Residual Solvents Chapter of the United States Pharmacopeia (USP).”

**May 2009 Ji Young Kim**, Ph.D. in Industrial and Physical Pharmacy, Advisor: Dr. Kinam Park. Thesis entitled: “Hydrotropic Polymer Micelle Systems for Oral Delivery of Paclitaxel.”

**Jan. 2009 Stephanie Noe,** Ph.D. in Industrial and Physical Pharmacy, Advisor: Dr. Stanley Hem. Thesis: “Mechanisms of Aluminum-Containing Vaccine Adjuvants: Implications of the Relationship between the Movement of Antigen in Vivo and Immunopotentiation.”

**Dec. 2005 Jelena Djordevic**, Ph.D. in Pharmaceutics, Advisor: Dr. Kathryn Uhrich. Thesis: “Amphiphilic Macromolecules: Efficient Carriers for Intracellular Drug Delivery”

**April 2005** **Rong Hu**, Ph.D. in Pharmaceutics, Advisor: Dr. A.-N. Tony Kong. Thesis: “Cancer Chemoprevention Isothiocyanates and the Underlying Molecular Mechanism”

**May 2004** **Chi Chen**, Ph.D. in Pharmaceutics, Advisor: Dr. A.-N. Tony Kong. Thesis: “Regulation of Cytoprotection and Cell Death Machineries by Chemopreventive Compounds”

**May 2004** **Pankaj Paranjpe**, Ph.D. in Pharmaceutics, Advisor: Dr. Patrick Sinko. Thesis: “Tumor-targeted and Activated Bioconjugates for Improved Camptothecin Delivery”

**Sept. 2003–May 2005** **Maha Saad**: Performed research on the molecular and functional characterization of Peptide/Histidine transporters in various human tissues.

**Sept. 2002** **Tamira Mullarkey**, M.S. in Pharmaceutics, Advisor: Dr. Thomas Cook. Thesis: “In Vitro Evaluation of Cytochrome P450-Mediated Metabolism of Chlorpyrifos in Human Liver Microsomes”

**June 2002** **Shilpi Agarwala**, M.S. in Pharmaceutics, Advisor: Dr. Thomas Cook. Thesis: “The Effect of Pesticides on Membrane Transporter Gene Expression and on the Efflux of Verapamil in Caco-2 Cells”

**April 2002** **Gregory Williams**, Ph.D. in Pharmaceutics, Advisor: Dr. Patrick Sinko. Thesis: “The Roles of Multiple Transporters in the Intestinal Absorption of Saquinavir, a Peptidomimetic HIV Protease Inhibitor”

**Sept. 2001** **Susan Wendel**, Ph.D. in Pharmaceutics, Advisor: Dr. Nicholas Lordi. Thesis: “The Prediction of Spray Drying Formulations and Processes for Pharmaceutical Powders”

**Sept. 2001** **Jeevan Kunta**, Ph.D. in Pharmaceutics, Advisor: Dr. Patrick Sinko. Thesis: “Investigation of the Role of Intestinal Extraction on Oral Bioavailability”

**May 2001** **Smriti Shenoy**, M.S. in Pharmaceutics, Advisor: Dr. Thomas Cook. Thesis: “Intestinal Permeability Studies of Chlorpyrifos Using a Single Pass Intestinal Perfusion Technique in Rats”

**Jan. 2001** **Monica Motwani**, Ph.D. in Pharmaceutics, Advisor: Dr. Joel Zatz. Thesis: “**Follicular delivery of drugs: Selection of vehicles based on physicochemical approaches”**

**Oct. 2000** **Meera Rangarajan**, Ph.D. in Pharmaceutics, Advisor: Dr. Joel Zatz. Thesis: “**Effect of Formulation on the Topical Delivery and Metabolism of Alpha-Tocopheryl Acetate and Permeation of Alpha-Tocopherol”**

**Oct. 2000** **Guori Gupchup Malhorta,** Ph.D. in Pharmaceutics, Advisor: Dr. Joel Zatz. Thesis: “Characterization and Enhancement of Nail Permeability”

**Jan. 2000–May 2005** **Thitiwan Burnachokpaisan, M.S.**: Performed research on investigating the effects of cyclosporine formulations on the expression and function of CD36 in THP-1 macrophages.

*Undergraduate Honors Program Students*

**Sept. 2000–May 2004** **Nesreen Eltoukhy**, Pharm.D., Pharmacy Honors Student, Thesis: “Preliminary Investigations into Molecular and Functional Characterization of Putative Peptide/Histidine Transporters.”

**Sept. 2000–May 2004** **Felice Peng**, Pharm.D., Pharmacy Honors Student, Thesis: “Molecular and Functional Characterization of Fatty Acid Translocase/CD36.”

**Sept. 2000–May 2001** **Joseph Rosenblatt**, B.S. in Biology, Department of Life Sciences Honors Research Program, Thesis: “The Development of an *In Vitro* Model to Determine Potential Risk Factor for Atherosclerosis: THP-1 Monocytes Phorbol Induced to Form Responsive Macrophages.”

*Undergraduate Students (Research Advisor)*

**Jan. 2023-present Yuanzhen Huang,** B.S. in Pharmaceutical Sciences

**Aug. 2022-Dec. 2022 Mehar Kaur Chadha,** B.S. in Pharmaceutical Sciences

**Jan. 2022-Dec. 2022 Elexus Goodpaster,** B.S. in Pharmaceutical Sciences

**Aug. 2022-Dec. 2022 Mehar Kaur Chadha,** B.S. in Pharmaceutical Sciences **Jan. 2022-Dec. 2022 Elexus Goodpaster,** B.S. in Pharmaceutical Sciences

**Jan. 2021-Dec. 2021 Zi-Ang (Jason) Chen,** B.S. in Pharmaceutical Sciences

**Jan. 2021-Dec. 2021 Lingwei Liyu,** B.S. in Pharmaceutical Sciences

**Jan. 2021-Present Jordan Keuneke,** B.S. in Pharmaceutical Sciences

**Feb. 2020-May 2020 Alexis Reidel,** B.S. in Pharmaceutical Sciences

**Jan. 2020-June 2020 Yuting Ma**, B.S. Pharmacy, Shenyang University.

**Aug. 2018-May 2019 Madison McAteer,** B.S. in Pharmaceutical Sciences

**May 2018-Aug. 2018 Mark Joseph Schopper**, Pharm.D.

**Jan. 2018-May 2018 Xueqi Wang**, B.S. Pharmacy, Shenyang University.

**Sept. 2016-May 2017 Jeanette Salazar,** B.S. in Pharmaceutical Sciences

**Sept. 2015-May 2017 Ana Hernandez,** Pre-Pharmacy Program

**Sept. 2013-May 2015 Victoria Yao,** B.S. in Pharmaceutical Sciences

**Sept. 2013-May 2015 Chanyu “Layla” Wu,** B.S. in Biology Program

**Sept. 2013-May 2015 Elizabeth Nguyen,** Pre-Pharmacy Program

**June 2012-June 2013 Sylvia Lefebvre,** Pharm.D. Program

**Jan. 2012-May 2012 Somi Ekwealor,** B.S. Pharmaceutical Sciences.

**Nov. 2011-May 2013 Jonathan Delgado,** Pre-Pharmacy Program

**Sept. 2011–Dec. 2012 Dan Sage,** Pharm. D. Program

**Sept. 2010–Oct. 2011 Curtis Theard,** Pre-Pharmacy Program

**Aug. 2009–Dec. 2009 Shuting Huang**, B.S. Pharmaceutical Sciences.

**Jan. 2008–May 2008 Aaron Turner**, Pharm. D. Student

**June 2007–July 2007 Tina Ngangana**, B.S. Pharmaceutical Sciences.

**June 2005–Sept. 2005 Lina Silimkhan**, Pharm. D. Student.

**Sept. 2004–May 2005 Hua Zhang**, Pharm. D. Student.

**June 2004–Dec. 2005 David Watts**, Pharm. D. Student.

**Jan. 2004–Dec. 2004** **Man Yu-Li**, Pharm.D. and Pharmacy Honors Student.

**Jan. 2004–June 2005** **Trixia Camacho**, Pharm. D. Student.

**Jan. 2004–May 2004** **Hua Zhang**, Pharm. D. Student.

**Sept. 2001–May 2002** **Devesh Chaudhari**, Pharm. D.

**Jan. 2001–Sept. 2003** **Kevin Gioia**,B.S. in Biology.

**Sept. 2000–Dec. 2000 George Samman**, Pharm.D.

**Sept. 1999–May 2000** **Alexander Toledo**, B.S. Pharmacy.

**Sept. 1999–May 2000** **Narendra Kuber**, Pharm.D.

**PUBLICATIONS:**

*Refereed Journals*

1. J. Wang, D. Shakleya, G. Giacoia, Z. Rahman, M.A. Khan, **G.T. Knipp**, P.J. Faustino. Bioavailability assessment of a brompheniramine taste-masked pediatric formulation in a juvenile porcine model. (Submitted).
2. V.S. Bebarta, X. Shi, S. Zhang, T.B. Hendry-Hofer, C.C. Severance, M.M. Behymer, G.R. Boss, S. Mahon, M. Brenner, **G.T. Knipp**, V.J. Davisson, R.T. Peterson, C.A. MacRae, J. Rutter, R.E. Gerszten, and A.K. Nath. Intramuscular Administration of Glyoxylate Rescues Swine from Lethal Cyanide Poisoning and Ameliorates the Biochemical Sequalae of Cyanide Intoxication. *Tox Sci.* Nov 3;kfac116. doi: 10.1093/toxsci/kfac116 (2022).
3. M. Behymer, H. Mo, N. Fujii, V. Suresh, A. Chen, J. Lee, A. Nath, K. Saha, S. Mahon, M. Brenner, C.A. MacCrae, R.T. Peterson, G.R. Boss, G.T. Knipp and V.J. Davisson. Identification of Platinum(II) Sulfide Complexes Suitable as Intramuscular Cyanide Countermeasures. *Chem. Res. Tox.* 35(11):1983-1996 (2022).
4. J. Wang, X. Yao, S. Toregrosa-Allen, B.D. Elzey, S. Utturkar, N.A. Lanman, V. Bernal-Crespo, M. Behymer, **G.T. Knipp**, Y. Yun, M.C. Veronesi, A.L. Sinn, K.E. Pollok, R.R. Brutkiewicz, K.S. Nevel, and S. Matosevic. Tumor-responsive, multifunctional CAR-NK cells cooperate with impaired autophagy to infiltrate and target glioblastoma. *Proc. Nat. Acad. Sci. USA*. 118(45):e2107507118 (2021).
5. K.E. Lubin and **G.T. Knipp.** Design of Experiment Based Optimization of an In Vitro Direct Contact Triculture Blood Brain Barrier Model for Permeability Screening. *Pharm. Pharmacol. Int. J.* **9**(4):143-158 (2021).
6. D.J. Lindley, S.M. Carl, S. Mowery, W.J. Roth and **G.T. Knipp.** Evaluation of Human Peptide/Histidine Transporter 1 (hPHT1/SLC15A4) Function: Transport Kinetics Utilizing a HPHT1 shRNA Stably Transfected Knockdown in the hCMEC/D3 Blood-Brain Barrier Cell Line. *Pharm. Pharmacol. Int. J.* **9**(3):109-118 (2021).
7. M. Lavan, X. Wang, R. McCain, A. Jannasch, B. Cooper, S. Hostetler, S. Byrn and **G.T. Knipp**. Development of a Pediatric Mini-Tablet Formulation for Expedited Preclinical Studies. *AAPS PharmSciTech* **22**:40 (2021)
8. Z. Ding, **G.T. Knipp**, R.M. van Rijn, J.A. Chester, and V.J. Watts. The CUL3/neddylation inhibitor MLN4924 reduces ethanol-induced locomotor sensitization and inflammatory pain allodynia in mice. *Behav. Brain Res.* **399**(5):113051 (2021).
9. M. Lavan and **G.T. Knipp**. Considerations for Determining Direct Versus Indirect Functional Effects of Solubilizing Excipients on Drug Transporters for Enhancing Bioavailability. *J. Pharm. Sci.* **109**(6):1833-1845 (2020).
10. M. Lavan, S.R. Byrn, and **G.T. Knipp**. Pediatric Formulations: Knowledge Gaps Limiting the Expedited Preclinical to Clinical Translation in Children. *AAPS PharmSciTech* **20**(2):73 (2019).
11. J. Morningstar, J. Lee, T. Hendry-Hofer, A. Witeof, L.T. Lyle, **G. Knipp**, C. McCrae, G. Boss, R. Peterson, V.J. Davisson, R. Gerszten, V. Bebarta, S. Mahon, M. Brenner, and A. Nath. Intramuscular Administration of Hexachloroplatinate Reverses Cyanide-Induced Metabolic Derangements and Counteracts Severe Cyanide Poisoning. *FASEB BioAdv* **1**(2):81-92 (2019; Epub October 8, 2018; <https://doi.org/10.1096/fba.1024>).
12. M. Lavan and **G.T. Knipp**. Effects of Dendrimer-Like Biopolymers on Physical Stability of Amorphous Solid Dispersions and Drug Permeability across Caco-2 Cell Monolayers. *AAPS PharmSciTech* **19**(6):2459-2471 (2018).
13. N.H. Sulimai, J.C. Ko, Y. Jones-Hall, H.-Y. Weng, M. Deng, G.J. Breur, and **G.T. Knipp**. Pharmacokinetic and Histopathological Evaluation of 25% Poloxamer as a Slow Release Carrier for Morphine in a Rat Model. *Front. Vet. Sci.* **5**: Article 9 (2018).
14. C. Kulczar, K.L. Lubin, S. Lefebvre, D.W. Miller, and **G.T. Knipp**. Development of a Direct Contact Astrocyte-hCMEC/D3 Blood-Brain Barrier Coculture Model. *J. Pharm. Pharmacol.* **69**(12):1684-1696 (2017).
15. J.C. Ko, A.B. Well, S. Levorato, R.R. McCain, **G.T. Knipp**, B. Cooper, A.H. Jannasch, and J.C. Hess. Pharmacokinetics and Behavioral Effects of a Single Application of Transdermal Fentanyl Solution in Laboratory Pigs - A Preliminary Study. *Vet. Anesthesia Analgesia*. **44**(1):195.e3-195.e4 (2017).
16. L.R. Eichstadt, L.A. Corriveau, G.E. Moore, **G.T. Knipp**, B. Cooper, and W.E. Gwin. Absorption of Transdermal Fluoxetine Compounded in a Lipoderm Base Compared to Oral Fluoxetine in Client-Owned Cats. *Int J Pharm Compd* **21**(3):242-246. (2017).
17. R.P. Gala, C. Popescu, **G.T. Knipp**\*, R.R. McCain, R.V. Ubale, R. Addo, T. Bhowmik, C.D. Kulczar, and M.J. D’Souza\*, Physicochemical and Preclinical Evaluation of a Novel Buccal Measles Vaccine. *AAPS PharmSciTech [Pediatric Drug Development and Dosage Form Theme Issue]* **18**(2):1-10 (2017; EPub June 29, 2016; Shared: [http://rdcu.be/ndT7](http://em.rdcu.be/wf/click?upn=KP7O1RED-2BlD0F9LDqGVeSKi8oAPVFJF-2B4EGEP2mJCYQ-3D_bnsPPr4bfnPlZ6hCgw-2BmHwN4SzUob1Zfy2kkxg0YKsL1T6Zq1UDuPd6hYgmWmFEBwiM0r1eUNUufgoOO-2FloN5Uq2jJC8ouuhWG9ENWnOFG-2FvXz7iqtHUdB2KnrbBvmGjnQH6nYQqxMef33eprd2rXzj4PHv07-2BqHGU0F8ye29OKTe3qhDEVGSN93lLEj9F-2Bh13PVtJXXCyPOtADMw6IXOg-3D-3D)).
18. K.L.R. Brouwer, L.M. Aleksunes, B. Brandys, G.P. Giacoia, **G. Knipp**, V. Lukacova, B. Meibohm, S.K. Nigam, M. Rieder and S.N. de Wildt; on behalf of the Pediatric Transporter Working Group. Human Ontogeny of Drug Transporters: Review and Recommendations of the Pediatric Transporter Working Group. *Clin Pharmacol Ther.* **98**(3):266-87 (2015).
19. J.G. Mehtala, C. Kulczar, M. Lavan, **G. Knipp**\* and A. Wei\* (\*-Co-corresponding authors), Cys34-PEGylated Human Serum Albumin for Drug Binding and Delivery. *Bioconjug Chem.* **26**(5):941-949.(2015).
20. A.E. Krasniak, **G.T. Knipp**, C.K. Svensson, and W. Liu. Pharmacogenomics of Acetaminophen in Pediatric Populations: a Moving Target. *Front. Genetics.* **5**(Article 314):1-8 (2014).
21. D.P. Sage, C. Kulczar, W. Roth, W. Liu, and **G.T. Knipp**. Persistent Pharmacokinetic Challenges to Pediatric Drug Development. *Front. Genetics.* **5**(Article 281):1-8 (2014).
22. J. Kim, Y.L. Jones, R. Wei, J. Myers, Y. Qi, **G.T. Knipp**, and W. Liu. hTERT rs2736100 Polymorphism Is Associated with Sensitivity to Telomerase Inhibitor and Antimitotic Agents in Cancer Cells. *Front. Genetics.* **4**(Article 162):1-6 (2013).
23. W.J. Roth, C.B. Kissinger, R.R. McCain, B.R. Cooper, J.N. Marchant-Forde, R.C. Vreeman, S. Hannou, and **G.T. Knipp**. Assessment of Juvenile Pigs to Serve as Human Pediatric Surrogates for Preclinical Formulation Pharmacokinetic Testing. *AAPS J.* *[Theme Issue: Challenges and Opportunities in Pediatric Drug Development]* **15**(3):763-774 (2013; EPub: April 18, 2013).
24. S. Abdel-Rahman, G.L. Amidon, A. Kaul, V. Lukacova, A.A. Vinks, **G.T. Knipp**, and the Members of the BCS Task Force. Summary of the NICHD-BPCA Pediatric Formulation Initiatives Workshop-Pediatric Biopharmaceutics Classification System (PBCS) Working Group. *Clin. Ther.* **34**(11S):S11-S24 (2012).
25. R. Kulkarni, N. Yumibe, Z. Wang, X. Zhang, C.C. Tang, K. Ruterbories, A. Cox, R. McCain and **G.T. Knipp**. Comparative Pharmacokinetic Studies of Immediate and Modified Release Formulations of Glipizide in Pigs and Dogs. *J. Pharm. Sci.* **101**(11):4327-4336 (2012; EPub August 19, 2012).
26. W.J. Roth, D.J. Lindley, S.M. Carl and **G.T. Knipp.** The Effects of Intra-Laboratory Modifications to Media Composition and Cell Source on the Expression of Pharmaceutically Relevant Transporters and Metabolizing Genes in the Caco-2 Cell Line. *J. Pharm. Sci.* **101**(10):3962-3978 (2012; EPub: July 11, 2012).
27. D.J. Lindley, W.J. Roth, S.M. Carl and **G.T. Knipp.** The Effects of Media on Pharmaceutically Relevant Transporters in the Human HT-29 Adenocarcinoma Cell Line: Does Culture Media Need to be Controlled? *J. Pharm. Sci.* **101**(4):1616-1630 (2012; EPub: Dec 28, 2011).
28. A. Newman, **G. Knipp** and G. Zografi. Commentary: Assessing the Performance of Amorphous Solid Dispersions. *J. Pharm. Sci.* **101**(4):1355–1377 (2012; EPub: Dec. 27, 2011).
29. J.N. Marchant-Forde, D.L. Matthews, R. Poletto, R.R. McCain, D.D. Mann, R.T. McGraw, J. Hampsch, S. Peters, **G.T. Knipp** and C.B. Kissinger. Plasma Cortisol and Noradrenalin Concentrations in Pigs: Automated Sampling of Freely Moving Pigs Housed in the PigTurn® Versus Manually Sampled and Restrained Pigs. *Anim. Welfare*. **21**(2):197-205 (2012).
30. D.J. Lindley, S.M. Carl, S. Mowery, and **G.T. Knipp.** The Evaluation of Peptide/Histidine Transporter 1 (PHT1) Function: Uptake Kinetics Utilizing a COS-7 Stably Transfected Cell Line. *Revista Mexicana De Ciencias Farmaceuticas* **42**(4):57-65 (2011; http://www.redalyc.org/revista.oa).
31. S.M. Carl, D.J. Lindley, D. Das, P.O. Couraud, B. Wekslar, I. Romero, S. Mowery and **G.T. Knipp.** ABC and SLC Transporter Expression and Proton Oligopeptide Transporter (POT) Mediated Permeation across the Human Blood-Brain Barrier Cell Line, hCMEC/D3. *Mol. Pharm.* **7**(4):1057-1068 (2010; EPub: June 5, 2010).
32. G. Latini, **G. Knipp**, A. Mantovani, M.L. Marcovecchio, F. Chiarelli, O. Soder. Endocrine Disruptors and Human Health. *Mini-Rev. Med. Chem.* **10**(9):846-855. (2010).
33. J. Goole, D.J. Lindley, W. Roth, S.M. Carl, K. Amighi, J.-M. Kauffmann, and **G.T. Knipp**. The Effects of Excipients on Transporter Mediated Absorption. *Int. J. Pharm.* **393**(1-2):17-31 (2010).
34. Y. Xu, S. Agarwal, T.J. Cook, and **G.T. Knipp**. Maternal Di-(2-ethylhexyl)-Phthalate Exposure Influences Essential Fatty Acid Homeostasis in the Rat Placenta. *Placenta* **29**:962–969 (2008).
35. Y. Xu, Q. Wang, T.J. Cook, and **G.T. Knipp**, Effect of Placental Fatty Acid Metabolism and Regulation by Peroxisome Proliferator Activated Receptors on Pregnancy and Fetal Outcomes., *J. Pharm. Sci.* **96**:2582-2606 (2007; EPub June 4, 2007)*.*
36. A.S. Mathis, S. Jin, G.S. Friedman, F. Peng, S.M. Carl, and **G.T. Knipp.** The Pharmacodynamic Effects Sirolimus and Sirolimus-Calcineurin Inhibitor Combinations on Macrophage Scavenger and Nuclear Hormone Receptors. *J. Pharm. Sci.* **96**:209-222 (2007; Epub, Oct. 9, 2006).
37. Y. Xu, S. Agarwal, T.J. Cook, and **G.T. Knipp**. Di-(2-ethylhexyl)-Phthalate Affects Lipid Profiling in Fetal Rat Brain upon Maternal Exposure. *Arch. Toxicol.* **81**:57-62 (2007; Epub, Sept 2, 2006).
38. Y. Xu, **G.T. Knipp**, and T.J. Cook. Effects of Di-(2-ethylhexyl)-Phthalate and Its Metabolites on the Lipid Profiling in Rat HRP-1 Trophoblast Cells. *Arch. Toxicol. Sci.* **80**:293-298 (2006).
39. R.K. Bhardwaj, D.R. Herrera-Ruiz, N. Eltoukhy, M. Saad, and **G.T. Knipp**. The Functional Evaluation of Human Peptide/Histidine Transporter 1 (HPHT1) in Transiently Transfected COS-7 Cells. *Eur. J. Pharm. Sci.* **27**:533-542 (2006).
40. Y. Xu, T.J. Cook and **G.T. Knipp**. Methods for Investigating Placental Fatty Acid Transport. *Methods Mol Med.* **122**:265-284 (2006).
41. Y. Xu, **G.T. Knipp**, and T.J. Cook.Expression of Cyclooxygenase Isoforms in Developing Rat Placenta, Human Term Placenta and BeWo Human Trophoblast Model. *Mol. Pharm.* **2**:481-490 (2005).
42. R.K. Bhardwaj, D. Herrera-Ruiz, P.J. Sinko, O.S. Gudmundsson, and **G.T. Knipp**. Delineation of HPEPT1 Meditated Uptake and Transport of Substrates with Varying Transporter Affinities Utilizing Stably Transfected HPEPT1/MDCK Clones and Caco-2 Cells. *J. Pharmacol. Exp. Ther.* **314**:1093-1100 (2005).
43. Y. Xu, T.J. Cook, and **G.T. Knipp**. Effects of Di-(2-ethylhexyl)-Phthalate (DEHP) and its Metabolites on Fatty Acid Homeostasis Regulating Proteins in Rat Placental HRP-1 Trophoblastic Cells. *Toxicological Sci.* **84**:287-300(2005).
44. Y. Xu, **G.T. Knipp**, and T.J. Cook. Expression of CYP4A Isoforms in Developing Rat Placenta Tissue and Trophoblast Cell Models. *Placenta* **26**(2-3):218-225 (2005).
45. Q. Wang, D. Herrera-Ruiz, T.J. Cook,A.S. Mathis, R.K. Bhardwaj, and **G.T. Knipp**. Expression of Fatty Acid Transferring Proteins, PPAR and RXR Isoforms in the Rat and Human Gastrointestinal Tracts. *J. Pharm. Sci.* **94**(2):363-372 (2005).
46. Q. Wang, R.K. Bhardwaj, D.R. Herrera-Ruiz, N. Hanna, I. Hanna, O.S. Gudmundsson, T. Buranachokpaisan, I.J. Hidalgo, and **G.T. Knipp.** Expression of Multiple Drug Resistance Conferring Proteins in Normal Chinese and Caucasian Small and Large Intestinal Tissues Samples. *Mol. Pharm.* **1**(6):447-454 (2004).
47. S. Jin, A.S. Mathis, K. Gioia, T. Minko, G.S. Friedman, J.A. Rosenblatt, F. Peng, D. Serur, and **G.T. Knipp**. Effect of Tacrolimus on the Expression of Macrophage Scavenger and Nuclear Hormone Receptors in THP-1 Derived Human Macrophages. *Transplantation* **77**:1281-1287 (2004).
48. D. Herrera, T.N. Faria, R.K. Bhardwaj. J. Timoszyk, R.L. Smith, D. Wall, O.S. Gudmundsson P. Moenech, and **G.T. Knipp**. A Novel hPEPT1 Stably Transfected Cell Line: Establishing a Correlation between Expression and Function. *Mol. Pharm.* **1**(2):136-144 (2004).
49. A.S. Mathis, N. Dave, **G.T. Knipp**, and G.S. Friedman. Drug-Related Dyslipidemia after Renal Transplantation. *Amer. J. Health-System Pharm.* **61**(6):565-585 (2004).
50. S. Jin, A.S. Mathis, J.A. Rosenblatt, T. Minko, G.S. Friedman, K. Gioia, D. Serur, and **G.T. Knipp**. Insights into Cyclosporine A-Induced Atherosclerotic Risk in Transplant Recipients: Macrophage Scavenger Receptor Regulation. *Transplantation* **77**:497-504 (2004).
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53. G. Williams, A. Liu, **G.T. Knipp**, and P.J. Sinko. Direct Evidence that Saquinavir is Transported by Multidrug Resistance-Associated Protein (MRP1) and Cannalicular Multispecific Organic Anion Transporter (MRP2). *Antimicrob. Agents Chemother.* **46**:3456-3462 (2002).
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61. **G.T. Knipp**, K.L. Audus, and M.J. Soares. Nutrient Transport Across the Placenta. *Adv. Drug Del. Rev.* **38**:41-58 (1999).
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*Invited Commentaries or Editorials*

1. W.J. Roth, D.P. Sage, C. Kulczar, W. Liu, and **G.T. Knipp**. Editorial: Perspectives on Pediatric Drug Development. *Revista Mexicana De Ciencias Farmaceuticas* **43**(3):5-6 (2012; http://www.redalyc.org/revista.oa).
2. A.S. Mathis and **G.T. Knipp**. Focused Areas for Advancing Stem Cell Research. *Journal of the Stem Cell Research*. **2**:[Editorial, [*www.NJSCREF.org*](http://www.NJSCREF.org)] (Posted July 2004).
3. **G.T. Knipp** and A**.**S. Mathis. Calcineurin Inhibitors and Post-Transplant Atherosclerosis. *International Atherosclerosis Society (www.athero.org)*, [May 2004, Invited Commentary].

Book Chapters:

*Invited Chapter*

1. Revised by M. Behymer and **G.T. Knipp.** First Edition: D.J. Lindley, S.M. Carl, D.R. Herrera-Ruiz, L.-F. Pan, L.B. Ward, J.M.E. Goole, O.S. Gudmundsson, and **G.T. Knipp**. Chapter 24: Drug Transporters and Their Role in Absorption and Disposition of Peptides and Peptide Based Pharmaceuticals. In *Oral Bioavailability: Basic Principles, Advanced Concepts and Applications, 2nd Edition.* Eds. M. Hu and X. Li. In the Wiley Series on Drug Discovery and Development, Series Ed. B. Wang, John Wiley & Sons, New York, NY. pp. XXX-YYYY (2023).
2. S.M. Carl, D.R. Herrera-Ruiz, R.K. Bhardwaj, O.S. Gudmundsson, S.M. Mowery and **G.T. Knipp**. Chapter 6: Mammalian Oligopeptide Transporters. In *Drug Transporters: Molecular Characterization and Role in Drug Disposition. 3rd Edition.* Editors G. You and M. Morris. John Wiley & Sons, New York, NY. pp. 113-142 (2022).
3. R.P. Gala, L. Bajaj, A. Bansal, K.B. Gomes, D. Joshi, I. Menon, R.U. Zaman, S.M. Zughaier, M. D’Souza, C. Popescu, N. D’Souza, **G.T. Knipp**, and M.J. D’Souza. Oral Vaccine Delivery: The Coming Age of Particulate Vaccines to Elicit Mucosal Immunity. In: Muttil P., Kunda N. (eds) *Mucosal Delivery of Drugs and Biologics in Nanoparticles. AAPS Advances in the Pharmaceutical Sciences Series, Vol. 41.* Springer, Cham, Switzerland. pp 155-175 (2020).
4. S.M. Carl, D.R. Herrera-Ruiz, R.K. Bhardwaj, O.S. Gudmundsson, and **G.T. Knipp**. Chapter 6: Mammalian Oligopeptide Transporters. In *Drug Transporters: Molecular Characterization and Role in Drug Disposition. 2nd Edition.* Editors G. You and M. Morris. John Wiley & Sons, New York, NY. pp. 67-90 (2014).
5. D.J. Lindley, S.M. Carl, D.R. Herrera-Ruiz, L.-F. Pan, L.B. Ward, J.M.E. Goole, O.S. Gudmundsson, and **G.T. Knipp**. Chapter 18: Drug Transporters and Their Role in Absorption and Disposition of Peptides and Peptide Based Pharmaceuticals. In *Oral Bioavailability: Basic Principles, Advanced Concepts and Applications.* Eds. M. Hu and X. Li. In the Wiley Series on Drug Discovery and Development, Series Ed. B. Wang, John Wiley & Sons, New York, NY. pp. 291-308 (2011).
6. R.K. Bhardwaj, D.R. Herrera-Ruiz, Y. Xu, S.M. Carl, T.J. Cook, N. Vorsa, and **G.T. Knipp**. Chapter 7: Intestinal Transporters in Drug Absorption. In *Biopharmaceutics Applications in Drug Development.* Editors R. Krishna and L. Yu, Kluwer Press, New York, NY, pp. 175-261 (2008).
7. S.M. Carl, D.J. Lindley, **G.T. Knipp**, K.R. Morris, E. Oliver, G.W. Becker and R.A. Arnold. Biotechnology Drug Product Development. In *Pharmaceutical Manufacturing Handbook*, Editor S.H. Gad, John Wiley & Sons, New York, NY, pp. 1-32 (2008). [DOI: 10.1002/9780470259818.ch1; Republished in a Wiley Special Edition Series *“Pharmaceutical Sciences Encyclopedia: Drug Discovery, Development, and Manufacturing*.” DOI: 10.1002/9780470571224.pse340 1-26 (2010)]
8. E. Oliver, S.M. Carl, K.R. Morris, G.W. Becker and **G.T. Knipp**. Regulatory Considerations in the Approval of Follow-On Protein Drug Products. In *Pharmaceutical Manufacturing Handbook*, Editor S.H. Gad, John Wiley & Sons, New York, NY, pp. 33-57 (2008). [DOI: 10.1002/9780470259818.ch2;Republished in a Wiley Special Edition Series entitled *“Pharmaceutical Sciences Encyclopedia: Drug Discovery, Development, and Manufacturing*.” 1–32 (2010)]
9. S.M. Carl, D.R. Herrera-Ruiz, R.K. Bhardwaj, O.S. Gudmundsson, and **G.T. Knipp**. Chapter 6: Mammalian Oligopeptide Transporters. In *Drug Transporters: Molecular Characterization and Role in Drug Disposition.* Editors G. You and M. Morris. John Wiley & Sons, New York, NY. pp 105-146 (2007).

*Edited Textbook Chapters*

1. C. Kulczar, W.J. Roth, S M. Carl, O.S. Gudmundsson, and **GT. Knipp**. Peptide and Protein Drug Delivery. In *Drug Delivery.* Eds. A.K. Mitra, D. Kwatra, and A.D. Vadlapudi. Jones & Bartlett Learning, LLC., Burlington, MA, pp 403-428 (2014).
2. A. Newman and **G.T. Knipp**. Chapter 2: States of Matter Related to Pharmaceutical Formulations. In: *Applied Physical Pharmacy, Second Edition.* Editors: Mansoor Amiji, Thomas J. Cook, and W. Cary Mobley. McGraw-Hill Education, New York, NY, pp 15-39 (2014).
3. *Martin’s Physical Pharmacy and Pharmaceutical Sciences, Fifth Edition.* Editor Patrick J. Sinko. Lippincott, Williams & Wilkins, Baltimore, MD, (2006).
	* 1. **G.T. Knipp** and K.R. Morris, Chapter 2: States of Matter.
		2. H. Morelos, D. Herrera-Ruiz, and **G.T. Knipp**, Chapter 3: Thermodynamics.
		3. **G.T. Knipp**, H. Morelos and D. Herrera-Ruiz, Chapter 4: Physical Properties of Drug Molecules.

**Patents (Issued):**

1. Dea Herrera‑Ruiz and **Gregory T. Knipp**, Filing date: May 31, 2001, Issued: January 27, 2004. U.S. Patent #6,683,169: “Nucleic Acid Encoding the Human Peptide Histidine Transporter 1 and Methods of Use Thereof.”
2. Aimable Ngendahimana, Christopher D. Kulczar, Monika Lavan, Kelsey E. Lubin, and **Gregory T. Knipp**. Filing date: September 7, 2017, Issued December 29, 2020. U.S. Patent #10,877,026 [Application Number 15/697,699]: “Blood Brain Barrier Models and Methods to Generate and Use the Same.”

**Patents (Submitted and Provisional):**

1. Kelsey E. Lubin, and Gregory T. Knipp. Entitled: “An Optimized In Vitro Cellular System for BBB Linked Neuroactivity Screening.” Provisional Patent Application No. 17004080, Submitted August 27, 2020 (Combined the previous)
2. Kelsey E. Lubin, and Gregory T. Knipp. Entitled: “An Optimized In Vitro Cellular System for BBB Linked Neuroactivity Screening.” Provisional Patent Application No. 62893522, Submitted August 29, 2019
3. Kelsey E. Lubin, and Gregory T. Knipp. Entitled: “A Multi-Cellular Neurovascular Unit (NVU) System for Blood Brain Barrier (BBB) Permeability Linked Neuroactivity Screening.” Provisional Patent Application No. 62894079, Submitted August 30, 2019.

**GenBank Sequences:**

1. **G.T. Knipp** and D. Herrera-Ruiz, **52 sequences** deposited and published in GenBank corresponding to the novel Human Peptide/Histidine Transporter 1 and its splice variants from Caco-2 and BeWo Cells, Accession Numbers: AR455188-AR455239 (2004).
2. N. Shagal, **G.T. Knipp**, B. Liu, B. Chapman, G. Dai, and M.J. Soares. Four new sequences deposited and published in GenBank corresponding to the mRNA of Rattus norvegicus proliferin-related protein (Plfr) and Rattus norvegicus prolactin-like protein F (Prlfp), Accession Numbers: AF139808 (2000), AF139809 (2000), NM\_022530 (2004) and NM\_053364 (2004).

**INVITED AND ORGANIZED PRESENTATIONS:**

1. “Pediatric Formulation Development: The Utility of the Juvenile Porcine Model for Preclinical Pharmacokinetic Assessment” Presented at the 19th Annual Congress of International Drug Discovery Science and Technology 2023 (IDDST 2023), Tokyo, Japan, May 8-10, 2023
2. “Preclinical Assessment of Pediatric Minitabs of Lapatanib in the Juvenile Porcine Model” Presenter and Session Chair of the Online Session: Cancers and Tumors (Part II), Global Congress on Pharmaceutical Sciences and Clinical Research 2023 Hybrid Meeting, Tokyo, Japan, March 28, 2023
3. “Challenges in the Preclinical Development of Pediatric Formulations: The Utilization of the Juvenile Porcine Model for PK/PD Evaluation.” Universidad Autónoma del Estado de Morelos, in Cuernavaca, Morelos, México. Hosted by Dea Herrera-Ruiz and the Facultad de Farmacia Commemorating the 25th Anniversary of the College of Pharmacy. March 13-15, 2023.
4. “In Vitro Neurovascular Unit Model: Assessing Permeability-Linked Neuroactivity” Hosted by Dr. Aaron Bowman, 2019 Parkinson Interest Group Meeting, West Lafayette, IN, October 2019.
5. “Establishing a Physiologically Relevant In Vitro BBB Permeability and Neuroactivity Screening Model” Hosted by BioCrossroads, 2019 Life Sciences Summit, Indianapolis, IN, September 2019.
6. “Mini-tablet Formulations and Pharmacokinetics in the Porcine Model: Expediting Pediatric Drug Development.” Hosted by Dr. Scott Hostetler, Elanco, Greenfield, IN, July 5, 2018.
7. “Inert or Functional Pharmaceutical Excipients: Reviewing the Fundamental Basis for Risk in Pediatric and Adult Formulations” Hosted by Dr. Sophie-Dorothee Clas, 2016 M3 Conference: Molecules, Materials, Medicines, Solomons Island, MD. May 2016.
8. “Elucidating Peptide Permeation Pathways Across *In Vitro* Models of the Gastrointestinal Epithelial and Blood-Brain Barriers.” A Tribute to Ronald T. Borchardt, The University of Kansas, Lawrence, KS, October 2015
9. Universidad Autónoma del Estado de Morelos, in Cuernavaca, Morelos, México. Hosted by the AAPS Student Chapter and the Facultad de Farmacia. Presented a short course entitled “Current Trends, Risks, and Opportunities in the Preclinical Translation of Novel Therapeutic Agents.” September 2015.
10. Mexican National Association of Farmacia, Hosted by Dr. Dea Herrera-Ruiz, "Treating Therapeutic Orphans: Preclinical Challenges to Pediatric Drug Development." 2015 Mexican National and International Congress of Pharmaceutical Sciences, Cancun, Quintana Roo, Mexico, September, 2015.
11. Eli Lilly Co., Indianapolis, IN. Hosted by Kaoutar Abbou Oucherif. “Risks and Challenges Associated with Pediatric Drug Development: What Role Should/Could Academia Play?” April 22, 2015.
12. “Evaluation of the Porcine Model for the Determination of Human Pharmacokinetics”, Invited by Dr. Tonglei Li, Presented at Purdue’s 2015 Symposium on Digital Human for Drug Development (DHD2), West Lafayette, IN, February 25, 2015.
13. “Pediatric Formulation and Regulatory Challenges: An Academic Perspective.” Presented at The Industry¹s Technical and Regulatory Path Forward for Pediatric Formulations Short Course, ExL Pharma’s 4th Drug Formulation & Bioavailability: Breakthrough Techniques in Optimizing the Screening, Delivery, Solubility, and Stability of Drugs and Biologics to Enhance Product Life Cycles, Boston, MA, January 26, 2015.
14. “Solubility Enhancing Excipients Functional Effects on Drug Transporters and Metabolizing Enzymes: In Vitro Folklore or In Vivo Reality?” Presented in the AAPS Sunrise Session entitled: “The Excipient Paradox—Interaction of Solubilizing Excipients with Metabolizing Enzymes and Transporters.” 2014 American Association of Pharmaceutical Scientists Annual Meeting, San Diego, CA, November 5, 2014.
15. Development of Pediatric Formulations: Challenges and Opportunities. “Pediatric Clinical Pharmacology and Development: Assessing the Juvenile Swine as a Preclinical Animal PK Model.” 49th AAPS Arden Conference, Rockville, MD. February 24-26, 2014.
16. The 4th Yao Yuan Biotech-Pharma International Symposium Global Coalition: A Synergistic Path to Biopharma Innovation. Hosted by Gui-Dong Liu, Director of the Yao Yuan Biotech-Pharma Consortium, and Professor Ya Cao, Deputy Director, Cancer Research Institute, Central South University. “Performing Pharmacokinetic Studies in the Juvenile and Adult Domesticated Swine: Does the PK Resemble Human Parameters?”, Changsha, China, November 2012.
17. An Introduction to Reduced Stress Pharmacological Research in Swine Utilizing Automated Blood Sampling. Hosted by Mrs. Robyn McCain, Purdue Translational Pharmacology CTSI Core. “An Evaluation of the Juvenile Porcine Model for Pediatric Formulation Development.” West Lafayette, IN, October 2012.
18. Organized and Moderated a Short Course on “Mechanistic Oral Absorption Modeling.” West Lafayette, IN, July 23-24, 2012.
19. Mechanistic Oral Absorption Short Course, Moderated by Drs. Manuel Sanchez-Felix, Michael Bolger, John Rose, and Gregory Knipp. Presented “Introduction to Physiological Rate Determining Steps Governing Oral Absorption.” July, 2012
20. Science on Tap Presentation, West Lafayette, IN. Hosted by Ms. Rebecca Scott. “Therapeutic Orphans: Investigating New Ways to Expedite Pediatric Medicine Development.” June, 2012
21. SSCI-Aptuit, Inc., West Lafayette, IN. Hosted by Dr. Lisa McQueen. “Elucidation of Physiologically Relevant, Rate Determining Steps Governing Oral Absorption.” February 2012.
22. The University of Georgia, Athens, GA. Hosted by Dr. Robert Arnold. “The Affects of DEHP on the Essential Fatty Acid Disposition in the Rat Placenta and Developing Fetus.” November 2011
23. The 2011 June Land of Lakes Research and Development Conference. Merrimac, WI. Hosted by Dr. Al Hanson. “Intestinal Drug Absorption as it Applies to the BCS: Considerations Regarding the Physiological Rate-Determining Factors that Impact Human Drug Absorption.” June 2011.
24. Corso di Aggiornamento "Ricerca, tecnologia e sviluppo." Mesagne, Italy. Hosted by Dr. Giuseppe Latini, “The Affects of DEHP and BPA on Placental Fatty Acid Homeostasis: A Biochemical Basis for Toxicity.” June 2010
25. Eli Lilly Co., Indianapolis, IN. Hosted by Rajesh Kulkarni. “An Academic’s Perspective on the Impact of Physiology from Lead Optimization to Dosage Form Design.” February 2010.
26. AAPS Student/Postdoctoctorate Outreach and Development Committee Roundtable Presentation. Seattle, WA. “Interviewing and Networking Skills: An Academic’s Perspective.**”** 2009 Annual AAPS National Biotechnology Conference, June 2009.
27. SSCI-Aptuit, Inc., West Lafayette, IN. Hosted by Dr. David Engers. “Discovery Pharmaceutics: Physiological Considerations for Effective Drug Delivery.” May 2009
28. Université Louis Pasteur, Strasbourg, France. Hosted by Dr. Valerie Schini, “Obtaining Graduate and Post Graduate Studies in the United States: Insights into Tailoring Your Search for a Position.” Presented with Dr. Rodolfo Pinal to Dr. Schini’s Laboratory, October 2008.
29. Université Louis Pasteur, Strasbourg, France. Hosted by Dr. Valerie Schini, “The Importance of Discovery Pharmaceutics: Physiological Considerations in Drug Dosage Formulation Design.” Presented to Dr. Schini’s Laboratory, September 2008.
30. Université Louis Pasteur, Strasbourg, France. Hosted by Dr. Nathalie Boulanger, “Counterfeit Medicines: Reality and Myth Collides.” Roundtable Discussion Presented with Dr. Rodolfo Pinal to Graduate Students and the Faculty of Pharmacy, September 2008.
31. Université Louis Pasteur, Strasbourg, France. Hosted by Dr. Nathalie Boulanger, “Delineating the Molecular and Functional Characteristics of Intestinal Oligopeptide Transport.” Seminar Presented to Graduate Students and the Faculty of Pharmacy, September 2008.
32. National Research Council of Italy, Perrigrino Hospital Obstetricians and Gynecologists and the University of Lecce, Italy. Lecce, Italy. Hosted by Dr. Giuseppe Latini, “Effects of Di-(2-ethylhexyl)-phthalate (DEHP) and Selective Metabolites and Bisphenol A on Placental Fatty Acid Homeostasis.” Seminar and Roundtable Discussion with Attending Members. September 2008.
33. Université Libré Bruxelles, Brussels, Belgium. Hosted by Drs. Karim Amighi and Jean-Michel Kauffman. “Effects of Di-(2-ethylhexyl)-phthalate (DEHP) and Selective Metabolites on Placental Fatty Acid Homeostasis. Seminar Presented to Graduate Students and the Faculty of Pharmacy, September 2008.
34. Universidad Autónoma del Estado de Morelos, in Cuernavaca, Morelos, México. Hosted by Efrén Hernández Baltazar, “Pharmaceutically Relevant Transporters: Impact of Their Physiological and Functional Characteristics on Dosage Form Performance.” Colloquio Internacional: Retos e Innovciones en la Investigación Farmacéutica, March 2008.
35. Mexican National Association of Farmacia, Hosted by Dr. Dea Herrera-Ruiz, "Drug Transport across the Placenta." Mexican XL National and International Congress of Pharmaceutical Sciences, Merida, Yucatan. November, 2007.
36. Mexican National Association of Farmacia, Hosted by the Universidad Autónoma del Estado de Morelos AAPS Student Chapter, "Opportunities to Enhance Outreach and Professional Development in a Global Environment". XL National and International Congress of Pharmaceutical Sciences, Merida, Yucatan. November, 2007.
37. Department of Medicinal Chemistry and Molecular Pharmaceutics, School of Pharmacy and Pharmaceutics, Purdue University, West Lafayette, IN. Hosted by Dr. Val Watts, Presented a Departmental Seminar entitled: “Di-(2-Ethylhexyl)-Phthalate (DEHP) and Selective Metabolites Affect Placental Fatty Acid Homeostasis: A Potential Contributing Mechanism to Reproductive Toxicology.” October 2007.
38. Organized and moderated a session entitled: “Impact of Design Space Philosophy & PAT on Process Validation for Biotechnology Products.**”** Under the Commercialization of Biologicals Symposium held at the 234th ACS National Meeting, Boston, MA, August 2007.
39. Johnson & Johnson Pharmaceutical Research & Development, L.L.C., Hosted by Dr. Denita Winstead, Spring House, PA. “Can a Better Understanding of the Physiological and Functional Characteristics of Pharmaceutically Relevant Transporters Aid in Optimizing Dosage Design?” March 2007.
40. Universidad Autónoma del Estado de Morelos, in Cuernavaca, Morelos, México. Hosted by the AAPS Student Chapter and the Facultad de Farmacia. Presented a short course entitled “Pharmaceutically Relevant Transporters: A Brief Introduction into Their Physiological and Functional Significance.” November 2006.
41. Regenstrief Healthcare Engineering Symposium, Purdue University, Hosted by Regenstrief Advisory Committee, West Lafayette, IN. “Biologically Derived Product Development”, October 2006.
42. Organized and Moderated a Round Table Session, Nashville, TN. “Exploring the Patent Process from Both the Academic and Industrial Perspectives” 2005 AAPS Annual Meeting, November 2005.
43. Purdue University, Hosted by Dr. Kenneth R. Morris, West Lafayette, IN. “Delineation of Peptide Transport Pathways across the Human Intestinal Epithelium.” July 2005.
44. Moderator, San Francisco, CA. “2005 National Biotechnology Conference Graduate Student Symposium.**”** 2005 AAPS National Biotechnology Conference, June 2005.
45. Organized and Moderated a Round Table Session, San Francisco, CA. “Regenerative Medicine: Alternatives to Embryonic Stem Cells.**”** 2005 AAPS National Biotechnology Conference, June 2005.
46. American Chemical Society's Middle Atlantic Regional Meeting (MARM), Piscataway, NJ. “Perspectives into the Molecular and Functional Characteristics of Intestinal Oligopeptide Transporters.” May 2005.
47. The University of Maryland, Hosted by Dr. Peter Swaan, Baltimore, MD. “Effects of di-(2-ethylhexyl)-phthalate (DEHP) and selective metabolites on placental fatty acid homeostasis.” April 2005.
48. Novartis Pharmaceuticals Corporation, East Hanover, NJ. Hosted by Dr. Yatindra Joshi, East Hanover, NJ. “Pharmaceutically Relevant Transporters: A Brief Introduction into Their Physiological and Functional Significance.” March 2005
49. The 37th Annual Higuchi Research Seminar, Hosted by Dr. Howard Rytting, Lawrence, Kansas. Moderator of the Molecular Approaches to Drug Delivery Session. Seminar: “Molecular and Functional Characterization of Intestinal Oligopeptide Transporters.” May 2004.
50. The University of Kansas Medical Center, Kansas City, KS. Hosted by Dr. Michael J. Soares. “Do Xenobiotics Alter the Molecular and Functional Characteristics of Placental Fatty Acid Transfer?” April 2004.
51. Universidad Autónoma del Estado de Morelos, in Cuernavaca, Morelos, México. Hosted by the Facultad de Farmacia. Presented a short course entitled “A Brief Introduction into the Molecular and Functional Aspects of Pharmaceutically Relevant Transporters.” January 2004.
52. Centro de Investigación Farmacológica y Biotecnológica, Fundación Médica Sur, in Mexico City, México. Hosted by Dr. Jorge Luis Poo, Medical Director. “Investigations into the Molecular and Transport Characteristics of Established and Putative Peptide Transporters.” January 2004.
53. Universidad Autónoma del Estado de Morelos, in Cuernavaca, Morelos, México. Hosted by the Facultad de Farmacia. “Placental Fatty Acid Homeostasis: Can Xenobiotics Influence Maternal to Fetal Fatty Acid Exchange?” January 2004.
54. Organized and Moderated a Round Table Session, Salt Lake City, UT. “Pharmaceutical Biotechnology of Drug Transporters in ADME: Current Insights into Tissue Specific Transporters.**”** 2003 Annual AAPS National Meeting and Exposition, November 2003.
55. A.S. Mathis and G.T. Knipp. “Modulation of CD36 and PPARγ by Immunosuppressive Agents.” Joint Meeting of the Ernest Mario School of Pharmacy Trustees Advisory Committee and Advisory Associates, Winants Hall, New Brunswick, NJ, April 2003.
56. The Center for Child and Reproductive Environmental Health and Core I of the NIEHS Center Noon Discussion Group. Co-presented with Dr. Thomas Cook, “Fatty Acid Transport and Regulation in the Human and Rat Placentas.” December 2002.
57. Environmental and Occupational Health Sciences Institute, EOHSI Noon Discussion Group Core I. "Immunosuppressive Regulation of Macrophage Scavenger Receptors: Potential Insights into the Observed Clinical Outcomes of Transplant Recipients." September 2002.
58. The University of Connecticut (Department of Pharmaceutics), Hosted by Dr. R.G. Bogner, “Investigations into the Molecular and Transport Characteristics of Established and Putative Peptide Transporters.” April 2002.
59. New Jersey Network, Public Access Television. Program: “Inside Science - Frontiers in Pharmaceutical R & D”, Host: Patrick Regan, Guest Panelist with Dr. Claude Benedict, Sr. Vice President of Preclinical Development at Aventis Pharmaceuticals. April 2002.
60. Rutgers University, 2001 Pharmaceutics Conference, Department of Pharmaceutics, Organized by Dr. T.J. Cook, “Novel Insights into Regional Peptide and Peptide-Based Transporter Expression in the Human Intestinal Tract.” November 2001.
61. Ohio State University (Department of Pharmaceutics), Hosted by Dr. W.L. Hayton, “Regional Patterns of Pharmaceutically Relevant Transporter Expression in the Human Intestinal Tract.” June 2001.
62. Bristol-Myers Squibb Research Institute, (Exploratory Biopharmaceutics and Drug Delivery), Hosted by Dr. R.L. Smith. “Spatial Patterns of Peptide and Fatty Acid Transporter Expression in Intestinal Tissue: Placing Physiology First to Provide Insights into the Potential for Rational Formulation and Drug Design Strategies.” December 2000.
63. Cook College, Rutgers University, Department of Nutrition, Hosted by Dr. Judith Storch, “Insights into Placental Fatty Acid Transfer: Temporal and Spatial Patterns of Expression of Proteins in the Rat and Human Placentas.” April 2000.

Outreach Presentations

1. West Lafayette High School, HOSA Club, Invited by Ms. Irene Bhunia, West Lafayette, IN. “Academic Research and Discovery: Addressing Therapeutic Challenges in the 21st Century.” September 2020.
2. Purdue Retirees Association, Monthly Luncheon Seminar, Invited by Mrs. Jane Brown, Lafayette, IN. “Challenges of Effective Therapeutic Delivery to Mitigate Neurodegenerative Disorders.” March 2020.
3. Purdue University, Science Upward Bound Outreach Program, Invited by Dr. Cynthia Koh-Knox, School of Pharmacy and Pharmaceutical Sciences, West Lafayette, IN. “Career Opportunities in the Pharmaceutical Sciences: Unlock Your Potential at Purdue.” July 2009
4. AAPS SPOD Committee Community Outreach, Ruben H. Fleet Science Center, Hosted by Julie Lawrence, Program Director of the Science Department, San Diego, CA. Presented: “Roundtable Discussion: Choosing a Career in Pharmaceutical Sciences that is Right for You”, November 2007.
5. AAPS SPOD Committee Community Outreach, Ruben H. Fleet Science Center, Hosted by Julie Lawrence, Program Director of the Science Department, San Diego, CA. Presented: “Academic Research and Discovery: Addressing Therapeutic Challenges in the 21st Century”, November 2007.
6. Purdue Pharmaceutical Sciences Club, Hosted by Mr. Thomas Shum, Presented: “Your Internship in the Pharmaceutical Sciences: Knowledge, Preparation, Execution and Courtesy are Everything!” School of Pharmacy and Pharmaceutical Sciences. October 2007.
7. Purdue University, School of Pharmacy and Pharmaceutical Sciences, Multicultural Programs’ Pre-Semester Experiences Program, Hosted by Mrs. Jackie Jimerson, Presented: “Career Opportunities in the Pharmaceutical Sciences at Purdue University.” August 2007.
8. Purdue University, Science Upward Bound Outreach Program, Invited by Wesley Campbell. School of Pharmacy and Pharmaceutical Sciences, West Lafayette, IN. “Career Opportunities in the Pharmaceutical Sciences: Unlock Your Potential at Purdue.” April 2007.
9. AAPS SPOD Committee H.S. Outreach, Feik School of Pharmacy, University of the Incarnate Word, Hosted by Dr. Anita Mosley, San Antonio, TX. Presented: “Careers and Opportunities in Pharmaceutical Sciences” and “Infectious Diseases and the Development of Novel Therapeutics”, October 2006.
10. AAPS SPOD Committee H.S. Outreach, Boston Latin School, Hosted by Alexandra Montes, Program Director of the Science Department, Boston, MA. Presented: “Careers in Pharmaceutical Sciences” and “Pharmaceutical Drug Discovery: Therapeutic Challenges for the 21st Century”, June 2006.
11. AAPS SPOD Committee H.S. Outreach, Nashville Adventure Science Center, Hosted by AAPS, Nashville, TN. Presented: “Careers in Pharmaceutical Sciences”, October 2005.
12. Howard University, Hosted by AAPS and the Howard University H.S. Upward Bound Program, Washington, D.C. “AAPS SPOD Committee H.S. Outreach: Careers in Pharmaceutical Sciences.” April 2005.
13. Franklin High School, Hosted by AAPS, Franklin, NJ. “AAPS SPOD Committee H.S. Outreach: Careers in Pharmaceutical Sciences.” December 2004.

Abstracts:

*Refereed Abstracts*

1. J.P. Sluka, C.C. Zhang, and **G.T. Knipp**. “Coupled in vitro BBB triculture assay and computational model development to predict doses of concern for neurotoxicity.” Society of Toxicology 62nd Annual Meeting and ToxExpo. Nashville, TN, March 2023.
2. M. Behymer, N. Fujii, V. Suresh, H. Mo, A. Chen, G.R. Boss, J. Lee, K. Saha, S. Mahon, M. Brenner, A.K. Nath, C.A. MacCrae, R.T. Peterson, **G.T. Knipp** and V.J. Davisson. “Intramuscularly Delivered Platinum-based Cyanide Countermeasures.” 2022 Globalization of Pharmacy Education Network (GPEN) Meeting. Organized by The University of Minnesota, Minneapolis, MN, October 2022.
3. M. Behymer, N. Fujii, V. Suresh, H. Mo, A. Chen, G.R. Boss, J. Lee, K. Saha, S. Mahon, M. Brenner, A.K. Nath, C.A. MacCrae, R.T. Peterson, **G.T. Knipp** and V.J. Davisson. “Optimization of Novel Platinum Based Cyanide Scavengers: In Vitro Prioritization.” 2022 AAPS PharmSci 360 Meeting. Boston, MA, October 2022.
4. M. Behymer, H. Mo, N. Fujii, V. Suresh, A. Chen, J. Lee, A.K. Nath, S. Mahon, M. Brenner, C.A. MacCrae, R.T. Peterson, G.R. Boss, **G.T. Knipp** and V.J. Davisson. “Optimization of Novel Platinum-Based Cyanide Scavengers: *In Vitro* Prioritization.” The 15th Annual CounterACT Network Research Symposium. New Orleans, LA, June 2022.
5. M. Behymer, H. Mo, N. Fujii, V. Suresh, A. Chen, J. Lee, A.K. Nath, K. Saha, S. Mahon, M. Brenner, C.A. MacCrae, R.T. Peterson, G.R. Boss, **G.T. Knipp** and V.J. Davisson. “Optimization of Novel Platinum-Based Cyanide Scavengers: *In Vitro Prioritization*.” The 15th Annual CounterACT Network Research Symposium. New Orleans, LA, June 2022.
6. V.J. Davisson, **G.T. Knipp,** M. Behymer, N. Fujii, V. Suresh, H. Mo, and C. Zhang. “Center for Advancing Novel Cyanide Countermeasures: *The Pharmaceutical Sciences Core*.” The 15th Annual CounterACT Network Research Symposium. New Orleans, LA, June 2022.
7. K. Lubin, M. Behymer, **G.T. Knipp**. “Design of Experiments Approach for the Optimization of a Physiologically Relevant In Vitro Blood Brain Barrier Model.” 22nd International Symposium on Signal Transduction at the Blood-Brain Barriers. Organized by Fraunhofer Inc., Wurzburg, Germany, September (2019).
8. K. Lubin, C.D. Kulczar, A. Ngendahimana, **G.T. Knipp**. Development and Optimization of a Direct Contact Blood Brain Barrier Model for In Vitro Permeability Screening. 2018 Globalization of Pharmacy Education Network (GPEN) Meeting. Organized by The National University of Singapore, Singapore, October (2018).
9. K. Lubin, **G.T. Knipp**. Development and Optimization of a Direct Layered Contact Blood Brain Barrier Model for In Vitro Permeability Screening. World Preclinical Congress: Blood Brain Barrier, Boston, MA (2018).
10. C. Popescu, R.P. Gala, **G.T. Knipp**, R.R. McCain, and M.J. D’Souza. ODF (Oral Disintegrating Film) as a Pediatric Centric Delivery System. 9th European Paediatric Formulation Initiative Conference, Warsaw, Poland, September 19-21 (2017)
11. R.P. Gala, C. Popescu, **G.T. Knipp**, R.R. McCain, R.V. Ubale, R. Addo, T. Bhowmik, and M.J. D’Souza. Next Generation of Immunization: Oral Disintegrating Films Loaded with Nanoparticulate Measles Vaccine for Buccal Delivery. 10th World Meeting on Pharmaceutics, Biopharmaceutics and Pharmaceutical Technology, Glasgow, U.K. (2016).
12. R.P. Gala, C. Popescu, **G.T. Knipp**, R.R. McCain, R.V. Ubale, R. Addo, T. Bhowmik, and M.J. D’Souza. Needle less Measles Vaccine Delivery: Preclinical Evaluation of Oral Disintegrating Films in a Juvenile Pig Model. 2015 American Association of Pharmaceutical Scientists Annual Meeting, Orlando, FL. (2015).
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98. **G.T.** **Knipp,** N.F.H. Ho, C.L. Barsuhn, and R.T. Borchardt. Delineation of Paracellular Diffusion inCaco-2 Monolayers: Effect of Perturbation on the Transport of Model Compounds which Vary in Charge and Size. Tenth Annual AAPS National Meeting and Exposition, Miami Beach, FL, in *Pharm. Res*, **12**(Suppl), Abstract (1995).
99. A.T.M. Serajuddin, A.B. Thakur, R.N. Goshal, S.A. Ranadive, **G.T.** **Knipp,** M.G. Fakes, and K.R. Morris. Drug-Excipient Compatibility Screening: A Practical Model. Sixth Annual AAPS National Meeting and Exposition, Washington, D.C., in *Pharm. Res*, **8**(Suppl), S103 Abstract #PT 6081 (1991).
100. K.R. Morris, **G.T.** **Knipp,** and A.T.M. Serajuddin. Structural Properties of Polyethylene Glycol (PEG) and Polysorbate 80 Mixtures, a Novel Solid Dispersion Vehicle. Fourth Annual AAPS National Meeting and Exposition, Atlanta, GA, in *Pharm. Res*, **6**(Suppl), S132 Abstract #PC 1024 6081 (1989).

*Non-Refereed Abstracts*

1. M.Lavan, J. Mehtala, C.D. Kulczar, **G.T. Knipp**, and A. Wei. Cysteine 34 Mono-PEGylated Human Serum Albumin for the Solubilization and Delivery of Chemotherapeutics. 2016 Globalization of Pharmacy Education Network (GPEN) Meeting. Organized by The University of Kansas, Lawrence, KS November 2016.
2. K.E. Lubin, **G.T. Knipp**. The Utilization of a Human iPSC Derived Endothelial Cell Line for In Vitro Blood-Brain Barrier Permeability Modeling. Purdue University College of Pharmacy Jenkins/Knevel Awards Symposium, West Lafayette, IN. November 2016 (Podium Presentation)
3. A. Ngendahimana, C. Kulczar, K. Lubin, and **G.T. Knipp**. "Physiologically Relevant Blood Brain Barrier Coculture Model Utilizing Direct Endothelial and Astrocyte Cell-Cell Contact." 2016 Garnet E. Peck Symposium in Industrial Pharmacy, West Lafayette, IN. March, 2016.
4. K.E. Lubin, R.P Gala, C. Popescu, **G.T. Knipp**, R.R McCain, R.V Ubale, R. Addo, T. Bhowmik, C.D. Kulczar, and M.J. D’Souza Needleless Measles Vaccine Delivery: Preclinical Evaluation of Oral Disintegrating Films in a Juvenile Pig Model. 2016 Garnet E. Peck Symposium in Industrial Pharmacy, West Lafayette, IN. March 2016
5. M.Lavan, J. Mehtala, C.D. Kulczar, **G.T. Knipp**, and A. Wei. Cysteine 34 Mono-PEGylated Human Serum Albumin for the Solubilization and Delivery of Chemotherapeutics, 2016 Garnet E. Peck Symposium in Industrial Pharmacy, West Lafayette, IN. March 2016.
6. C. Kulczar, S. Lefebvre, D. Miller, and **G.T. Knipp.** Improvement in Blood-Brain Barrier Tightness through a Direct Contact hCMEC/D3 and Human Astrocyte Coculture Model. 2014 Globalization of Pharmacy Education Network (GPEN) Meeting. Organized by The Universities of Helsinki and Eastern Finland, Helsinki, Finland (2014).
7. C. Kulczar, S. Lefebvre, D. Miller, and **G.T. Knipp.** Improvement in Blood-Brain Barrier Tightness through a Direct Contact hCMEC/D3 and Human Astrocyte Coculture Model. 2014 Globalization of Pharmacy Education Network (GPEN) Meeting. Organized by The Universities of Helsinki and Eastern Finland, Helsinki, Finland (2014). **[Short Course-Podium Presentation]**
8. J. Mehtala, C.D. Kulczar, **G.T. Knipp**, and A. Wei. PEGylated Human Serum Albumin for Enhanced Drug Binding and Delivery of Poorly Soluble Drugs. Dane O. Kildsig Center of Pharmaceutical Processing Research Meeting, Purdue University, West Lafayette, IN. November, 2013 .
9. C.D. Kulczar, S. Lefebvre, and **G.T. Knipp**. Improvement in Blood-Brain Barrier Tightness through a Direct Contact hCMEC/D3 and Human Astrocyte Coculture Model. 2013 Pharmaceutical Graduate Student Research Meeting. Iowa City, IA. June, 2013.
10. C.D. Kulczar, W.J. Roth, C.B. Kissinger, R. Vreeman, S. Hannou, B.R. Cooper, R.R. McCain, and **G.T. Knipp**. Juvenile Pigs as Surrogates for Human Pediatrics During Preclinical Pharmacokinetic Testing: A Possible Means to Expedite Pediatric Drug Development?. 2012 Garnet E. Peck Symposium in Industrial Pharmacy, West Lafayette, IN. October, 2012.
11. W.J. Roth, C.B. Kissinger, B.R. Cooper, R.R. McCain, J.N. Marchant-Forde, R.C. Vreeman, S. Hannou, and **G.T. Knipp**. Assessment of Juvenile Pigs to Serve as Human Pediatric Surrogates for Preclinical Formulation Pharmacokinetic Testing. 9th Biennial Globalization of Pharmacy Education Network (GPEN) Meeting. Organized by Monash University, Melbourne, Australia (2012). **[Podium Presentation]**
12. C.D. Kulczar, W.J. Roth, C.B. Kissinger, B.R. Cooper, R.R. McCain, R.C. Vreeman, and G.T. Knipp. Juvenile Pigs as Surrogates for Human Pediatrics During Preclinical Pharmacokinetic Testing: A Possible Means to Expedite Pediatric Drug Development? 2012 Pharmaceutical Graduate Student Research Meeting, Hosted by the University of Nebraska Medical Center, Omaha, NE. **Best Poster Award**.
13. W.J. Roth, C.B. Kissinger, S. Hannou, B.R. Cooper, R.R. McCain, R. Vreeman, and **G.T. Knipp**. Development and Testing of Novel Pediatric Formulation The 9th Annual Garnet E. Peck Symposium: Pharmaceutical Solids, Purdue University, West Lafayette, IN, October (2011).
14. W.J. Roth, C.B. Kissinger, R. Vreeman, S. Hannou, B.R. Cooper, R.R. McCain, and **G.T. Knipp**. Development of a Novel Pediatric Formulation of Rifampicin for the Treatment of Tuberculosis (TB) in Infants and Young Children. 2011 Indiana CTSI Annual Meeting, Indianapolis, IN. (2011).
15. W.J. Roth, C.B. Kissinger, R. Vreeman, S. Hannou, B.R. Cooper, R.R. McCain, and **G.T. Knipp**. Development of a Novel Pediatric Formulation of Rifampicin for the Treatment of Tuberculosis (TB) in Infants and Young Children. 2010 Indiana CTSI Retreat at Purdue Meeting, West Lafayette, IN. (2010).
16. S.A. Mowery, S.M Carl, D.J. Lindley, and **G.T. Knipp**. Membrane Expression, Localization, and Functional Analysis of Human Peptide/Histidine Transporter 1 in Gastrointestinal and BBB Cell Lines. 8th Biennial Globalization of Pharmacy Education Network (GPEN) Meeting. Organized by the University of North Carolina, Chapel Hill, NC (2010).
17. L.F. Pan and **G.T. Knipp**. Delineating Potential Effects of Bisphenol A on Placental Fatty Acid Homeostasis. 8th Biennial Globalization of Pharmacy Education Network (GPEN) Meeting. Organized by the University of North Carolina, Chapel Hill, NC (2010). **[Podium Presentation]**
18. S. Hannou, **G.T. Knipp**,R. Pinal, R. McCain, K. Boksa, and B. Cooper. Automated Blood Sampling in the Porcine Model, A Clinically Relevant Model for Assessing the Effects of Process Variation in the Pharmacokinetics of Rifampicin. The 8th Annual Garnet Peck Symposium: Pediatric Drug Formulation and Nanotechnology in Drug Delivery, Purdue University, West Lafayette, IN, October (2010).
19. W. Roth, S. Mowery,R. McCain, T.R. DeGraw, C. Kissinger, J. Marchant-Forde, R. Pinal, and **G.T. Knipp**. Relative *In Vivo* Exposure Comparisons of Acetaminophen from Different Sourced Capsules Utilizing the PigTurn-Culex-L System. May 2010 Dane O. Kildsig Center of Pharmaceutical Processing Research Meeting, University of Puerto Rico-San Juan, San Juan, PR, May (2010).
20. W. Roth, S. Mowery,R. McCain, C. Kissinger, **G.T. Knipp**, R. Pinal, T.R. DeGraw, D. Mann, D. Matthews, J. Marchant-Forde,. Measuring the Pharmacokinetics of Carbamazepine and Acetaminophen in Pigs Using the PigTurn-Culex-L System. November 2009 Dane O. Kildsig Center of Pharmaceutical Processing Research Meeting, Purdue University, West Lafayette, IN, November (2009).
21. **G.T. Knipp**, T.R. DeGraw, R. McCain, D. Mann, D. Matthews, J. Marchant-Forde, R. Pinal, W. Roth, S. Mowery. Measuring Induction of Carbamazepine Metabolism in Pigs Using Automated Blood Sampling. May 2009 Dane O. Kildsig Center of Pharmaceutical Processing Research Meeting, Storrs, CT May (2009).
22. S.M. Carl, D.J. Lindley, L.F. Pan, and **G.T. Knipp**. Functional Evaluation of Human Peptide/Histidine Transporter-1 (hPHT1) in a Stably-Transfected Human Blood Brain Barrier Cell Line, hCMEC/D3. 7th Biennial Globalization of Pharmacy Education Network (GPEN) Meeting. Organized Katholieke Universiteit-Leuven, Leiden University and Utrecht University in Leuven, Belgium, September 2008.
23. S.M. Carl, D.J. Lindley, R.K. Bhardwaj, Y. Xu, M. Yard, and **G.T. Knipp**. Oligopeptide Transporter HPHT1 and HPHT2 are Upregulated During Gastrointestinal Carcinomas. 6th Biennial Globalization of Pharmaceutical Education Network (GPEN) Meeting, University of Kansas, Lawrence, KS. (2006).
24. R.K. Bhardwaj, D.R. Herrera-Ruiz, S.M. Carl, D.J. Lindley, and **G.T. Knipp**. Delineation of Human Peptide/Histidine Transporter 1 (HPHT1) Uptake Kinetics Utilizing Transiently Transfected COS-7 Cells. 6th Biennial Globalization of Pharmaceutical Education Network (GPEN) Meeting, The University of Kansas, Lawrence, KS. (2006).
25. S. Jin, A.S. Mathis, K. Gioia, T. Minko, G.S. Friedman, F. Peng, D. Serur, and **G.T. Knipp**. The Effect of Sirolimus & Cyclosporine Combination Therapy on the Expression of Macrophage & Nuclear Hormone Receptors in THP-1 Derived Human Macrophages" in the Society of Chinese Bioscientists in America (SCBA-Bio/Pharm) 2003 Annual Conference, Busch Campus Center, Rutgers University, Piscataway, NJ, (2003). **Excellent Poster Award.**
26. D. Herrera-Ruiz, Q. Wang, Q. Li, and **G.T. Knipp**. Temporal and Spatial Patterns of Expression of Peptide Transporters in the Placenta. 2000 GRASP Meeting, Hosted by the University of Maryland, Baltimore, MD. (2000). **Best Poster Award**
27. Q. Wang, Q. Li, M.J. Soares, H. Fuji, and **G.T. Knipp**. Temporal and Spatial Patterns of expression of PPAR and RXR Isoforms: Possible Placental Transcription Factors that May Act to Regulate Placental fatty Acid Transport and Metabolism. 1999 Rutgers University Pharmaceutics Conference, Piscataway, NJ (1999).
28. Q. Li, Q. Wang, M.J. Soares, H. Fuji, and **G.T. Knipp**. Fatty Acid Transport and Metabolism Regulatory Proteins in the Developing Rat Placenta and in Trophoblast Cell Culture Models. 1999 Rutgers University Pharmaceutics Conference, Piscataway, NJ (1999).
29. D.R. Herrera, N. Kuber, P.J. Sinko, and **G.T. Knipp**. Temporal and Spatial Patterns of Expression of Peptide Transporters in the Placenta: Possible Mediators of Transplacental Teratogenic Peptide Based Drug Transport. 1999 Rutgers University Pharmaceutics Conference, Piscataway, NJ (1999).
30. **G.T.** **Knipp,** D. Vander Velde, T.J. Siahaan, and R.T. Borchardt. The Effect of Solution Conformation and Charge on the Paracellular Permeability of Model Pentapeptides across Caco-2 Monolayers. The Twenty-Seventh Annual Pharmaceutics Graduate Research Meeting, Hosted by The University of Michigan, Ann Arbor, MI (1995).
31. **G.T.** **Knipp,** D. Vander Velde, T.J. Siahaan, and R.T. Borchardt. Determination of the Solution Conformations of Model Pentapeptides Designed to Elucidate the Relationships Between Peptide Conformation and Membrane Permeability. The Twenty-Fifth Annual Pharmaceutics Graduate Research Meeting, Hosted by Purdue University, West Lafayette, IN (1993).