CURRICULUM VITAE

William C. Zamboni, Pharm.D., Ph.D.

PERSONAL INFORMATION

Office Address: Division of Pharmacotherapy and
Experimental Therapeutics
UNC Eshelman School of Pharmacy
University of North Carolina at Chapel Hill
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EDUCATION AND TRAINING

Doctor of Philosophy 2001 - 2005
Clinical Pharmaceutical Scientist Program
Dept. of Pharmaceutical Sciences, University of Pittsburgh,
School of Pharmacy, Pittsburgh, PA. Dissertation was titled
"Preclinical and Clinical Pharmacologic Studies of
9-nitrocamptothecin and its 9-aminocamptothecin metabolite".

Research Fellowship 1995 - 1997
Department of Pharmaceutical Sciences
St. Jude Children's Research Hospital, Memphis, TN.

Oncology Pharmacy Residency 1994 - 1995
Warren G. Magnuson Clinical Center, National Institutes of Health, Bethesda, MD.

Doctor of Pharmacy 1992 - 1994
University of Pittsburgh School of Pharmacy, Pittsburgh, PA.

Bachelor of Science in Pharmacy 1988 - 1992
University of Pittsburgh School of Pharmacy, Pittsburgh, PA.

PROFESSIONAL EXPERIENCE

ACADEMIC

Current Academic Positions at UNC:

Professor 2022 - Present

Division of Pharmacotherapy and Experimental Therapeutics
UNC Eshelman School of Pharmacy, University of North Carolina, Chapel Hill, NC.
(Associate Professor from 2008 - 2022)

Research Associate Professor 2014 - Present
Department of Pharmacology
UNC School of Medicine, University of North Carolina, Chapel Hill, NC.

Current Research Positions at UNC:

Director, UNC Advanced Translational Pharmacology 2020 - Present
and Analytical Chemistry (A-TPAC) Lab and Recharge Center.
UNC Eshelman School of Pharmacy and UNC Lineberger
Comprehensive Cancer Center, University of North Carolina, Chapel Hill, NC.

Co-Faculty Director, Nanomedicines Characterizations Core 2014 - Present
UNC Eshelman School of Pharmacy, University of North Carolina, Chapel Hill, NC.

Member, Center for Nanotechnology in Drug Delivery 2014 - Present
UNC Eshelman School of Pharmacy, University of North Carolina, Chapel Hill, NC.

Member, Carolina Institute of Nanomedicine 2012 - Present
University of North Carolina, Chapel Hill, NC.

Director, Analytical Chemistry and Pharmacology Core Lab 2010 - Present
UNC Lineberger Comprehensive Center.

Director, Oncology Research and Drug Development Fellowship Program 2009 - Present
UNC Eshelman School of Pharmacy, University of North Carolina, Chapel Hill, NC.

Director, Translational Oncology and Nanoparticle Drug Development 2008 - Present
Initiative ($TOND_2I$) Lab, UNC Eshelman School of Pharmacy and
UNC Lineberger Comprehensive Cancer Center
University of North Carolina, Chapel Hill, NC.

Member, Molecular Therapeutics Program 2008 - Present
UNC Lineberger Comprehensive Cancer Center
University of North Carolina, Chapel Hill, NC.

Member, Center for Pharmacogenomics and Individualized Therapy 2008 - Present
University of North Carolina, Chapel Hill, NC.

Prior Positions at UNC:

Associate Professor 2008 - 2022
Division of Pharmacotherapy and Experimental Therapeutics
UNC Eshelman School of Pharmacy, University of North Carolina, Chapel Hill, NC.

Co-Director, Mouse Phase I Unit 2009 - 2015
UNC Lineberger Comprehensive Cancer Center, Chapel Hill, NC.

Co-Director, NC Biomedical Innovation Network 2009 - 2012
Research Triangle Park, NC.

Member, Carolina Center of Cancer Nanotechnology Excellence 2008 - 2020
University of North Carolina, Chapel Hill, NC.

Director, UNC GLP Bioanalytical Facility 2008 - 2014
UNC Eshelman School of Pharmacy and UNC Lineberger
Comprehensive Cancer Center, University of North Carolina, Chapel Hill, NC.

Member, Center for Experimental Therapeutics 2008 - 2010
University of North Carolina, Chapel Hill, NC.

Prior Positions Not at UNC:

Assistant Professor 2007 - 2008
Department of Obstetrics Gynecology, and Reproductive Sciences
School of Medicine, University of Pittsburgh, Pittsburgh, PA.

Adjunct Clinical Instructor 2001 - 2013
Department of Pharmacy Practice
School of Pharmacy, Duquesne University, Pittsburgh, PA.

Assistant Member, Molecular Therapeutics Drug Discovery Program 1998 - 2008
University of Pittsburgh Cancer Institute
University of Pittsburgh Health System, Pittsburgh, PA.

Assistant Professor, Department of Pharmaceutical Sciences 1998 - 2008
School of Pharmacy, University of Pittsburgh, Pittsburgh, PA.

Assistant Professor, Division of Hematology-Oncology 1998 - 2008
Department of Medicine, School of Medicine
University of Pittsburgh, Pittsburgh, PA.

Assistant Professor, Department of Developmental Therapeutics 1997 - 1998
Greenebaum Cancer Center, University of Maryland, Baltimore, MD.

Clinical Assistant Professor, Department of Pharmacy Practice and Science 1997 - 1998
School of Pharmacy, University of Maryland, Baltimore, MD.

NON-ACADEMIC:

Current Positions:

NuVeta Radiotherapy 2023 - Present
Member, Scientific Advisory Board
Company specializes using novel radiation technology to increase the delivery of drugs to tissues.
Durham, NC

HealthSpan Research 2023 - Present
Chief Scientific Officer
Company specializes in developing therapeutic agents to extend a person's health span.
Boston, MA

U.S. FDA
Member, Pharmaceutical Science and Clinical Pharmacology Advisory Committee 2022 - Present
of the US Food and Drug Administration, Silver Spring, MD

St. Jude Children's Research Hospital
Member, St. Jude Comprehensive Cancer Center Pharmacokinetic Shared Resource 2022 - Present
External Advisory Board, Memphis, TN

Akagera Medicines 2020 - Present
Member, Scientific Advisory Board
Company specializes in targeting tuberculosis and other infectious diseases
with liposomal therapeutics.
Boston, MA

Glolytics, LLC 2016 - Present
Chief Scientific Officer and Founder
Company specializes in the evaluation of the bi-directional interaction between
the immune system and drugs, nanoparticles, antibodies, ADCs and biological agents
Chapel Hill, NC

ChemoGLO, LLC 2012 - Present
Chief Scientific Officer and Co-Founder
Company specializes in the detection and removal of hazardous drugs
in hospitals, laboratories and manufacturing facilities
Chapel Hill, NC

MediGLO, LLC 2006 - Present
Chief Executive Officer and Founder
Company focuses on medical, pharmaceutical and drug development consulting
Chapel Hill, NC

Prior Positions:

Member, Petersen Institute of NanoScience and Engineering 2006 - 2008
University of Pittsburgh, Pittsburgh, PA.

Staff Pharmacist 1999 - 2006
Children's Hospital of Pittsburgh, Pittsburgh, PA.

Staff Pharmacist 1998 - 1998
Pharmacy Department., NIH, Bethesda, MD.

Staff Pharmacist 1993 - 1994
Veteran's Affairs Medical Center, Pittsburgh, PA.

Staff Pharmacist 1992 - 1994
PRS Consultants, Latrobe, PA.

Staff Pharmacist 1992 - 1994
Children's Hospital of Pittsburgh, Pittsburgh, PA.

Staff Pharmacist 1992 - 1992
Rinehart's Pharmacy, Nanty Glo, PA.

LICENSURE AND CERTIFICATION

Pharmacy License (Pennsylvania #RP039278L) 1992 - Present

HONORS AND AWARDS

Triangle Business Journal BDO Life Sciences Award – Outstanding Biotech Company	2015
(ChemoGLO, LLC) from a Research University	
American College of Clinical Oncology Aventis Oncology Fellowship entitled "Evaluation of the Tumor Disposition of Cisplatin using Microdialysis in Patients with Melanoma."	2001
Phi Delta Chi Distinguished Alumni Award American College of Clinical Pharmacy Rhone-Poulenc Rorer 1999 Oncology Research Award entitled "Disposition of Liposomal-Cisplatin (SPI-77) and Cisplatin in Solid Tumors"	1999
American College of Clinical Pharmacy Rhone-Poulenc Rorer 1996-97 Oncology Fellowship Research Project entitled: "Cerebrospinal Fluid (CSF) Disposition of Topoisomerase I Inhibitors in the Nonhuman Primate Model"	1997
American Society of Clinical Oncology 1997 Merit Award for the presentation entitled: "Pharmacokinetically Guided Dose Adjustment Reduces Variability in Topotecan (TPT) Systemic Exposure in Children with Solid Tumors".	1997
American College of Clinical Oncology Phone-Poulenc Rorer Oncology Fellowship entitled "Cerebrospinal Fluid (CSF) Disposition of Topoisomerase I Inhibitors in a Nonhuman Primate Model"	1996
American Society of Clinical Oncology 1996 Merit Award for the presentation entitled: "Pharmacokinetics (PK) of Topotecan (TPT) in Pediatric Patients with Normal and Altered Renal Function".	1996
Magna Cum Laude, Doctor of Pharmacy Program, University of Pittsburgh	1994
University of Pittsburgh Alumni Association Graduate Scholarship	1993
University of Pittsburgh Honors Convocation Honoree	1992
Eli Lilly Achievement Award for Ethics, Scholarship and Leadership	1992
University of Pittsburgh University Scholar	1992
Magna Cum Laude, University of Pittsburgh School of Pharmacy	1992
University of Pittsburgh Student Leadership Honor Society	1992
Emma W. Locke Memorial Award Nominee	1992
Omicron Delta Kappa National Leadership Honor Society	1992
Rho Chi Pharmacy Honor Society	1991
University of Pittsburgh Honors Convocation Honoree	1991

BIBLIOGRAPHY

PATENTS

1. Method and System for Hazardous Drug Surface Cleaning. By William Zamboni, Tom O'Neill, and Stephen Eckel. Patent Number US 11,274,271. March 15, 2022.

PUBLICATIONS

Chapters or Review Articles

Published or in Press

1. **Zamboni WC,** Orbach R, Burckart GJ, Stewart CF. Effect of Obesity on the Pharmacokinetics and Pharmacodynamics of Anticancer Agents. Journal of Clinical Pharmacology. 2023;63(S2) S85-S102. [Part of Journal of Clinical Pharmacology supplement entitled Bridging Drug Efficacy and Safety to the Obese].

2. McColl ER, Croyle MA, **Zamboni WC**, Honer WG, Heise M, Piquette-Miller M, Goralski KB. COVID-19 Vaccines and the Virus: Impact on Drug Metabolism and Pharmacokinetics. Drug Metab Dispos. 2023 Jan;51(1):130-141. doi: 10.1124/dmd.122.000934. Epub 2022 Oct 23. PMID: 36273826.

3. Lucas AT, Moody A*, Schorzman AN, **Zamboni WC**. Importance and Considerations of Antibody Engineering in Antibody-Drug Conjugates Development from a Clinical Pharmacologist's Perspective. Antibodies (Basel). 2021 Jul 26;10(3):30. doi: 10.3390/antib10030030. PMID: 34449544; PMCID: PMC8395454.

4. Moody AS*, Dayton P, Lucas AT, **Zamboni WC**. Imaging methods to evaluate tumor microenvironment factors affecting drug delivery and predict antitumor response. Overcome Cancer Drug Resistance by Nano-carrier Drug Delivery System. Editor: Vladimir P. Torchilin. Cancer Drug Resist. 2021;4:382-413. doi: 10.20517/cdr.2020.94. Epub 2021 Jun 19.

5. Piscitelli JA*, Ban Jisun*, Lucas AT, **Zamboni WC**. Complex factors and challenges that affect the pharmacology, safety and efficacy of Nanocarrier Drug Delivery Systems. Overcome Cancer Drug Resistance by Nano-carrier Drug Delivery System. Pharmaceutics. 2021; 13(1): 114.

6. Lucas AT*, Robinson R, Schorzman AN, Piscitelli J*, Razo J*, **Zamboni WC**. Pharmacologic considerations in the disposition of antibodies and antibody-drug conjugates in preclinical models and in patients. Antibodies. 2019; 8(1): 3. doi: 10.3390/antib8010003. PMID: 31544809.

7. **Zamboni WC**, Szebeni J, Kozlov V, Lucas AT, Piscitelli JA*, Dobrovolskaia MA. Animal Models for Analysis of Immunological Responses to Nanomaterials: Challenges and Considerations. Adv Drug Deliv Rev. 2018 Nov - Dec;136-137:82-96. PMID: 30273617.

8. Lucas AT, Price LSL*, Schorzman AN, Storrie M*, Piscitelli JA*, Juan Razo, **Zamboni WC**. "Factors affecting the pharmacology of antibody-drug conjugates". Antibodies. 2018; 7(1): 10. doi: 10.3390/antib7010010. PMID: 31544862

9. Schorzman AN, Lucas AT*, Kagel JK*, **Zamboni WC**. Methods and Study Designs for Characterizing the Pharmacokinetics and Pharmacodynamics of Carrier-Mediated Agents. Methods Mol Biol. 2018;1831:201-228. PMID: 30051434.

10. Lucas AT*, Price LS*, Schorzman AN, **Zamboni WC**. Complex effects of tumor microenvironment on the tumor disposition of carrier-mediated agents. Invited review, Nanomedicine. 2017:12(16):2021-2042. PMID: 28745129.

11. Tyson R*, Osae L*, Madden AJ*, Lucas AT*, **Zamboni WC**. Preclinical and Clinical Pharmacology Studies of Nanoparticles: The Translational Challenge. Nanopharmacy, 1st Edition, Wileys. 2017.

12. Tamarkin L, Yuan Z, Maggi EC, Adem A, Schorzman AN, **Zamboni WC**, Oarr D, Libutti SK. Cancer Nanomedicines: Opportunities and Challenges. Biotech, Biomaterials and Biomedical - TechConnect Briefs. 2017; 3:126-129.

13. Proctor AE, **Zamboni WC**. Ovarian cancer. In: Schwinghammer TL et al, eds. Pharmacotherapy Casebook: A Patient-Focused Approach. 10th ed. New York: McGraw-Hill, 2017.

14. Lucas AT*, Madden AJ*, **Zamboni WC**. Challenges in preclinical to clinical translation for anticancer carrier-mediated agents. Invited Review. Wiley Interdiscip Rev Nanomed Nanobiotechnol. 2016 Sep;8(5):642-53. PMID: 26846457.

15. **Zamboni WC**. Pharmacokinetic and Pharmacodynamic Characterization of Nanotherapeutics, NCI Cancer Nanotechnology Plan 2015. https://www.cancer.gov/nano/research/plan/cananoplan-2015-complete.pdf.

16. Lucas A*, Madden A*, **Zamboni WC**. Formulation and physiological factors affecting the pharmacology of carrier-mediated agents. Expert Opin Drug Metab Toxicol. 2015;11(9):1419-33. PMID: 26173794.

17. O'Neal S, Lucas A*, Caron WP*, Song G*, Lay JC, **Zamboni WC**. Bidirectional Interaction Between Nanoparticles and Carrier-Mediated Agents and the Cells of the Mononuclear Phagocyte System. In: Dobrovolskaia M, editor. Immunological Properties of Engineered Nanomaterials. Second Edition. World Scientific. ISBN: 978-981-4699-16-7. 2015.

18. Petschauer JS, Madden AJ, Kirschbrown WP, Song G, **Zamboni WC**. The effects of nanoparticle drug loading on the pharmacokinetics of anticancer agents. Nanomedicine (Lond). 2015 Feb;10(3):447-63. doi: 10.2217/nnm.14.179. PubMed PMID:25707978.

19. Bartlett JA, Brewster M, Brown P, Cabral-Lilly D, Cruz CN, David R, EickhoffWM, Haubenreisser S, Jacobs A, Malinoski F, Morefield E, Nalubola R, Prud'homme RK, Sadrieh N, Sayes CM, Shahbazian H, Subbarao N, Tamarkin L, Tyner K, Uppoor R, Whittaker-Caulk M, **Zamboni W**. Summary report of PQRI Workshop on Nanomaterial in Drug Products: current experience and management of potential risks. AAPS J. 2015 Jan;17(1):44-64. doi: 10.1208/s12248-014-9701-9. Epub 2014 Nov 25. PubMed PMID:25421459; PubMed Central PMCID: PMC4287304.

20. Gabizon A, Bradbury M, Prabhakar U, **Zamboni W**, Libutti S, Grodzinski P. Cancer nanomedicines: closing the translational gap. Lancet. 2014 Dec 20;384(9961):2175-6. PMID: 25625382.

21. Song G, Petschauer JS, Madden AJ, **Zamboni WC**. Nanoparticles and the mononuclear phagocyte system: pharmacokinetics and applications for inflammatory diseases. Curr Rheumatol Rev. 2014;10(1):22-34. PubMed PMID: 25229496.

22. Smith M, Brown J, **Zamboni WC**, Walker N. Symposium Overview: From immunotoxicity to nanotherapy: the effects of nanomaterials on the immune system. Toxicol Sci. 2014 Apr;138(2):249-55. PMCID: PMC3988451.

23. Kam TC, **Zamboni WC**. Ovarian Cancer. In: Schwinghammer TL and Koehler JM, eds. Pharmacotherapy: A Patient-Focused Approach, 9th edition, McGraw-Hill, 2013.

24. Prabhakar U, Maeda H, Jain R, Sevick-Muraca E, **Zamboni W**, Barry S, Gabizon A, Grodzinski P, Blakey D. Challenges and key considerations of the enhanced permeability and retention effect (EPR) and nanomedicine drug delivery in oncology. Cancer Research. 2013;73(8):2412-7. PubMed Central: PMC3916009.

25. Kumar P*, Caron WP*, Song G*, Rawal S, **Zamboni WC**. Nanoparticle Effects on the Interaction with Cells of the Mononuclear Phagocytic System. In: Dobrovolskaia M, editor. Immunological Properties of Engineered Nanomaterials. First Edition. World Scientific 2013.

26. Caron WP*, Song G*, Kumar P*, Rawal S*, **Zamboni WC**. Pharmacokinetic and Pharmacodynamic Disposition of Carrier-Mediated Agents. Clin Pharmacol Ther. 91(5);802-12:2012.

27. **Zamboni WC**, Torchilin V, Patri A, Hrkach J, Lee R, Stern S, Nel A, Malghan S, Panaro N, Grodzinski P. Best Practices in Cancer Nanotechnology: Perspectives from NCI Nanotechnology Alliance. Clinical Cancer Research. Clin Cancer Res. 18(12);3229-41:2012. PubMed Central: PMC3916007.

28. Song G*, Wu H*, Yoshino K, **Zamboni WC**. Factors affecting the Pharmacokinetic and Pharmacodynamic Disposition of Liposomal Agents. J Liposomal Res. 22(3);177-92:2012.

29. **Zamboni WC** and La I*. Carrier-mediated and targeted cancer drug delivery. In: Armstrong D, editor. Oxidative Stress in Applied Basic Research and Clinical Practice. First Edition. Springer Science. Part 5, 427-452, 2012.

30. Combest AJ*, **Zamboni WC**. Use of microdialysis in preclinical and clinical development of anticancer agents. In Handbook of Anticancer Agents: Pharmacokinetics and Pharmacodynamics, 2nd Edition. Springer Science and Business Media, New York, NY; 2010, 2011.

31. La-Beck*, Walsh MD*, **Zamboni WC**. Ovarian Cancer. In: Schwinghammer TL and Koehler JM, eds. Pharmacotherapy: A Patient-Focused Approach, 8th edition, McGraw-Hill, 2011.

32. Sparreboom A and **Zamboni WC**. Camptothecin Analogues. In Chabner BA and Longo DL, editors. Cancer Chemotherapy and Biotherapy: Principles and Practice, Fourth Edition, Lippincott Williams & Wilkins, 2011.

33. **Zamboni WC**, Yoshino K, Formulation and Physiologic Factors Affecting the Pharmacokinetics and Pharmacodynamics of Liposomal Agents. Drug Delivery Systems. 25(1);58-70:2010.

34. La-Beck NM*, **Zamboni WC**. Pharmacokinetics and pharmacodynamics of nanoparticle anticancer agents. NCI Alliance for Nanotechnology in Cancer Bulletin 3(1);3-6:2009.

35. **Zamboni WC** and Tonda M. Ovarian Cancer. In: Dipro J, Talbert R, Matzke G, Posey L, editors. Pharmacotherapy: A Pathophysiological Approach, Seventh Edition, McGraw-Hill, 2008.

36. **Zamboni WC**. Concept and Clinical Evaluation of Nanoparticle and Nanosome Anticancer Agents. The Oncologist 13(3);248-60:2008.

37. Waddell JA, Adel NG, Almuete V, Ignoffo R, Medina PJ, Kuhn JC, Solimando DA, **Zamboni WC**. New treatments for the management of treatment-experienced breast cancer: examining the evidence. Advanced Studies in Pharmacy 4(13);2007.

38. **Zamboni WC**. Tumor Targeted Delivery of Drugs for the Treatment of Cancer. In: Prakash S, eds. Artificial Cell, Cell Engineering and Therapy, First Edition, Woodhead Publishing Limited, Cambridge, UK. 2007.

39. **Zamboni WC**. Liposomal, nanoparticle, conjugated formulations of anticancer agents. Invited Review. Clin Cancer Res 11(23);8230-4:2005.

40. Sparreboom A, **Zamboni WC**. Topoisomerase I Inhibitors. In Chabner BA and Longo DL, editors. Cancer Chemotherapy and Biotherapy: Principles and Practice, Fourth Edition, Lippincott Williams & Wilkins, 2005.

41. **Zamboni WC**, Jung L, Tonda M. Ovarian Cancer. In: Dipro J, Talbert R, Matzke G, Posey L, editors. Pharmacotherapy: A Pathophysiological Approach, Sixth Edition, McGraw-Hill, 2005.

42. **Zamboni WC**, Jung L, Tonda M. Ovarian Cancer. In: Schwinghammer T, eds. Pharmacotherapy: A Patient-Focused Approach, Sixth edition, McGraw-Hill, 2005.

43. **Zamboni WC**. Use of microdialysis in preclinical and clinical development. In: Figg WD, McLeod H, editors. Handbook of Pharmacokinetics and Pharmacodynamics of Anti-Cancer Drugs, First edition. Humana Press. 2004.

44. **Zamboni WC**. An overview of the pharmacokinetic disposition of PEG-GCSF. Pharmacotherapy, 23(8 Pt 2):9S-14S,2003.

45. **Zamboni WC** and Stewart CF. An overview of the pharmacokinetics disposition of darbapoetin. Pharmacotherapy. 22(9):133S-140S;2002.

46. Jung LJ* and **Zamboni WC**. Cellular, pharmacokinetic, and pharmacodynamic aspects of response to camptothecins: can we improve it? Drug Resistance Updates. 4(4):273-88;2001.

47. **Zamboni WC**, Jung L*, Tonda M. Ovarian Cancer. In: Schwinghammer T, Yee G, editors. Pharmacotherapy: A Patient-Focused Approach, Fifth edition. McGraw & Hill. 2001.

48. **Zamboni WC**, Jung L*, Tonda M. Ovarian Cancer. In: Dipro J, Talbert R, Matzke G, Posey L, editors. Pharmacotherapy: A Pathophysiological Approach, Fifth Edition. McGraw & Hill. 2001.

49. **Zamboni WC**, Tonda ME. New designs of clinical trials. Highlights in Oncology Practice, 18(1):2-7, 2000.

50. **Zamboni WC** and Trovato JA. Ovarian Cancer. In: Schwinghammer T, Yee G, editors. Pharmacotherapy: A Patient-Focused Approach, Second edition. Appleton & Lange. 1999.

51. **Zamboni WC** and Goldspiel B. Ovarian Cancer. In: Dipro J, Talbert R, Matzke G, Posey L, editors. Pharmacotherapy: A Pathophysiological Approach, Fourth Edition. 1999.

52. Stewart CF, **Zamboni WC**. Plasma Protein Binding of Chemotherapeutic Agents. In Grochow L, Ames M, editors. Pharmacokinetics and Pharmacodynamics of Anticancer Agents, Second Edition. 1998.

53. Masson E, **Zamboni WC**. Pharmacokinetic Optimization of Cancer Chemotherapy: Effect on Outcomes. Clin Pharmacokinetics. 32(4);324-343:1997.

54. **Zamboni WC**. Fruits of the Yew (Ovarian Cancer). In: Schwinghammer T, Yee G, editors. Pharmacotherapy: A Patient-Focused Approach, First edition. Appleton & Lange, 1996.

55. **Zamboni WC** and Goldspiel B. Ovarian Cancer. In: Dipro J, Talbert R, Hayes P, Matzke G, Posey L, editors. Pharmacotherapy: A Pathophysiological Approach, Third Edition. Appleton & Lange, 1996.

In Preparation:

None

Peer Reviewed Articles

Students and fellows under my direction are indicated by an asterick.

Published or In Press:

1. Mansfield AS, Yin JV, Bradbury P, Kwiatkowski D, Patel S, Bazhenova L, Forde P, Lou Y, Dizona P, Villaruz L, Arnold S, Khalil M, Kindler HL, Koczywas M, Pacheco J, Rolfo C, Xia B, Mikula E, Chen L*, Patel K*, Smith KER, Cao L, Shaprio G, Costello B, Adjei A, Sharon E, Moscow J, **Zamboni WC**, Hassan R. Phase 1/2 Randomized Trial of Anetumab Ravtansine and Pembrolizumab Compared to Pembrolizumab for Pleural Mesothelioma (NCI ETCTN 10107). Lung Cancer. 2024 Sep;195:107928. doi: 10.1016/j.lungcan.2024.107928. Epub 2024 Aug 13. PMID: 39197359; PMCID: PMC11416719.

2. Brickey WJ, Caudell DL, Macintyre AN, Olson JD, Dai Y, Li S, Dugan GO, Bourland JD, O'Donnell LM, Tooze JA, Huang G, Yang S, Guo H, French MN, Schorzman AN, **Zamboni WC**, Sempowski GD, Li Z, Owzar K, Chao NJ, Cline JM, Ting JPY. The TLR2/TLR6 ligand FSL-1 mitigates radiation-induced hematopoietic injury in mice and nonhuman primates. Proc Natl Acad Sci U S A. 2023 Dec 12;120(50):e2122178120. doi: 10.1073/pnas.2122178120. Epub 2023 Dec 5. PMID: 38051771; PMCID: PMC10723152.

3. Williams GR, Outlaw D, Harvey RD, Lichtman SM, **Zamboni WC**, Giri S. Chemotherapy dosing in older adults with cancer: One size does NOT fit all. J Geriatr Oncol. 2022 Aug 24:S1879-4068(22)00203-X. doi: 10.1016/j.jgo.2022.08.012. Epub ahead of print. PMID: 36030172.

4. Dahl DK, Whitesell AN, Sharma-Huynh P, Maturavongsadit P, Janusziewicz R, Fox RJ, Loznev HT, Button B, Schorzman AN, **Zamboni W**, Ban J, Montgomery SA, Carey ET, Rahima Benhabbour S. A mucoadhesive biodissolvable thin film for localized and rapid delivery of lidocaine for the treatment of vestibulodynia. Int J Pharm. 2022 Jan 25;612:121288. doi: 10.1016/j.ijpharm.2021.121288. Epub 2021 Nov 17. PMID: 34800616; PMCID: PMC8753993.

5. Arnold K, Wang Z, Lucas A, **Zamboni W**, Xu Y, Liu J. Investigation of the pharmacokinetic properties of synthetic heparan sulfate oligosaccharides. Glycobiology. 2022 Oct 14:cwac068. doi: 10.1093/glycob/cwac068. Epub ahead of print. PMID: 36239422.

6. Price L*, Rivera J, Madden A*, Herity L*, Piscitelli J*, Mageau S*, Santos D, Roques J, Midkiff B, Nikolaishvili-Feinberg N, Darr D, Chang S, **Zamboni W**. Minibeam radiation therapy enhanced tumor

delivery of PEGylated liposomal doxorubicin in a triple negative breast cancer mouse model. Resubmitted to Ther Adv in Med Oncol. 2021 Oct 29;13:17588359211053700. doi: 10.1177/17588359211053700. PMID: 34733359; PMCID: PMC8558804.

7. Prasher A, Shrivastava R, Dahl D, Sharma-Huynh P, Maturavongsadit P, Pridgen T, Schorzman A, **Zamboni W**, Ban J, Blikslager A, Dellon ES, Benhabbour SR. Steroid eluting esophageal-targeted drug delivery devices for treatment of eosinophilic esophagitis. Polymners. 2021 Feb 13;13(4):557. doi: 10.3390/polym13040557. PMID: 33668571; PMCID: PMC7917669.

8. Piha-Paul SA, Thein KZ, De Souza P, Kefford R, Gangadhar T, Smith C, Schuster S, **Zamboni WC**, Dees CE, Markman B. First-in-human, phase I/II study of CRLX301 in patients with advanced or metastatic solid malignancies. Invest New Drugs. 2021 Aug;39(4):1047-1056. doi: 10.1007/s10637-021-01081-x. Epub 2021 Feb 16. PMID: 33594602.

9. Duska L, O'Malley DM, Krasner C, Schilder RJ, Mathews C, Moore K, Thaker P, Miller A, Prudy C, Leyco AJ, Smith C, Mercier D, Tennant L, Kennedy E, Vahanian N, Lucas AT, **Zamboni WC**, Link C. A Phase Ib/II and pharmacokinetic study of EP0057 (formerly CRLX101) in combination with weekly paclitaxel in patients with recurrent or persistent epithelial ovarian, fallopian tube, or primary peritoneal cancer. Gynecol Oncol. Gynecol Oncol. 2021 Mar;160(3):688-695. doi: 10.1016/j.ygyno.2020.12.025. Epub 2020 Dec 31. PMID: 33390325.

10. Hwang D, Dismuke T, Rosen EP, Kagel JR, Lim C. **Zamboni WC**, Kabanov AV, Gershon TR, Sokolsky-Papkov M. Nanoparticle formulation improves the delivery and efficacy of vismodegib for brain tumor therapy in a GEMM of sonic hedgehog driven medulloblastoma. Nanomedicine. 2021 Feb;32:102345. doi: 10.1016/j.nano.2020.102345. Epub 2020 Nov 28. PMID: 33259959; PMCID: PMC8160025.

11. Price LSL*, Stern ST, Deal AM, Kabanov AV, **Zamboni WC**. A Reanalysis of Nanoparticle Tumor Delivery Using Classical Pharmacokinetic Metrics. Science Advances. 15 Jul 2020: Vol. 6, no. 29, eaay9249. DOI: 10.1126/sciadv. aay9249. PMID: 32832614 PMCID: PMC7439617.

12. Zhu J, Beechinor RJ, Thompson T, Schorzman AN, **Zamboni W**, Crona DJ, Weiner DL, Tarantino LM. Pharmacokinetic and pharmacodynamic analyses of cocaine and its metabolites in behaviorally divergent inbred mouse strains. Genes Brain Behav. 2020 May 8:e12666. doi: 10.1111/gbb.12666. PMID: 32383297.

13. Graham-Gurysh EG, Moore KM, Schorzman AN, Lee T*, **Zamboni WC**, Hingtgen SD, Bachelder EM, Ainslie KM. Tumor responsive and tunable polymeric platform for optimized delivery of paclitaxel to treat glioblastoma. ACS Appl Mater Interfaces. 2020 Apr 29;12(17):19345-19356. PMID: 32252517.

14. Parker CL, McSweeney MD, Lucas AT, Jacobs TM, Wadsworth D, **Zamboni WC**, Lai SK. Pre-targeted delivery of PEG-coated carriers to breast tumors using multivalent, bispecific antibody against polyethylene glycol and HER2. Nanomedicine. 2019 Oct; 21:102076. PMID: 31394261.

15. Salch SA, **Zamboni WC**, Zamboni BA, Eckel SF. Patterns and characteristics associated with the surface contamination of hazardous drugs in hospital pharmacies. Am J Health Syst Pharm. 2019 Apr 17;76(9):591-598. PMID: 31361828.

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Submitted or Resubmitted:

1. Chen Li*, Lucas AT, Mansfield AS, Lheureux S, O'Connor C*, Zamboni BA, Patel K*, McKee T, Moscow J, **Zamboni WC**. Evaluation of Innate Immune System Biomarkers, Body Habitus, and Sex on the Pharmacokinetics and Pharmacodynamics of Anetumab Ravtansine in Patients With Cancer. Submitted to Clinical Pharmacology and Therapeutics, Aug 2024.

2. Alqaisi HA, Cohn DE, Cherm MJY, Duska LR, Jewell A, Corr B, Winer IS, Girda E, Crispens MA, Dhani NC, Madariaga AU, Grant R, Malaguti M, Lee C, Bowering V, Wong, H, Poothullil A, Speers V, Wang L, Bedard PL, Brady C, Nixon A, Chen Li*, O'Connor C*, **Zamboni W**, Moscow J, Oza AM, Lheureux S. A randomized phase II study of bevacizumab with weekly anetumab ravtansine or weekly paclitaxel in platinum-resistant/refractory high grade ovarian cancer (NCI trial#10150). Submitted to Clin Cancer Res in Aug 2024.

3. Lucas AT, Price LSL*, Santos CM, Perou C, Kabanov AV, **Zamboni WC**. Fibroblast-mediated increase in tumor density is associated with reduced nanoparticle tumor delivery and efficacy. Submitted to Science Advances, March 2024.

In Preparation:

4. Thakkar E*, Turner D, Santana V, Li J, Zamboni BA, Stewart C, **Zamboni WC**. The effect of body habitus on the pharmacokinetics of bevacizumab in pediatric and adults patients with refractory solid tumors. (Plan to submit to Clinical Pharmacology and Therapeutics).

5. **Zamboni WC**, Taft-Benz SA, Lucas AT, Moseley C, Zamboni BA, Heise M. COVID-19 infection alters the innate immune system and the pharmacokinetics of PEG-liposomal doxorubicin in mice.

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7. Hwang JJ, **Zamboni WC**, Malik S, Hansen N, Strychor S, Zamboni BA, Sidone BJ*, Marshall JL. Phase I and pharmacokinetic study of weekly docetaxel and oxaliplatin in patients with advanced solid tumors.

8. Lucas AT, Santos CM, Kabanov AV, **Zamboni WC**, Bronich TK. Pharmacology of variably-loaded tri-block co-polymer formulations of cisplatin in a genetically engineered mouse model of triple negative breast cancer. (Plan to submit to Journal of Controlled Release).

1. Lucas AT, Beaudoin JJ*, Herity L*, Razo*, Sketch M, Price LSL*, **Zamboni WC**. Pharmacokinetic and allometric scaling studies of nanoparticle formulations of anthracyclines. Submitted to Journal of Pharmacokinetics and Pharmacodynamics, Dec 2023.

2. Madden AJ*, Price LSL*, Sandison KL*, White TF*, Santos CM, O'Neil S, Fitch RM, McGee W, Miller R, **Zamboni WC**. The effect of dose of actively and passively targeted PEGylated liposomal formulations of cisplatin on tumor delivery and interaction with tumor associated macrophages. Submitted to Nanomedicine NBM, July 202.

Abstracts and Scientific Presentations At Meetings

Students and fellows under my direction are indicated by an asterisk.

Published or Accepted:

1. Chen Li*, Lucas AT, Mansfield AS, Lheureux S, Patel K*, O'Connor C*, Hassan R, Moscow J, Zamboni WC. Evaluation of Innate Immune System Biomarkers, Body Habitus, and Sex on the Pharmacokinetics and Pharmacodynamics of Anetumab Ravtansine in Patients With Cancer. 2024 Annual Meeting of the American College of Clinical Pharmacology.

2. Williams GR, Al-Obaidi M, Rower J, Harmon C, Dai C, Acosta E, Giri S, **Zamboni W**, Lucas AT, Shachar SS, Gbolahan O, Meyerhardt J, Caan B, Bhatia S. Does Oxaliplatin Pharmacokinetics (PKs) explain the association between Body Composition and Chemotoxicity Risk in older patients with gastrointestinal (GI) Cancers. ASCO 2022.

3. Johannessen L, Hu S, Ke N, D'Ippolito A, Rajagopal N, Savinainen A, **Zamboni W**, Hodgson G. Preclinical evaluation of PK, PD, and anti-tumor activity of the oral, non-covalent, potent and highly selective CDK7 inhibitor, SY-5609, provides rationale for clinical development in multiple solid tumor indications. AACR-NCI-EORTC 2019 #C091.

4. Starling BR, Kumar P, Lucas AT, Barrow D, Farnan L, Hendrix L, Giovinazzo H, Song G, Gehrig P, Bae-Jump V, Bensen JT, **Zamboni WC**. The effect of body habitus on the innate immune system and pharmacology of carrier-mediated agents and biologics. Interdisciplinary Nutrition Sciences Symposium 2019.

5. Madariaga A, O'Malley DM, Thacker PH, Wenham RM, Mehta A, Bowering V, Cao L, **Zamboni WC**, Nixon A, Bedard P, Wang L, Hassan R, Siu L, Moscow J, Lheureux S. A randomized phase II study of bevacizumab and either weekly anetumab ravtansine or weekly paclitaxel in platinum-resistant or refractory ovarian cancer. Submitted to ASCO TIPS 2019.

6. Juric D, Papadopoulos K, Tolcher A, Do K, Orlando D, **Zamboni W**, Hodgson G, di Tomaso E, Stephens K, Roth D, Shapiro G. Proof-of-Mechanism Based on Target Engagement and Modulation of Gene Expression Following Treatment with SY-1365, a First-in-Class Selective CDK7 Inhibitor in Phase 1 Patients with Advanced Cancer. EORTC-NCI-AACR Conference 2018.

7. Kirschbrown WP, Lucas AT, **Zamboni WC**, Garg A. Biomarkers of Fc-gamma receptors (FcγRs) on Mononuclear Phagocyte System (MPS) Cells in Blood of Patients with Advanced Gastric Cancer are upregulated as compared to Patients with Metastatic Breast Cancer. EORTC-NCI-AACR Conference 2018.

8. Price LP, Stern S, Kabanov A, **Zamboni WC**. Evaluating the efficiencies and deficiencies of nanoparticle tumor delivery and disposition. Annual Investigators' meeting of the NCI Alliance for Nanotechnology in Cancer 2018.

9. Beaudoin JJ*, Herity LB*, Razo J*, Price LSL*, Sketch MR, Kabanov AV, Lucas AT, **Zamboni WC**. Pharmacokinetic and Allometric Scaling Studies of Nanoparticle Formulations of Anthracyclines. GPEN 2018.

10. Chang SX, Rivera JN, Price LSL*, Herity LB*, Madden AJ*, Roques JR, Santos C, Darr D, **Zamboni WC**. Pharmacokinetic (PK) and pharmacodynamic (PD) studies of PEGylated liposomal doxorubicin (PLD) enhanced delivery to tumors after microbeam radiation therapy (MRT) compared with broadbeam radiaton therapy (BRT) in a triple negative breast cancer mouse model. NCI CCNE PI Meeting 2017.

11. Price LSL*, Stern ST, Kanaby MC*, Eve SG*, Deal AM, Kabanov AV, **Zamboni WC**. Evaluation of nanoparticle drug delivery to tumors: Effects of pharmacokinetic study design and metrics on liposomal delivery to tumors. NCI CCNE PI Meeting 2017.

12. Lucas AT*, Herity LB*, Kornblum ZA, Madden AJ*, Gabizon A, Layko D, Kabanov AV, Ajamie T, Bender DM, Kulanthaivel P, Sanchez-Felix MV, Havel HA, **Zamboni WC**. Use of mononuclear phagocyte platforms to characterize nanomaterials, nanoparticles and colloids. FIP/USP/AAPS Workshop on Nanomedicines – Technical and Regulatory Perspectives 2017.

13. McSweeney MD, Price LSL*, Herity LB*, Wessler T, Cao Y, Forest MG, **Zamboni WC**, Lai SK. The impact of anti-PEG antibodies on the pharmacokinetics and biodistribution of Doxil *in vivo* and *in silico*. Submitted to the Keystone Conference on Immunology.

14. Chang SX, Rivera JN, Herity LB*, Price LSL*, Madden AJ*, Roques JR, Santos C, Darr D, **Zamboni WC**. Comparison of microbeam versus conventional broadbeam radiation therapy on tumor delivery enhancement of PEGylated liposomal doxorubicin in a triple negative breast cancer mouse model. AACR 2017. Cancer Res 2017;77(13 Suppl): Abstract nr 5051. doi:10.1158/1538-7445.AM2017-5051.

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22. **Zamboni WC**, Markman B, de Souza P, Dees EC, Gangadhar TC, Eliasof S, Murphy C, Senderowicz A, Wang H. Pharmacokinetics (PK) of CRLX301, a Novel Nanoparticle-Drug Conjugate (NDC) Containing the Payload Docetaxel, in Patients with Refractory Solid Tumors. AACR 2016, #2047.

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24. Chang XS, Madden AJ*, Rivera J, Santos C, Darr D, Hunter L, **Zamboni WC**. Use of microbeam radiation therapy to increase the tumor delivery of PEGylated liposomal doxorubicin in a triple negative breast cancer GEM model. Submitted to American Association of Physics in Medicine 2015.

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27. Bori F*, Madden A*, Kumar P*, Moore S*, Ramanathan R, **Zamboni WC**. Effect of Obesity and Hormones on Pharmacokinetics and Pharmacodynamics of PEGylated Liposomal CKD-602 (S-CKD602). Presented at the Annual Biomedical Research Conference for Minority Students 2013.

28. Eckel SF, McAdoo WF*, Sherwood CA*, O'Neal SK, **Zamboni WC**. Evaluation of Hazardous Drug Clean (HDClean), a two-step towelette system, in removing surface contamination of hazardous drugs. Presented at FIP Annual Meeting 2013.

29. Karginova O, Adamo B, Deal A, Santos C, Darr D, Bash R, Sandison K*, **Zamboni W**, Miller R, Anders C. Efficacy of Carboplatin alone or with ABT888 in a BRCA-mutated, basal-like, Triple Negative Breast Cancer (TNBC) intracranial murine model. Presented at SABCS 2013.

30. Schorzman AN, Chu K, Finniss M, Bowerman C, Kuijer J, Madden A, DeSimone J, **Zamboni W**. An LC-MS/MS Assay for Simultaneous Quantitation of Docetaxel and its Prodrug-Conjugate for Pharmacokinetic Studies of PRINT-Lipidized-Docetaxel Nanoparticles in Mice. Proceedings ASMS 2013, #1203.

31. Madden A*, Rawal S*, Chu K, Sandison K*, Schell R*, Feng L, Ma P, Mumper R, DeSimone J, **Zamboni WC**. Meta-analysis evaluating the efficiency of tumor and tissue delivery of carrier-mediated agents (CMA) and small molecules (SM) using a novel pharmacokinetic (PK) metric relative distribution index over time (RDI-OT). 2013 Proceedings of AACR, #3366.

32. Song G*, Darr DB, Santos CM, Kim M, Midkiff BR, Feinberg NN, Miller CR, Rogers A, Dudley AC, Perou CM, **Zamboni WC**. Relationship between Tumor Microenvironment, Tumor Delivery, and Efficacy of PEGylated Liposomal Doxorubicin (PLD) and Non-liposomal doxorubicin (NL-doxo) in Genetically Engineered Mouse Models (GEMMs) of Breast Cancer (BC). 2013 Proceedings of AACR, #3365.

33. Caron W*, Song G*, Kumar P*, Lay J, Gehrig P, **Zamboni W**. Phenotypically profiling the factors affecting the pharmacokinetics and pharmacodynamics of nanoparticles in preclinical models and in patients. Society of Toxicology Annual Meeting, San Antonio, TX, March 2013.

34. Hinkal G, Hull L, Mazar A, **Zamboni W**. The Animal Models Working Group: Index and Best Practices. NCI Alliance for Nanotechnology in Cancer; Annual Principal Investigator Meeting. November 2012.

35. Caron WP*, Song G*, Lay JC, Madden AJ*, Schorzman A, O'Neal S, Gehrig PA, Decuzzi P, **Zamboni WC**. PhenoGLO-HTSP: A High Throughput Screening Platform that Profiles the Bi-Directional Interaction between Nanoparticle Agents and the Mononuclear Phagocyte System (MPS). NCI Alliance for Nanotechnology in Cancer; Annual Principal Investigator Meeting. November 2012.

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156. Houghton PJ, Stewart CF, **Zamboni WC**, Thompson J, Santana VM. Rational design of clinical trials in children with camptothecin analogs based upon optimization of efficacy in xenograft models. Proceedings of the European Cancer Society 1997.

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163. **Zamboni WC**, Houghton PJ, Hulstein J, Thompson JC, Cheshire PJ, Stewart CF. Probenecid inhibits systemic and renal clearance of topotecan. Proceedings of the American Society for Clinical Pharmacology and Therapeutics 1997. Clin Pharmcol Therap 1997; 61:145.

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167. Bowman LC, Stewart CF, **Zamboni WC**, Crom WC, Luo X, Heideman R, Houghton PJ, Meyer WH, Pratt CB. Toxicity and pharmacodynamics of oral topotecan (POTOPO) in pediatrics patients with relapsed solid tumors. Proceedings of ASCO 1996: #462.

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169. Stewart CF, **Zamboni WC**, Crom WR, Houghton PJ, Pratt CB. Pharmacokinetics of DMP-840 in children with relapsed solid tumors. Proceedings of AACR 1996: #181.

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Submitted:

1. Harvey RD, Selvaggi G, Ross J, Zhou J, Chen Z, Chen L*, **Zamboni W**, Dees EC, MD5A phase 1 trial of MRX-2843, a novel dual MerTK inhibitor, in patients with advanced or metastatic solid tumors. Submitted to ASCO'24.

INVITED TALKS

1. The Effect of Body Habitus on Precision Dosing of Complex Drugs and Biologics. The University of Texas College of Pharmacy Rho Chi Ceremony. April 2023.
2. Effect of Viral Infections on Innate Immune System and Pharmacology of Complex Drugs. ASPET Webinar Sept 2023.
3. Pharmacologic Studies of the Mononuclear Phagocyte System as Part of Clinical Studies of Anetumab Ravtansine: Interim Analysis. Anetumab Ravtansine Clinical Team, UM1 ETCTN, CTEP, NCI. Feb 2022.
4. Minibeam Radiation Therapy Enhanced Delivery of Nanoparticle Anticancer Agents to Pancreatic Cancer Tumors. NCI Alliance for Nanotechnology in Cancer Program Meeting. Oct 2021.
5. Effect of Body Habitus and Race on the Innate Immune System and the Pharmacology of Complex Drugs and Biologics. UNC TREND, UNC LCCC. Oct 2021.
6. Translational Studies of the Innate Immune System as Biomarkers for the Pharmacology of Complex Drugs and Biologics: A Model for Team Pharmaceutical Sciences. WVU School of Pharmacy. Nov 2018.

7. Biomarkers of the Mononuclear Phagocytic System (MPS) for the Pharmacokinetics and Pharmacodynamics of the Antibodies and Antibody Drug Conjugates. PEGS Summit: Clinical Progress in Antibody-Drug Conjugates. Boston, MA. May 2018.
8. Evaluating the Efficiencies and Deficiencies of Nanoparticle Tumor Delivery and Disposition, CCNE Site Visit to UNC. Chapel Hill, NC. February 2018.
9. Relationship between the Mononuclear Phagocyte System and the Pharmacokinetics and Pharmacodynamics of Antibody Drug Conjugates in Patients. PEGS Boston – Antibody-Drug Conjugates. Boston, MA. May 2017.
10. Pharmacokinetics and Pharmacodynamics of Nanoparticles; Bi-directional Interaction between Nanoparticle Agents and the Mononuclear Phagocyte System. The Carolina Nanoformulations Workshop, Chapel Hill, NC. 2017.
11. Evaluation of the Bi-Directional Interaction between the Mononuclear Phagocyte System (MPS) and the Pharmacokinetics and Pharmacodynamics of Carrier Mediated Agents and Antibody-Drug Conjugates. PEGS Boston – Antibody Drug Conjugates II: Advancing Towards the Clinic. Boston, MA. April 2016.
12. Factors affecting the clearance, distribution, and tumor delivery of carrier-mediated agents. Barrow Neurological Institute. Phoenix, AZ. Feb 2016.
13. Understanding the factors affecting the PK of nano agents in preclinical models and in patients as a method to improve the therapeutic index. Applied Pharmaceutical Nanotechnology (APN) meeting. Cambridge, MA. Nov 2015.
14. Bi-directional interaction between mononuclear phagocyte system and nanoparticles in blood, tumor and tissues. American Society of Nanomedicine. Crystal City, VA. Oct 2015.
15. Interactions between tumor microenvironmental factors and nanomedicines which influence tumor delivery and efficacy. American Society of Nanomedicine. Crystal City, VA. Oct 2015.
16. Bi-directional interaction between the mononuclear phagocyte system and liposomal agents in preclinical models and patients. 24th Annual Southeast Lipid Research Conference. Stone Mountain, GA. Sept 2015.
17. Preclinical Characterization of ADME, PK, PD, and toxicology of Nanoformulations; Use of nano agents in non-cancer diseases; Factors affecting nano delivery to tumors in animal models and patients; Clinical PK and PD (efficacy and toxicity) aspects of nano agents. Carolina Nanoformulations Workshop, UNC Eshelman School of Pharmacy. 2015.
18. Interactions between the mononuclear phagocyte system, carrier-mediated agents and antibody drug conjugates. Americas Antibody Congress 2015. San Diego, CA. May 2015.
19. Translational studies evaluating the bi-directional interaction between the mononuclear phagocyte system and carrier-mediated agents. National Center for Toxicological Research. Jefferson, AK. May 2015.
20. Bi-directional interaction between the mononuclear phagocyte system and nanoparticle pharmacokinetics and pharmacodynamics in preclinical models and patients. University of Kentucky, Lexington, KY. May 2015.
21. Bi-directional interaction between the mononuclear phagocyte system and nanoparticle pharmacokinetics and pharmacodynamics: Influence on Accelerated Blood Clearance. Moderna Symposium on Accelerated Blood Clearance of Nanoparticles. Boston, MA. March 2015.
22. Translational Studies Evaluating the Bi-directional Interaction between Carrier-Mediated Anticancer Agents and the Mononuclear Phagocyte System. 36th EORTC-PAMM Winter Meeting, Marseille Provence Metropole, France. January 2015.
23. Workshop: Profiling the Factors that Alter the Tumor Delivery of Carrier-Mediated Agents. World ADC Conference, San Diego, CA. Nov 2014.

24. Factors Affecting the Pharmacokinetics and Pharmacodynamics of Nanparticles, Carrier-Mediated Agents and Antibody Drug Conjugates: Similarities and Connections. World ADC Conference, San Diego, CA. Nov 2014.

25. Pharmacokinetics and Pharmacodynamics of Nanoparticles and Carrier-Mediated Agents in Preclinical Animal Models and in Patients. CACO-PBSS Cancer Nanotherapeutics Workshop, San Francisco, CA. April 2014.

26. NIH/NIAID/DAIDS Workshop on Long Acting / Extended-Release Antiretroviral Drugs, Boston, MA, March 2014.

27. Safety and ADMET Aspects of Nanotechnology in Parenteral Drug Products. US FDA and PQRI Workshop on Nanomaterial Drug Products: Current Experience and Management of Potential Risks, Silver Spring, MD, Jan 2014.

28. Profiling the Interaction between Nanoparticle and Carrier-Mediated Agents and the Mononuclear Phagocyte System in Blood, Tumors and Tissues. CT3N Symposium, University of Pennsylvania, Nov 2013.

29. Profiling the Factors affecting Nanoparticle and Carrier-Mediated Agent Clearance and Delivery to Tumors and Tissues. PKUK Meeting, Harrogate, North Yorkshire, UK, Oct 2013.

30. Evaluation of Factors Affecting Nanoparticle Pharmacokinetics and Pharmacodynamics in Preclinical Models and Patients: A focus on Patient Characteristics and the Mononuclear Phagocyte System. Pharmacoepidemiology Seminar Series, UNC School of Medicine, Chapel Hill, NC, Oct 2013.

31. Profiling the Factors affecting Nanoparticle Clearance and Delivery to Tumors and Tissues. Department of Pharmacology, Harvard University, Boston, MA, Oct 2013.

32. Novel Methods, Models and Pharmacologic Results to Guide the Translational Development of Nanoparticle and Carrier-Mediated Agent. Department of Pharmacology, UNC School of Medicine, Oct 2013.

33. Novel pharmacologic and phenotypic methods to characterize carrier-mediated and nanoparticle agents as part of preclinical and clinical development. 2nd International Conference and Exhibition on Biowaivers and Biosimilars, Raleigh, NC, Sept 2013.

34. Phenotypically profiling the factors affecting the pharmacokinetics and pharmacodynamics of nanoparticle agents in preclinical models and in patients. Society of Toxicology Annual Meeting, San Antonio, TX, March 2013.

35. Evaluation of the mononuclear phagocyte system (MPS) and effects on nanoparticle pharmacokinetics and pharmacodynamics in preclinical animal models and in patients. Nanomedicines Alliance Industry Symposium on Nanomedicines: Charting a Road to Commercialization. Rockville, MD, March 2013.

36. Profiling the biological factors modulating nanoparticle clearance, biodistribution and tumor delivery in preclinical animal models and in patients. NCI Alliance for Nanotechnology in Cancer Annual Principal Investigator Meeting, Biodistribution Working Group Session, Houston, TX, November 2012.

37. Profiling the bi-directional interaction between nanoparticle agents and the mononuclear phagocyte system: effects on clearance and tumor delivery of nanoparticle agents. NIH/NCI TONIC / Alliance for Nanotechnology in Cancer / Industry Workshop on Enhanced Permeability and Retention (EPR) Effect and Nanomedicine Drug Targeting in Cancer, NIH, Bethesda, MD, October 2012.

38. Factors affecting the bi-directional interaction between liposomal agents and the mononuclear phagocyte system. AAPS Webinar, September 2012.

39. Profiling the biological factors modulating drug delivery in preclinical animal models and in patients. Invited speaker for the 2012 Drug Carriers in Medicine and Biology Gordon Research Conference, Waterville Valley Resort, NH, August 2012.

40. Influence of the MPS on the clearance and tumor delivery of nanoparticle agents. In the session on Pharmacokinetics of Nanoparticles – Understanding Interactions at the Nano/Bio Interface, AAPS National Biotechnology Conference, San Diego, CA, May 2012.

41. Phenotypic probing of the mononuclear phagocyte system as a method to individualize therapy with PEGylated liposomal doxorubicin (PLD) in patients with refractory ovarian cancer. Ovarian Cancer: Prevention, Detection and Treatment of the Disease and Its Recurrence – Molecular Mechanisms and Personalized Medicine. University of Pittsburgh Cancer Institute, Pittsburgh, PA, 2012.

42. Technetium-99m sulfur colloid (TSC) as a phenotypic probe for predicting the pharmacokinetics and pharmacodynamics of PEGylated liposomal doxorubicin (PLD; Doxil) in patients with recurrent epithelial ovarian cancer. UNC Nuclear Medicine Division of Radiology Meeting, May 2012.

43. Pharmacologic methods and resources to facilitate the translational development of carrier-mediated and nanoparticle agents. Northwestern University Center for Cancer Nanotechnology Excellence, Chicago, IL, April 2012.

44. Factors affecting the pharmacokinetics and pharmacodynamics of nanoparticle agents in preclinical models and in patients. ASME Early-Stage Research Collaboration Nano Engineering for Medicine and Biology Workshop, Washington DC, April 2012.

45. PhenoGLO: Novel platforms to profile nanoparticle agents and individualize nanoparticle therapy. Nanotechnology Commercialization Conference, Durham, NC, April 2012.

46. Phenotypic probing of the mononuclear phagocyte system as a method to individualize PEGylated liposomal doxorubicin (Doxil) therapy in patients with refractory ovarian cancer: Results of UNC LCCC clinical study. UNC LCCC Gynecologic Oncology Group, Chapel Hill, NC, March 2012.

47. Overview of nanoparticle anticancer agents and pharmacologic issues. UNC LCCC Phase I Program Seminar, Chapel Hill, NC, March 2012.

48. Age related effects on the pharmacokinetics and pharmacodynamics of PEGylated-liposomal anticancer agents: Alterations in MPS function? UNC LCCC Geriatric Oncology Program, Chapel Hill, NC, February 2012.

49. Phenotypic probing of the bi-directional interaction between PEGylated liposomal agents and the mononuclear phagocyte system. Carolina Center of Cancer Nanotechnology Excellence Seminar, Chapel Hill, NC, February 2012.

50. Unique pharmacologic resources to evaluate and improve the preclinical and clinical development of carrier-mediated and nanoparticle agents. Center for Innovation for Nanobiotechnology (COIN) and NanoMedicine Partnering Mission of Medicon Valley of Denmark and Sweden Meeting, Chapel Hill, NC, January 2012.

51. Phenotypic probing of the bi-directional interaction between PEGylated liposomal agents and the mononuclear phagocyte system. International Liposome Society Liposome Advances Conference, London, England, December, December 2011.

52. Novel pharmacokinetic and pharmacodynamic metrics to profile the systemic, tumor and tissue disposition of nanoparticle agents. Nanoparticle Biodistribution: Physical and Biological Effects at the NCI Alliance for Nanotechnology in in Cancer Investigators' Meeting, Boston, MA, September 2011.

53. Pharmacologic and animal model pitfalls for the translational development of nanoparticle agents as part of the symposium on Nanotechnology in Products: Pitfalls and Successes in the Path to a Commercial Product at the MANCEF/COMS Nanotechnology Meeting, August 2011. Panel Member.

54. Lessons learned in the translation from animals to humans for pharmacokinetics and pharmacodynamics of nanoparticle agents. Nanomedicine Product Development Summit: Turning Nanoparticle Delivery Systems into Innovative Medicines. Controlled Release Society Meeting, July 2011. Panel Member.

55. Factors affecting the pharmacokinetics and pharmacodynamics of nanoparticle agents in animal models and in patients. Pharmacologic and Regulatory Issues for the Translational Development of Nanoparticle Agents Workshop, Controlled Release Society Meeting, July 2011, Co-Chair.

56. Pharmacologic methods to improve the translational development of nanoparticle agents. Department of Pharmacology, East Carolina University, May 2011.

57. Factors Affecting the Translational Development of Nanoparticle Agents. Department of Pharmacology, Wake Forest University, April 2011.

58. Mechanistic PK-PD Modeling of the Bi-directional Interaction between PEGylated Liposomal Anticancer Agents and Monocytes. AAPS National Biotechnology Conference, April 2011.

59. How to improve the translational development of nanoparticle agents via pharmacologic methods. NC Society of Toxicology Meeting, March 2011.

60. Factors affecting the pharmacokinetics (PK) and pharmacodynamics (PD) of nanoparticle and nanosomal anticancer agents. EORTC-AACR-NCI Meeting, November 2010.

61. Preclinical and translational pharmacology of nanoparticle therapeutics. American College of Toxicology Meeting, October 2010.

62. Bi-Directional Pharmacokinetic and Pharmacodynamic Interaction between PEGylated Liposomal Anticancer Agents and the Reticuloendothelial System. International Liposome Research Days, August 2010.

63. Pharmacology and Toxicology Issues Affecting the Translational Development of Nanoparticle Agents. NCI Best Practices in Cancer Nanotechnology Workshop, June 2010.

64. Evidence and Clinical Practice Experience of Pharmacokinetic Monitoring of 5-FU for Colorectal Cancer. HOPA Annual Meeting, March 2010.

65. Age Related Effects on the Pharmacokinetic and Pharmacodynamics of Liposomal and Nanoparticle Anticancer Agents. UNC LCCC Geriatric Oncology Program. March 2010.

66. Factors Affecting the Pharmacokinetics and Pharmacodynamics of Liposomal and Nanoparticle Agents. AAPS Webinar, February 2010.

67. Factors Affecting the Pharmacokinetics and Pharmacodynamics of PEGylated Liposomal Anticancer Agents. International Liposome Society Liposome Advances Conference, London, England, December 2009.

68. Factors Affecting the Pharmacology of PEGylated Liposomal Agents in Patients. Fourth Annual NCI Alliance for Nanotechnology in Cancer Investigators Meeting, October 2009.

69. Individualizing Pegylated Liposomal Doxorubicin (PLD) Treatment in Patients with Ovarian Cancer. UNC LCCC Board of Visitors Meeting. August 2009.

70. Factors Affecting the Pharmacokinetics and Pharmacodynamics of Nanosomal Anticancer Agents: Evaluation of the Reticuloendothelial System, Chapel Hill Drug Conference, University of North Carolina, Chapel Hill, NC in May 2009.

71. Development of Phenotypic Probes of the Reticuloendothelial System as Part of the Translational Development of Nanosomal and Nanoparticle Anticancer Agents, UNC Institute for Pharmacogenetics and Individualized Therapy Seminar Series, Feb 2009.

72. Evaluation of the Reticuloendothelial System as Part of the Translational Development of Nanosomal Anticancer Agents, UNC Pathology and Laboratory Medicine Grand Rounds, February 2009.

73. Translational Development of Nanosomal and Nanoparticle Anticancer Agents, UNC Gynecology Oncology Grand Rounds, January 2009.

74. Influence of the Reticuloendothelial System on the Pharmacokinetics and Pharmacodynamics of Nanosomal and Nanoparticle Anticancer Agents, Philadelphia College of Pharmacy and Sciences, Pharmaceutical Sciences Dept, Grand Rounds, January 2009.

75. Factors Affecting the Pharmacokinetics and Pharmacodynamics of Nanosomal Anticancer Agents: Evaluation of the Reticuloendothelial System. Annual Meeting of the American Society for Clinical Pharmacology and Therapeutics in April 2008.

76. Evaluation of the Reticuloendothelial System as Part of the Preclinical and Clinical Development of Liposomal and Nanoparticle Anticancer Agents. Moffitt Cancer Center, Tampa FL in Nov'06; Nanoparticle Characterization Laboratory, National Cancer Institute, Fredrick, MD in Feb 2007.

77. Liposomal and Nanoparticle Anticancer Agents: Magic Bullets N'at. University of Pittsburgh Alumni Association Metro PITT Club Meeting, Pittsburgh, PA, May 2006.

78. Preclinical and Clinical Development of Liposomal Anticancer Agents. FDA, Feb 2006.

79. Novel Methods for Pharmacokinetic Sampling: Use of Microdialysis to Evaluate the Pharmacokinetics and Pharmacodynamics of Drugs. HOPA Annual Meeting, San Diego, CA, June 2005.

80. Optimizing Erythropoietic Growth Factor Formulary Management: 2005 Interchange Opportunities. University Pharmacotherapy Associates Program. January 2005 to Present.

81. Optimizing Outcomes in Chemotherapy-Induced Neutropenia: Synchronized CSF Innovation. University Pharmacotherapy Associates Program. July 2004 to January 2005.

82. Systemic, Tissue, and Tumor Disposition of Stealth Liposomes. University of Pittsburgh School of Pharmacy Alumni Weekend. Seven Springs, PA. June 2002 and Children's Hospital of Philadelphia, March 2004.

83. Use of Microdialysis in Pharmacodynamic Studies of Anticancer Agents. 4th International Symposium on the Pharmacodynamics of Anticancer Agents. Sea Island, GA. September 2001.

84. Use of PET Imaging in the Development of Anticancer Agents. Significant Papers in Pharmacotherapy. The Annual Meeting of the American College of Clinical Pharmacy, Los Angeles, CA. November 2000.

85. Pharmacokinetic Principles and Modeling, Regional Chemotherapy and Tumor Disposition of Anticancer Agents. The Seventh Annual Berlex Oncology Clinical Pharmacology of Anti-Cancer Drugs Course, Leesburg, VA. November 2000.

86. Tumor Disposition of Platinum after Administration of Cisplatin and Liposomal-Cisplatin in Mice Bearing B16 Murine Melanoma Tumors. Fourth Annual Invitational Oncology Pharmacy Conference. St. Thomas, Virgin Islands.

87. Plant Alkaloids. University of Pittsburgh Cancer Institute Comprehensive Chemotherapy Course. Pittsburgh, PA. October 1999.

88. Pharmacokinetic Principles and Modeling, Regional Chemotherapy and Tumor Disposition of Anticancer Agents. The Seventh Annual Berlex Oncology Clinical Pharmacology of Anti-Cancer Drugs Course, Leesburg, VA. October 1999.

89. Factors Affecting Platinum Exposure and Formation of Platinum-DNA Adducts in Solid Tumors. St. Jude Children's Research Hospital, Memphis, TN, May 1999.

90. Factors Affecting Platinum Exposure and Formation of Platinum-DNA Adducts in B16 Murine Melanoma Tumors after Cisplatin Administration. Third Annual Invitational Oncology Pharmacy Research Conference. Napa Valley, CA. February 1999.

91. Pharmacokinetic Principles and Modeling, and Tumor Disposition of Anticancer Agents. The Sixth Annual Berlex Oncology Clinical Pharmacology of Anti-Cancer Drugs Course, Leesburg, VA. October 1998.

92. Use of Microdialysis Methodology to Evaluate Anticancer Agent Disposition in Tumor Extracellular Fluid. Second Annual Invitational Oncology Pharmacy Research Conference. Newport Beach, CA. February 1998.

93. Pharmacokinetically Guided Dose Adjustment Reduces Variability in Topotecan Systemic Exposure in Children with Solid Tumors. St. Jude Children's Research Hospital Postdoctoral Retreat. Memphis, TN. April 1997.

94. Cerebrospinal Fluid Disposition of Topoisomerase I Inhibitors in the Nonhuman Primate Model. St. Jude Children's Research Hospital Postdoctoral Retreat. Memphis, TN. April 1996.

95. Pharmacokinetic and Pharmacodynamic Research of Chemotherapeutic Agents. University of Pittsburgh School of Pharmacy, Pittsburgh, PA. October 1995.

96. Clinical Applications of Gene Therapy to Genetic and HIV Diseases. First Annual Pharmacotherapy Frontiers Symposium. Warren G. Magnuson Clinical Center, National Institutes of Health, Bethesda, MD. May 1995.

97. Evaluation of Ondansetron and Granisetron Cross-Sensitivity and Systemic Exposure Responses. Eastern States Residency Conference. Baltimore, MD. April 1995.

GRANTS

Current Grants:

Source of Support:	Wake Forest University Health Sciences / NIH PAR-20-284 (IPF#23-1748)
Principal Investigators:	Gmeiner, William
Co-Investigator:	Zamboni, William (Consortium PI)
Total Direct Funding:	$701,249
Total Period Support:	07/01/2023 – 06/30/2028
Percent Effort:	5% Effort/ 5% Salary
Project Title:	Nanodelivery of FP polymers to improve treatment of metastatic colorectal cancer

Source of Support:	Deep Creek Pharma, LLC. / NIH PA-22-178 (IPF#23-0461)
Principal Investigators:	Gmeiner, William
Co-Investigator:	Zamboni, William (Consortium PI)
Total Direct Funding:	$416,636 Total UNC Subaward
Total Period Support:	05/01/2023 – 04/30/2025
Percent Effort:	10% Effort/ 10% Salary
Project Title:	STTR: Phase II: Improved Treatment of Colorectal Cancer with CF10

Source of Support:	TransChromix LLC. / NIH PA-22-179 (IPF#23-0755)
Principal Investigators:	Chen, Xian (UNC School of Medicine)
Co-Investigator:	Zamboni, William
Total Direct Funding:	$180,000 (Total UNC Subaward)
Total Period Support:	09/01/2023 – 08/31/2024

Percent Effort:	2% Effort/ 2% Salary
Project Title:	STTR: Novel therapeutic intervention of early-stage T1D
Source of Support:	US FDA_RFA-FD-23-004: Research Triangle Center of Excellence in Regulatory Science and Innovation (CERSI) (U01) Clinical Trials Optional
Principal Investigators:	Watkins, Paul (Contact PI); Halabi, Susan (PI); Samei, Ehsan (PI); and Mentz, Robert J. (PI)
Project PI:	Zamboni, William (Contact Project PI); Bae-Jump, Victoria; Gonzalez, Daniel; and Secord, Angeles A
Total Direct Funding:	Total Costs: $544,250 in Year 1; $544,250 in Year 2
Total Period Support:	09/01/2023 – 08/31/2028 (Total 5-year application)
Percent Effort:	15% effort / 15% salary
Project Title:	Precision Dosing of Immuno-Oncology Antibodies via Biomarkers and/or Metrics associated with the Innate Immune System (IIS) and Body Habitus
Source of Support:	US FDA The Perinatal Health Center of Excellence (PHCE) Grant (NCTR Project # GCDER014)
Principal Investigators:	Wang, Yow-Ming (US FDA PI); Zamboni, William (UNC PI)
Total Direct Funding:	$181,018/year x 2 year
Total Period Support:	01/01/2024 – 12/31/2025
Percent Effort:	18.5% effort / 18.5% support
Project Title:	Evaluating the Effect of Obesity on the Pharmacokinetics and Pharmacodynamics of Monoclonal Antibodies in Pediatric Patients
Source of Support:	NIH - 1R21CA267584-01
Principal Investigators:	V Bae-Jump; W Zamboni
Total Funding:	$427,625
Total Period of Support:	01/31/23 – 12/31/25
Percent Effort:	8% Effort / 8% Salary
Project Title:	Impact of Obesity on Immuno-Oncology Agents in Endometrial Cancer
Source of Support:	NIH 1R01CA247652-01A1
Principal Investigators:	W Zamboni (Lead PI), S. Chang (Co-PI), and S. Libutti (Co-PI)
Total Direct Funding:	$2,792,913 total award of 5 yrs.
Total Period Support:	04/01/21 – 03/31/26
Percent Effort:	23% Effort/ 23% Salary
Project Title:	Minibeam Radiation Therapy Enhanced Delivery of Nanoparticle Anticancer Agents to Pancreatic Cancer Tumors
Source of Support:	NIH - 1R01CA257009-01A1
Principal Investigators:	K. Ainslie
Co-Investigator	W Zamboni
Total Direct Funding:	$1,761,616 Total award; $309,698 to Zamboni's lab of 5 yrs.
Total Period Support:	08/01/21 – 07/31/26
Percent Effort:	4.58% Effort/ 4.58% Salary
Project Title:	Tunable Temporal Drug Release for Optimized Synergistic Combination Therapy of Glioblastoma
Source of Support:	NIH - 1R01CA264488-01
Principal Investigators:	A. Kabanov
Co-Investigator:	W. Zamboni
Total Direct Funding:	$2,452,235 Total award; $182,248 to Zamboni's lab of 4 yrs.
Total Period Support:	08/01/21 – 07/31/25
Percent Effort:	4% Effort/ 4% Salary

Project Title:	Toward Translation of Nanoformulated Paclitaxel-Platinum Combination
Source of Support	NIH / NCI T32 (2-T32-CA196589-06)
Principal Investigators	Kabanov A
Total Period of Support	07/08/2020 – 4/30/2022
Co-Investigator	Zamboni W
Percent Effort	0% Effort / 0% Salary
Project Title	Carolina Cancer Nanotechnology Training Program (C-CNTP)
Source of Support:	NIH/NCI Experimental Therapeutics-Clinical Trials Network with Phase 1 Emphasis (ET-CTN) (UM1) – Biomarker Supplement
Principal Investigators:	W Zamboni
Total Direct Funding:	$100,000
Total Period of Support:	11/01/18 – 12/31/23
Percent Effort:	10% Effort / 10% Salary
Project Title:	Pharmacologic studies of the mononuclear phagocyte system as part of the clinical studies of anetumab ravtansine: Sample Analyses
Source of Support:	NIH - 5UL1TR002489-04
Principal Investigators:	J. Buse
Co-Investigator:	W. Zamboni
Total Direct Funding:	$38,450,854 Total award
Total Period Support:	03/30/18 – 02/28/23
Percent Effort:	5% Effort/ 5% Salary
Project Title:	The North Carolina Translational and Clinical Sciences (TraCS) Institute
Source of Support:	UNC LCCC Development Grant – Tier 2
Principal Investigators:	V Bae-Jump, W Zamboni
Total Direct Funding:	$200,000
Total Period of Support:	12/01/20 – 01/31/24 (NCE)
Percent Effort:	10% Effort / 0% Salary
Project Title:	Atezolizumab and ONC201 as a Novel Treatment Strategy in Obesity-driven Endometrial Cancer
Source of Support:	UNC LCCC Development Grant – Tier 1
Principal Investigators:	W Zamboni, EC Dees
Total Direct Funding:	$49,995
Total Period of Support:	12/01/17 – 06/30/24 (NCE)
Percent Effort:	10% Effort / 0% Salary
Project Title:	Biomarkers of the Mononuclear Phagocytic System as Predictors of the Pharmacokinetics and Pharmacodynamics of the Antibody Drug Conjugate Glembatumumab Vedotin

Current Contracts:

Source of Support:	SciTech Development
Principal Investigator:	W Zamboni
Total Direct Funding:	$138,800
Total Period of Support:	11/01/23 – 10/31/24
Percent Effort of Support:	2% Effort / 2% Salary
Project Title:	Analytical and Pharmacokinetic Studies of Total (Encapsulated + Released) Fenretinide, 4-methoxy- and 5-oxo- Fenretinide Metabolites, and Retinol after administration of Phospholipid Suspension (ST-001) in Plasma from Patients

Source of Support:	Inimmune Corporation
Principal Investigator:	W Zamboni
Total Direct Funding:	$223,741
Total Period of Support:	09/01/23 – 08/31/23
Percent Effort of Support:	5% Effort / 5% Salary
Project Title:	Single Dose and Multiple Dose Pharmacokinetic Studies of Total (Encapsulated and Released) INI-4001 for Liposomal INI-4001 and INI-4001 for Non-Liposomal INI-4001 in Plasma, Tumor and Tissues in C57Bl/6 Mice Bearing B16F10 Melanoma Flank Tumors

Source of Support:	Xcovery (Task 2)
Principal Investigators:	Zamboni W
Total Direct Funding:	$254,598 (Total amount is based on number of patients enrolled)
Total Period of Support:	02/01/18 – 02/01/24
Percent Effort:	5% Effort / 5% Salary
Project Title:	Analytical and Pharmacokinetic Studies of MRX-2843 and metabolite(s) in Plasma and Urine as part of the Phase 1 Dose Escalation Study of the Safety, Pharmacokinetics and Pharmacodynamics of MRX-2843 in Adult Subjects with Refractory Solid Tumors

Source of Support:	ChemoGLO
Principal Investigators:	W Zamboni
Total Direct Funding:	$12,874/year
Total Period of Support:	09/01/19 – 12/31/24
Percent Effort:	1% Effort / 1% Salary
Project Title:	Task 5 - Comparison of Chemotherapy Measurements on Surfaces by LC-MS/MS

Source of Support:	ChemoGLO
Principal Investigators:	W Zamboni
Total Direct Funding:	$48,000/year
Total Period of Support:	01/01/17 – 12/31/25
Percent Effort:	5% Effort / 5% Salary
Project Title:	Analysis of Platinum Exposures of Surfaces in Hospitals and Pharmacies

UNC Projects Administered Via the Recharge Center:

Source of Support:	Gilead Sciences
Principal Investigators:	Mungo, Chemtai
Total Direct Funding:	$10,000
Total Period Support:	06/01/2019 – 04/30/2024
Project Title:	Pharmacokinetic Analyses of Artesunate Following Intravaginal Administration in Patients in Kenya

Source of Support:	University of Alabama Birmingham Medical Center
Principal Investigators:	Giri, S
Total Direct Funding:	$12,000
Total Period Support:	06/01/2021 – 04/30/2024 (NCE)
Project Title:	Optimizing Melphalan dose among older adults with Multiple Myeloma receiving Autologous Stem Cell Transplantation

Source of Support:	NIH 1K01TW011191-01_K01 Career Development Award (PSID 5113822)
Principal Investigators:	Westmoreland, Kate

Total Direct Funding: $714,155
Total Period Support: 06/01/2019 – 04/30/2024
Project Title: Understanding Methotrexate Dosing, Pharmacokinetics, and Toxicities in Patients with Burkitt Lymphoma in Malawi

Source of Support: NIH R01 DK124617, NIH/NIDDK
Principal Investigators: Arthur, Janelle Corrinne
Total Direct Funding: $1,193,579 currently awarded; $1,915,735 (Total award 5-year project)
Total Period Support: 06/01/2020 – 05/31/2025
Project Title: Microbiota-mediated fibrotic remodeling in the inflamed intestine

Source of Support: Cincinnati Childrens Hospital Medical Center / FDA (PSID 5126493)
Principal Investigators: Capal, Jamie Korin
Total Direct Funding: $50,404
Total Period Support: 09/10/2021 - 06/30/2023
Project Title: Sirolimus TSC Epilepsy Prevention Study (STEPS)

Research Proposals Pending

Pending Grants:

Source of Support: State of NC Collaboratory
Principal Investigator: Yuan, Hong (Lead-PI); Zamboni, William (Co-PI)
Total Direct Funding: $139,235 (For Zamboni)
Total Period Support: 02/01/2024 – 01/31/2025
Percent Effort: 5% Effort / 5% Salary
Project Title: Safely enhance CNS cancer drug delivery by spatially fractionated radiation therapy

Source of Support: American Foundation for Pharmaceutical Education (AFPE)
Principal Investigators: Clarie O'Connor
Mentor: Zamboni, William
Total Direct Funding: $9,600
Total Period Support: 06/01/2024 – 05/31/2025
Percent Effort: 5% Effort/0% Salary
Project Title: Precision dosing of monoclonal antibodies in obese patients

Source of Support: fFAME / NIH PA-20-185 (IPF#23-1300) New
Principal Investigators: Benner, Steven
Co-Investigator: Zamboni, William (Contact UNC PI), Hingtgen, Shawn (PI) and Dees, Claire (Co-I)
Total Direct Funding: $ 1,850,308.50
Total Period Support: 04/01/2023 – 03/31/2028
Percent Effort: 10% Effort/ 10% Salary
Project Title: Synthetic Bio-Medicine Collaboration for Cancer Research, Diagnostics and Therapy

Source of Support: fFAME Foundation / NCI – RFA-RM-22-020 (IPF#23-0733) New
Principal Investigators: Benner, Steven E.
Co-Investigator: Zamboni, William (Contact UNC PI), Hingtgen, Shawn (PI) and Dees, Claire (Co-I)
Total Direct Funding: $2,110,793
Total Period Support: 08/01/2023 – 07/31/2028
Percent Effort: 15% Effort/ 15% Salary
Project Title: Creating Synthetic Biology to be Used in the Clinic

Source of Support:	University of Alabama at Birmingham / NIH PAR-21-033 (IPF#23-1034) New
Principal Investigators:	Williams, Grant R.
Co-Investigator:	Zamboni, William
Total Direct Funding:	$446,509
Total Period Support:	07/01/2023 – 06/30/2028
Percent Effort:	15% Effort/ 15% Salary
Project Title:	Preventing Chemotherapy-Induced Neuropathy through Personalized Dosing- the PRECISE Study

Source of Support:	NIH 1R01DK134137-01A1 (IPF#23-0484) Resubmisison
Principal Investigators:	Nguyen, Juliane (Contact PI) and Arthur, Janelle (PI)
Co-Investigator:	Zamboni, William and Sheikh, Shehzad
Total Direct Funding:	$3,834,120
Total Period Support:	04/01/2023 – 03/31/2028
Percent Effort:	8% Effort/ 8% Salary
Project Title:	Engineering Probiotic Yeast for Targeted Treatment of Ulcerative Colitis

Source of Support:	Oregon Health and Science University / NCI – R01 PA-20-185 (IPF#23-0364)
Principal Investigators:	Brody, Jonathan
Co-Investigator:	Zamboni, William (UNC Consortium PI)
Total Direct Funding:	$118,502 (Total UNC Subaward)
Total Period Support:	04/01/2024 – 03/31/2026
Percent Effort:	5% Effort/ 5% Salary
Project Title:	Overcoming Chemoresistance in Pancreatic Ductal Adenocarcinoma with iRGD-targeted PEG:CF10

Source of Support:	TransChromix LLC. / NIH PA-21-262 (IPF#23-0744) Resubmission
Principal Investigators:	Chen, Xian (UNC School of Medicine)
Co-Investigator:	Zamboni, William
Total Direct Funding:	$303,029 (Total UNC Subaward)
Total Period Support:	04/01/2023 – 03/31/2024
Percent Effort:	5% Effort/ 5% Salary
Project Title:	STTR: Novel brain-penetrant strategies for translation-targeting therapeutics of Alzheimer's disease

Source of Support:	NIH 1R01EB034318-01 (IPF#22-5225)
Principal Investigators:	Lai, Sam
Co-Investigator:	Zamboni, William
Total Direct Funding:	$2,921,795
Total Period Support:	04/01/2023 – 03/31/2027
Percent Effort:	8% Effort/ 8% Salary
Project Title:	Engineering biodegradable PEGs that overcome anti-PEG immunity to restore prolonged circulation and efficacy of PEGylated therapeutics

Source of Support:	Wake Forest University Health Sciences / DoD – W81XWH-22-BCRP-BTA12 (IPF#22-4474)
Principal Investigators:	Lo, Hui-Wen
Co-Investigator:	Zamboni, William (Consortium PI)
Total Direct Funding:	$206,366
Total Period Support:	02/01/2023 – 01/31/2025
Percent Effort:	5% Effort/ 5% Salary
Project Title:	Developing Pharmacological Inhibitors of tGLI1 for Breast Cancer Brain Metastasis

Source of Support:	Deep Creek Pharma, LLC. / NIH PA-21-262 (IPF#22-4006)

Principal Investigators:	Gmeiner, William
Co-Investigator:	Zamboni, William (Consortium PI)
Total Direct Funding:	$46,884 Total UNC Subaward
Total Period Support:	12/01/2023 – 11/30/2024
Percent Effort:	9% Effort/ 9% Salary
Project Title:	STTR Phase I: CF10 Nanoparticle Therapy for Colorectal Liver Metastases

Pending Contracts:

None

Research Proposals - Past Funding

UNC - Past Grants:

Source of Support:	NC Biotechnology Center Innovation Impact Grant (IIG)
Principal Investigators:	W Zamboni
Total Direct Funding:	$150,000
Total Period of Support:	Awarded April 4, 2022
Project Title:	A Triple Quadrupole LC-MS/MS System for Bioanalytical Studies Supporting the Translational Development of Complex and Small Molecule Agents

Source of Support:	NIH R01 - 1R01HL141934-04
Principal Investigators:	S Lai (Lead PI), W Zamboni (Co-PI)
Total Direct Funding:	$2,658,480 Total award
Total Period Support:	05/10/2018 – 05/30/2022 (NCE)
Percent Effort:	10% Effort/ 10% Salary
Project Title:	Overcoming anti-PEG immunity to restore prolonged circulation and efficacy of PEGylated therapeutics.

Source of Support:	NIH - 1R01HL153744-01A1
Principal Investigators:	D. Lawrence
Co-Investigator:	W Zamboni
Total Direct Funding:	$2,705,713 Total award; $247,830 to Zamboni's lab of 3 yrs. from 05/01/2022
Total Period Support:	05/01/21 – 11/30/23
Percent Effort:	5% Effort/ 5% Salary
Project Title:	Design and Application of Photoresponsive Modules in Circulating Erythrocytes

Source of Support:	NCI/NIH 1 1R41CA254834-01A1 / STTR - Deep Creek Pharma
Principal Investigators:	W Gmeiner, W Zamboni
Total Direct Funding:	$45,124 – Direct funding for UNC subaward to Zamboni's lab
Total Period of Support:	08/17/21 – 07/31/22 (NCE)
Percent Effort:	10% Effort / 10% Salary
Project Title:	STTR: Phase I: Advanced pre-clinical development of CF10 to improve treatment of metastatic colorectal cancer

Source of Support:	NCTraCS Funding for COVID-19 Research C192034 Intramural
Principal Investigators:	W Zamboni (Lead-PI), M Heise (Co-PI)
Total Direct Funding:	$50,000
Total Period of Support:	06/01/20 – 07/31/22
Percent Effort:	1% Effort Cost Share
Project Title:	Evaluation of innate immune system (IIS) phenotype on COVID-19 incidence, severity, and treatment outcomes

Source of Support:	Center for Health Innovation – Innovation Pilot Award
Principal Investigator(s):	Rahima Benhabbour
Co-Investigator:	W Zamboni (via the UNC ATPAC Recharge Center)
Total Direct Funding:	$5,599
Total Period of Support:	10/23/20 – Present
Project Title:	Lidocaine assay cross-validation and analysis of PK samples of mice treated with mucoadhesive biodegradable films loaded with lidocaine for vulvar pain management.

Source of Support:	NIH / NCI T32-CA009156-35
Principal Investigators:	J Pagano, B Weissman
Total Period of Support:	01/01/16 – 12/31/21
Co-Investigator:	William C. Zamboni
Percent Effort:	0% Effort / 0% Salary
Project Title:	T32 Training Grant in Cancer Research

Source of Support:	1U54CA198999-01 – CCNE Pilot Grant
Principal Investigators:	Zamboni W (Lead-PI), Lockett M (Co-PI)
Total Direct Funding:	$49,860
Total Period Support:	09/01/19 - 06/30/21
Percent Effort:	5% effort/ 0% salary
Project Title:	Modulation of Tumor Fibroblasts by MRX-2843 to Increase the Tumor Delivery and Efficacy of Nanoparticles in In Vivo and In Vitro 3D Tumor Models.

Source of Support:	NIH/NCI Experimental Therapeutics-Clinical Trials Network with Phase 1 Emphasis (ET-CTN) (UM1) – Biomarker Supplement
Principal Investigators:	W Zamboni
Total Direct Funding:	$99,800
Total Period of Support:	11/01/17 – 05/31/21
Percent Effort:	5% Effort / 5% Salary
Project Title:	Pharmacologic studies of the mononuclear phagocyte system as part of the clinical studies of anetumab ravtansine: Assay development and validation

Source of Support:	Emory University Drug Development Fund
Principal Investigators:	W Zamboni
Total Direct Funding:	$6,036
Total Period of Support:	03/01/19 – 06/30/19
Percent Effort:	0.25% Effort / 0.25% Salary
Project Title:	Quantitation of SN38 in Plasma, Tumor and Liver after Administration of HA-SN38 Nanoparticle in Mice

Source of Support:	NC TraCS Institute: 2KR1091802
Principal Investigators:	Zamboni W; Jarstfer M
Total Direct Funding:	$2,000
Total Period of Support:	01/01/19 – 12/31/19
Percent Effort:	5% Effort / 5% Salary
Project Title:	In vitro selection of non-binding ssDNA oligos with high serum nuclease resistance

Source of Support:	1 R43 CA228938-01 SBIR: Phase I Proposal: CBT Pharmaceuticals
Principal Investigators:	Reddy M, W Zamboni
Total Direct Funding:	$48,500 (for Zamboni)
Total Period of Support:	09/20/18 – 02/28/20
Percent Effort:	5% Effort / 5% Salary

Project Title:	Combination of checkpoint inhibitors UNC: Evaluation of the Interaction between CBT-501 & CBT-502 and the Mononuclear
Source of Support:	NSF ASSIST Pilot Study Year 6 – NC State University
Principal Investigators:	D Carpenter (Co-PI); W Zamboni (Co-PI); Michael Daniele (Co-I)
Total Direct Funding:	$59,936
Total Period of Support:	11/01/17 – 10/31/18
Percent Effort:	10% Effort / 0% Salary
Project Title:	Evaluation of the Pharmacokinetics of Lisinopril and Tracer Compounds in Sweat, Saliva, and Plasma to Inform the Design of a Non-Invasive Wearable Sensor to Detect Medication Adherence
Source of Support:	NIH/NCI Experimental Therapeutics-Clinical Trials Network with Phase 1 Emphasis (ET-CTN) (UM1)
Principal Investigators:	W Zamboni
Total Direct Funding:	$26,540
Total Period of Support:	11/01/17 – 10/31/18
Percent Effort:	2% Effort / 2% Salary
Project Title:	Pharmacokinetic Analyses of 9922 as part of Phase 1/2 Clinical Trials of 9922
Source of Support:	1U54CA198999-01 – CCNE Pilot Grant
Principal Investigators:	Zamboni W
Total Direct Funding:	$49,885
Total Period Support:	08/01/17-10/31/18
Percent Effort:	5% effort/ 0% salary
Project Title:	Evaluation of nanoparticle drug delivery to tumors: Effects of Pharmacokinetic study design and metrics on delivery to tumors
Source of Support:	NCTraCs
Principal Investigators:	D Lawrence D
Total Direct Funding:	$15,839
Total Period of Support:	05/01/17 – 12/31/18
Co-Investigator:	W Zamboni
Percent Effort:	3% Effort / 3% Salary
Project Title:	Assay development and validation for quantitation of CY5-B12-docetaxel and photocleaved docetaxel + short chain in mouse plasma and tumors
Source of Support:	NIH / NCI (2-P30-CA016086)
Principal Investigators:	S Earp (PI of Pharmacology Core: W Zamboni)
Total Direct Funding:	$110,843/yr
Total Period of Support:	12/01/16 – 11/30/21
Percent Effort:	10% Effort / 10% Salary for Zamboni
Project Title:	Cancer Center Support Grant
Source of Support:	UNC Eshelman Institute for Innovation – Student/Postdoc Fellow
Principal Investigators:	A Lucas; W Zamboni (Advisor)
Total Direct Funding:	$25,000
Total Period of Support:	08/01/16 – 12/31/17
Percent Effort:	10% Effort / 0% Salary
Project Title:	Phenotypic Probe to Individualize the Treatment of Monoclonal Antibodies and Antibody Drug Conjugates
Source of Support:	Center for Translational Cancer Nanomedicine at Northeastern University
Principal Investigators:	W Zamboni

Total Direct Funding: $14,000
Total Period of Support: 02/01/16 – 05/31/16
Percent Effort: 2% Effort / 2% Salary
Project Title: ICP-MS Analysis of Platinum (Pt) in Blood, Kidney, Liver, Lung, and Heart as Part of the Study of Pharmacokinetic Analysis of Platinum Derivatives Following Systemic Administration in Mice

Source of Support: 1U54CA198999-01 – CCNE – Pilot Grant Program
Principal Investigators: S Chang, W Zamboni
Total Direct Funding: $50,000
Total Period of Support: 12/01/15 – 11/31/16
Percent Effort: 5% Effort / 0% Salary
Project Title: Enhancing Tumor Delivery of Nanoparticle Anticancer Agents using Microbeam Radiation Therapy

Source of Support: NIH R01 - 5R01CA184088-05
Principal Investigators: A Kabanov (Lead PI), W Zamboni (Co-PI)
Total Direct Funding: $1,494,965
Total Period Support: 12/01/2015 – 11/31/2020 (in NCE)
Percent Effort: 10% Effort/ 10% Salary
Project Title: Liposomal Doxorubicin and Pluronic Combination for Cancer Therapy

Source of Support: UNC LCCC Pilot Study
Principal Investigators: D Darr, W Zamboni
Total Direct Funding: $20,000
Total Period of Support: 10/01/15 – 09/30/16
Percent Effort: 0% Effort / 0% Salary
Project Title: Analytical and PK studies of S1 in mice

Source of Support: UNC Eshelman Institute for Innovation
Principal Investigators: D Carpenter, A Sage, W Zamboni
Total Direct Funding: $50,000
Total Period of Support: 10/01/15 – 09/30/16
Percent Effort: 5% Effort / 0% Salary
Project Title: Creating the first non-invasive wearable technology to continuously monitor and improve patient medication adherence.

Source of Support: 1U01CA198910-01
Principal Investigators: Kabanov, Bronich, Liu
Total Direct Funding: $449,982
Total Period Support: 09/01/2015-8/31/2020 (in NCE)
Co-Investigator: W Zamboni
Percent Effort: 10% effort/10% salary
Project Title: Targeted Core Shell Nanogels for Triple Negative Breast Cancer

Source of Support: 1U54CA198999-01 - CCNE
Principal Investigators: Huang (Contact PI) Project 4 PI: Kabanov
Total Direct Funding: Project 4 $343,636
Total Period Support: 9/01/2015-7/31/2020
Co-Investigator: W Zamboni
Percent Effort: 7% effort/ 7% salary
Project Title: Nano Approaches to Modulate Host Cell Response for Cancer Therapy; Project 4 Title: High-Capacity Polymeric Micelle Therapeutics for Lung Cancer

Source of Support: UNC Eshelman Institute for Innovation
Principal Investigators: W Zamboni, S Chang
Total Direct Funding: $50,000
Total Period of Support: 08/01/15 – 09/30/16
Percent Effort: 5% Effort / 0% Salary
Project Title: Enhancing Tumor Delivery of Nanoparticle Anticancer Agents using Microbeam Radiation Therapy

Source of Support: UNC Research Opportunity
Principal Investigators: Lai S
Total Direct Funding: $480,000
Total Period of Support: 07/01/15 – 06/30/18
Co-Investigator: W Zamboni
Percent Effort: 0% Effort / 0% Salary (no salary allowed/requested)
Project Title: Research Program in Immunoengineering

Source of Support: NCSU College of Veterinary Medicine Pilot Grant
Principal Investigators: M Risselada, K Messenger, W Zamboni
Total Direct Funding: $11,930
Total Period of Support: 04/24/15 – 12/31/15
Percent Effort: 2% Effort / 2% Salary
Project Title: Subcutaneous administration of carboplatin in pluronic F127 in a rodent model

Source of Support: NIH 1R21EB017938-01
Principal Investigators: S Lai
Total Direct Funding: $125,000/yr x 2 yrs
Total Period of Support: 09/01/2014 – 08/31/16
Co-Investigator: W Zamboni
Percent Effort: 5% Effort / 5% Salary
Project Title: Prevalence and characteristics of anti-PEG antibodies in humans

Source of Support: UNC LCCC Developmental Research Awards 2014
Principal Investigators: W Zamboni
Total Direct Funding: $50,000
Total Period of Support: 08/01/2014 – 07/31/2016
Percent Effort: 5% Effort / 0% Salary
Project Title: Evaluation of Mediators of Mononuclear Phagocyte System (MPS) Function and Nanoparticle Pharmacology in Obese and Non-Obese Patients with Ovarian and Endometrial Cancer enrolled on the UNC Cancer Survivorship Cohort (CSC)

Source of Support: NIH 1R21EB017938-01
Principal Investigators: S Lai
Total Direct Funding: $125,000/yr x 2 yrs
Total Period of Support: 09/01/2014 – 08/31/16
Co-Investigator: W Zamboni
Percent Effort: 5% Effort / 5% Salary
Project Title: Prevalence and characteristics of anti-PEG antibodies in humans

Source of Support: UNC LCCC Developmental Research Awards 2014
Principal Investigators: W Zamboni
Total Direct Funding: $50,000
Total Period of Support: 08/01/2014 – 07/31/2016
Percent Effort: 5% Effort / 0% Salary

Project Title: Evaluation of Mediators of Mononuclear Phagocyte System (MPS) Function and Nanoparticle Pharmacology in Obese and Non-Obese Patients with Ovarian and Endometrial Cancer enrolled on the UNC Cancer Survivorship Cohort (CSC)

Source of Support: NIH/NCI Experimental Therapeutics-Clinical Trials Network with Phase 1 Emphasis (ET-CTN) (UM1).
Principal Investigators: C Dees, H Hurwitz
Total Period of Support: 07/01/14 – 06/30/20
Co-Investigator: W Zamboni (Director of Pharmacology Core)
Percent Effort: 1% Effort / 1% Salary

Source of Support: The Ben and Catherine Ivy Foundation – Ivy Brain Tumor Program
Principal Investigators: M Berens (PI of Pharmacology subcontract: W Zamboni)
Total Direct Funding: $150,000
Total Period of Support: 07/01/14 – 06/30/16
Percent Effort: 5% Effort / 5% Salary
Project Title: Delivery of Targeted Drugs Across the Blood Brain Barrier to Treat Glioblastoma

Source of Support: U. S. FDA
Principal Investigators: Y Cao
Total Direct Funding: $460,000
Total Period of Support: 01/01/14 – 12/31/17
Co-Investigator: W Zamboni
Percent Effort: 2% Effort / 2% Salary
Project Title: Physiologically Based Pharmacokinetic Model for Drugs Encapsulated into Liposomes

Source of Support: NIH / NCI (1 U54 CA151652-01) – Alliance Challenge Project (ACP)
Principal Investigators: W Zamboni, A Kabanov
Total Direct Funding: $55,000/yr
Total Period of Support: 07/01/13 – 04/30/15
Percent Effort: 2% Effort / 2% Salary for Zamboni
Project Title: Pegylated Liposomal Doxorubicin (PLD) in Combination with Pluronic for Treatment of Ovarian and Breast Cancer

Source of Support: Lilly Research Awards Program (LRAP)
Principal Investigators: WC Zamboni
Total Direct Funding: $98,000/yr x 1 yr
Total Period of Support: 06/01/13 – 05/31/15
Percent Effort: 10% Effort / 10% Salary
Project Title: A High Throughput Screening Platform to Evaluate the Interactions between Nanoparticle and Non-Nanoparticle Agents and the Mononuclear Phagocyte System (MPS) in Humans and Animal Models

Source of Support: Lilly Research Awards Program (LRAP)
Principal Investigators: WC Zamboni
Total Direct Funding: $98,000/yr x 1 yr
Total Period of Support: 06/01/13 – 05/31/15
Percent Effort: 10% Effort / 10% Salary
Project Title: A High Throughput Screening Platform to Evaluate the Interactions between Nanoparticle and Non-Nanoparticle Agents and the Mononuclear Phagocyte System (MPS) in Humans and Animal Models

Source of Support: NIH RO1 DA023690

Principal Investigators: L Tarantino, T Wiltshire
Total Period of Support: 03/01/13 – 06/30/18
Co-Investigator: W Zamboni
Total Direct Funding: $75,500/year
Percent Effort: 5% Effort / 5% Salary for Zamboni
Project Title: Organismal and Genetic Networks in Drug Reward and Reinforcement

Source of Support: NCI SBIR Phase II Grant: Multifunctional Therapeutics Based on Nanotechnology (N44CO-17019-36)
Principal Investigators: B Oberhardt (PI of Pharmacology subcontract: W Zamboni)
Total Direct Funding: $245,000
Total Period of Support: 09/28/12 – 09/27/14
Percent Effort: 5% Effort / 5% Salary
Project Title: NanoVector Phase II SBIR: Multifunctional Therapeutics using Engineered Plant Virus Nanoparticles
Source of Support: American Cancer Society Grant
Principal Investigators: CK Anders
Total Direct Funding: $100,000
Total Period of Support: 07/01/12 – 08/31/14
Co-Investigator/Mentor: W Zamboni
Percent Effort: 2% Effort / 2% Salary
Project Title: PARP Inhibition to Treat Triple-Negative Breast Cancer Brain Metastases

Source of Support: NC TraCS Pilot Grant
Co-Principal Investigators: C Anders, R Miller
Total Period of Support: 07/01/12 – 06/30/14
Co-Investigator: W Zamboni
Total Direct Funding: $50,000
Percent Effort: 0% Effort / 0% Salary for Zamboni
Project Title: Nanoparticle Anticancer agents for the Treatment of Metastatic Central Nervous System Malignancies

Source of Support: American Brain Tumor Association Discovery Grant
Principal Investigator: W Zamboni
Total Period of Support: 07/01/12 – 06/30/13
Total Direct Funding: $50,000
Percent Effort: 2% Effort / 2% Salary for Zamboni
Project Title: Nanoparticle Agents for the Treatment of Metastatic Central Nervous System Malignancies

Source of Support: NIH / NCI (1 U54 CA151652-01) – Alliance Challenge Project (ACP)
Principal Investigators: W Zamboni, P Decuzzi
Total Direct Funding: $40,000/yr
Total Period of Support: 07/01/12 – 06/30/13
Percent Effort: 5% Effort / 5% Salary for Zamboni
Project Title: A High Throughput Screening Platform with Mathematical Modeling to Evaluate the Interactions between Nanoparticle Agents and the Mononuclear Phagocyte System (MPS)

Source of Support: NIH K23
Principal Investigators: CK Anders
Total Direct Funding: $9,000
Total Period of Support: 09/01/11 – 08/31/13
Co-Investigator/Mentor: W Zamboni

Percent Effort: 0% Effort / 0% Salary
Project Title: PARP Inhibition to Treat Triple-Negative Breast Cancer Brain Metastases

Source of Support: NC TraCS 10KR101122
Principal Investigator: G Song; W Zamboni
Total Direct Funding: $10,000
Total Period of Support: 09/01/11 – 08/31/12
Percent Effort: 0% Effort / 0% Salary
Project Title: Relationship between Monocytes Phagocyte System (MPS) in Tumors and Tumor Delivery and Efficacy of Nanoparticle Anticancer Agents in Genetically Engineered Mouse Models of Breast Cancer

Source of Support: NIMH (1R01MH093372-01A1)
Principal Investigator: B Philpot
Total Direct Funding: $8,700
Total Period of Support: 09/01/11 – 08/31/12
Co-Investigator/Mentor: W Zamboni
Percent Effort: 5% Effort / 5% Salary
Project Title: Epigenetic Regulation of Ube3a as a Treatment for Angelman Syndrome

Source of Support: NIH RO1 EB008733-01
Principal Investigator: P Dayton
Total Period of Support: 03/01/11 – 02/28/14
Co-Investigator: WC Zamboni
Total Direct Funding: $57,500/yr x 2 yrs
Percent Effort: 7.5% Effort / 7.5% Salary
Project Title: Precision Engineering of Ultrasonically-Targeted Drug Delivery Vehicles

Source of Support: NIH / NIAID BAA-NIAID-DAIT-NIHAI2009060
Principal Investigators: M Jay, R Mumper, W Zamboni
Total Direct Funding: $4,563,828 (Total Grant Funding)
Total Period of Support: 09/30/10 – 09/29/13
Percent Effort: 10% Effort / 10% Salary for Zamboni
Project Title: Development of Improved DTPA for Radionuclide Chelation – Phase IV.

Source of Support: NIH / SAIC S10-155
Principal Investigators: J Hrkach, WC Zamboni
Total Direct Funding: $120,993
Total Period of Support: 09/01/10 – 08/31/11
Percent Effort: 5% Effort / 5% Salary
Project Title: Pharmacologic Studies of BIND-Vincristine in Non-human Primates

Source of Support: NIH / NCI (1 U54 CA151652-01)
Principal Investigators: J DeSimone (PI of Pharmacology Core: W Zamboni)
Total Direct Funding: $99,701
Total Period of Support: 09/01/10 – 08/31/15
Percent Effort: 10% Effort / 10% Salary for Zamboni
Project Title: Carolina Center of Cancer Nanotechnology Excellence

Source of Support: NC TraCS Institute
Principal Investigator: W Caron; W Zamboni (Faculty Advisor)
Total Direct Funding: $10,000
Total Period of Support: 07/01/10 – 06/31/11
Percent Effort: 0% Effort / 0% Salary

Project Title:	Development of an *Ex Vivo* Phenotypic Probe to Guide Pegylated Liposomal Doxorubicin (Doxil) Therapy in Patients
Source of Support:	NIH RO1 DA023690
Co-PIs:	L Tarantino, T Wiltshire
Total Period of Support:	07/01/09 – 06/30/11
Co-Investigator:	W Zamboni
Total Direct Funding:	$75,554/yr x 2 yrs
Percent Effort:	5% Effort / 5% Salary for Zamboni
Project Title:	Organismal and Genetic Networks in Drug Reward and Reinforcement
Source of Support:	PA-06-134 / NIAID Advanced Technology SBIR
Principal Investigators:	N Sharpless
Total Direct Funding:	$65,384
Total Period of Support:	04/01/09 – 03/31/10
Co-Investigator:	WC Zamboni
Percent Effort:	0% Effort / 0% Salary for Zamboni
Project Title:	G-Zero Therapeutics
Source of Support:	NIH/NCI CA119343 – CCNE Pilot Grant
Co-PIs:	William C. Zamboni; Paola Gehrig
Total Direct Funding:	$50,000
Total Period of Support:	01/01/09 – 12/31/11
Percent Effort:	0% Effort / 0% Salary
Project Title:	Carolina Center for Cancer Nanotechnology Excellence Pilot Grant: Study Evaluating Measures of the Reticuloendothelial System as Predictors of Doxil Pharmacokinetic and Pharmacodynamic Disposition in Patients with Refractory Ovarian Cancer
Source of Support:	UNC LCCC University Cancer Research Fund
Co-PIs:	W Zamboni; P Gehrig
Total Direct Funding:	$125,000
Total Period of Support:	01/01/09 – 12/31/10
Percent Effort:	5% Effort / 5% Salary
Project Title:	Study Evaluating Measures of the Reticuloendothelial System as Predictors of Doxil Pharmacokinetic and Pharmacodynamic Disposition in Patients with Refractory Ovarian Cancer
Source of Support:	NIH / NCI P42 Grant
Principal Investigator:	Jon Serody
Total Direct Funding:	$250,000
Total Period of Support:	12/01/08 – 12/01/10
Co-Investigator:	William C. Zamboni, Pharm.D., Ph.D.
Percent Effort:	0% Effort / 0% Salary
Project Title:	STTR Phase II Grant: Blockage of NF-Kappa B for Prevention/Treatment of GVHD
Source of Support:	NIH / NCI 3U54CA119343-05S2
Principal Investigators:	J DeSimone; W Zamboni
Total Direct Funding:	$74,500
Total Period of Support:	07/01/08 – 12/31/10
Percent Effort:	4% Effort / 4% Salary
Project Title:	Characterization of PRINT Nanoparticles Using SKOV-3 Mouse Model
Source of Support:	NIH / NIAID HHSN266200500045P
Co-PI:s	M Jay; W Zamboni; R Mumper

Total Period of Support:	07/01/08 to 09/29/09
Total Direct Funding:	$100,115/yr
Percent Effort:	12.5% Effort / 12.5% Salary
Project Title:	Development of Improved DTPA for Radionucleotide Chelation

Source of Support:	NIH / NIDDKD: Nanoscience and Nanotechnology in Biology and Medicine
Principal Investigator:	E Wiener
Total Period of Support:	07/01/07 to 08/30/12
Co-Investigator:	W Zamboni
Total Direct Funding:	$84,739/yr
Percent Effort:	10% Effort / 10% Salary
Project Title:	A New Dimension in Renal Clearance Design Criteria for Dendrimer Nanostructures

UNC – Past Contracts:

Source of Support:	Inimmune Pharma.
Principal Investigators:	Zamboni W
Total Direct Funding:	$75,000
Total Period of Support:	07/01/21 – 06/30/22
Percent Effort:	5% Effort / 5% Salary
Project Title:	Bioanalytical and Pharmacology studies of INI-4001 and INI-2004

Source of Support:	Meryx, Inc. (Task 5)
Principal Investigators:	Zamboni W
Total Direct Funding:	$65,000
Total Period of Support:	02/01/20 – 02/01/22
Percent Effort:	5% Effort / 5% Salary
Project Title:	Quantitation of MRX-2843 and Metabolites in Plasma in a Phase I Dose Escalation Study of the Safety, Pharmacokinetics, and Pharmacodynamics of MRX-2843 and Osimertinib in Adult Subjects with Relapsed/Refractory Leukemias

Source of Support:	Meryx (Tasks 1-4 and 6)
Principal Investigators:	Zamboni W
Total Direct Funding:	$254,598
Total Period of Support:	02/01/18 – 02/01/22
Percent Effort:	5% Effort / 5% Salary
Project Title:	Analytical and Pharmacokinetic Studies of MRX-2843 and metabolite(s) in Plasma and Urine as part of the Phase 1 Dose Escalation Study of the Safety, Pharmacokinetics and Pharmacodynamics of MRX-2843 in Adult Subjects with Refractory Solid Tumors

Source of Support:	OBI Pharma
Principal Investigators:	W Zamboni
Total Direct Funding:	$131,885
Total Period of Support:	06/01/20 – 12/31/21
Percent Effort:	5% Effort / 5% Salary
Project Title:	Measurement of the cell-associated exposures of human IgG1, Herceptin and OBI-898 (anti-SSEA-4 antibody) in circulating peripheral blood mononuclear cells by LC-MS/MS in patients with non-small cell lung cancer (NSCLC)

Source of Support:	ChemoGLO

Principal Investigators: Zamboni W
Total Direct Funding: $28,850
Total Period of Support: 03/01/17 – 03/31/21
Percent Effort: 2.5% Effort / 2.5% Salary
Project Title: Monoclonal antibody IgG1 quantitation from laboratory bench surfaces

Source of Support: NanoValent Pharmaceuticals, Inc.
Principal Investigators: W Zamboni
Total Direct Funding: $230,000
Total Period of Support: 06/01/20 – 05/31/21
Percent Effort: 5% Effort / 5% Salary
Project Title: Task#1: Preclinical characterization & evaluation of a targeted nanosphere formulation of CPT-11 (NV-103) by LC-MS/MS in mice to improve treatment of Ewing sarcoma as part of Pharmacologic development & evaluation of NV-103

Source of Support: Glolytics
Principal Investigators: Zamboni W
Total Direct Funding: $52,024
Total Period of Support: 08/01/17 – 07/31/18
Percent Effort: 5% Effort / 5% Salary
Project Title: Measure MPS Biomarkers in Blood as Part of Clinical Studies of MVT-5873

Source of Support: Glolytics
Principal Investigators: Zamboni W
Total Direct Funding: $75,218
Total Period of Support: 02/01/17 – 07/31/19
Percent Effort: 5% Effort / 5% Salary
Project Title: Evaluation of Function and Hormone Mediators of Mononuclear Phagocyte System (MPS) for MM-310-01-01-01 Study

Source of Support: Glolytics
Principal Investigators: Zamboni W
Total Direct Funding: $77,024
Total Period of Support: 02/01/17 – 01/31/19
Percent Effort: 5% Effort / 5% Salary
Project Title: Exploratory Analysis to Address Whether the Mononuclear Phagocyte System (MPS) Contributes to Faster Clearance of mAbs/ADCs in Advanced Gastric Cancer (AGC) Compared with Metastatic Breast Cancer (MBC) and Other Solid Tumors

Source of Support: ZY Therapeutics
Principal Investigators: Zamboni W
Total Direct Funding: $42,310
Total Period of Support: 02/01/17 – 06/30/17
Percent Effort: 3% Effort / 3% Salary
Project Title: Separation and quantitation of ZY-101 drug forms in rat plasma

Source of Support: NexImmune
Principal Investigators: W Zamboni
Total Direct Funding: $61,672
Total Period of Support: 08/01/15 – 03/31/16
Percent Effort: 5% Effort / 5% Salary
Project Title: Assay Development and Validation for Quantitation of Kb-SIY-dimer and anti-CD28 ligands in Solution for CMC Studies by High Resolution Mass Spectrometry (HRAM)

Source of Support: Nemucore
Principal Investigators: W Zamboni
Total Direct Funding: $75,000
Total Period of Support: 07/01/14 – 06/30/16
Percent Effort: 5% Effort / 5% Salary
Project Title: Development of Pt and Gd containing Nano-emulsions

Source of Support: Merrimack Pharmaceuticals
Principal Investigators: W. Zamboni
Total Direct Funding: $53,823
Total Period of Support: 11/19/14 – 01/30/15
Percent Effort: 5% Effort / 5% Salary
Project Title: Non-GLP development of analytical methods for MM-310 encapsulated and released drug - Task Order 2

Source of Support: Onyx Pharmaceuticals
Principal Investigators: W Zamboni
Total Direct Funding: $125,820
Total Period of Support: 06/01/2014 – 05/31/15
Percent Effort: 5% Effort / 5% Salary
Project Title: Evaluation of the pharmacodynamics, pharmacokinetics and efficacy of PEGylated liposomal carfilzomib and non-liposomal carfilzomib in female nu/nu mice bearing orthotopic A549 NSCLC tumors. The A549 NSCLC cells are luciferase expressing cell lines.

Source of Support: Merrimack Pharmaceuticals
Principal Investigators: W. Zamboni
Total Direct Funding: $69,372
Total Period of Support: 05/15/14 – 08/01/14
Percent Effort: 5% Effort / 5% Salary
Project Title: Non-GLP development of analytical methods for MM-310 encapsulated and released drug

Source of Support: Hoffman-La Roche, Inc.
Principal Investigators: J Shields, WC Zamboni
Total Direct Funding: $35,000 ($17,500 for Zamboni)
Total Period of Support: 02/01/12 – 01/31/13
Percent Effort: 5% Effort / 5% Salary
Project Title: Assessment of RO5212054/PLX3603 to 1) radiosenstize B-Raf mutant melanoma cells in vitro and 2) radiosensitize and/or inhibit melanoma brain tumor growth in vivo

Source of Support: SciDose, LLC
Principal Investigators: WC Zamboni
Total Direct Funding: $97,994
Total Period of Support: 09/01/11 – 08/30/12
Percent Effort: 5% Effort / 5% Salary
Project Title: Evaluation of the protein binding for novel formulations of Docetaxel

Source of Support: Bayer HealthCare AG
Principal Investigators: R Goldberg; WC Zamboni
Total Direct Funding: $129,134
Total Period of Support: 02/01/11 – 07/01/14
Percent Effort: 10% Effort / 10% Salary

Project Title: Pharmacokinetic Study of IHL=305 Alone and in Combination with Regorafenib as Part of the Placebo-Controlled Phase II Study of Regorafenib in Combination with FOLFIRI as Second-Line Therapy in Patients with K-RAS or BRAF Mutant Metastatic Colorectal Cancer

Source of Support: Mallinckrodt/Covidien
Principal Investigators: WC Zamboni
Total Direct Funding: $196,910
Total Period of Support: 02/01/11 – 08/01/11
Percent Effort: 10% Effort / 10% Salary
Project Title: Pharmacokinetic Screening of PEGylated Liposomal Formulations of Cisplatin in nu/nu Female Mice Bearing KB Human Nasopharyngeal Xenografts

Source of Support: Mallinckrodt/Covidien
Principal Investigators: WC Zamboni
Total Direct Funding: $196,910
Total Period of Support: 02/01/11 – 08/01/11
Percent Effort: 10% Effort / 10% Salary
Project Title: Pharmacokinetic Screening of PEGylated Liposomal Formulations of Cisplatin in nu/nu Female Mice Bearing KB Human Nasopharyngeal Xenografts

Source of Support: SciDose, LLC
Principal Investigators: WC Zamboni
Total Direct Funding: $252,994
Total Period of Support: 10/01/10 – 09/30/11
Percent Effort: 7.5% Effort / 7.5% Salary
Project Title: Pharmacology Studies of Curcumin-Succinate-PEG400 Conjugate compared with Curcumin In Vitro Systems and Tumor Models

Source of Support: Mallinckrodt/Covidien
Principal Investigators: WC Zamboni
Total Direct Funding: $275,910
Total Period of Support: 07/01/10 – 05/30/11
Percent Effort: 10% Effort / 10% Salary
Project Title: Efficacy and Pharmacology Studies of Folr1 Ab-SPI-077 compared with SPI-077 in Mice Bearing KB Human Nasopharyngeal Xenografts

Source of Support: Carmel Pharma
Principal Investigators: W Zamboni
Total Direct Funding: $40,500/year
Total Period of Support: 05/01/10 – 04/30/15
Percent Effort: 2% Effort / 2% Salary
Project Title: ChemoGLO Kits and Reference Laboratory for Chemotherapy Environmental Contamination in Pharmacies and Healthcare Areas

Source of Support: Mersana Therapeutics, Inc.
Principal Investigators: WC Zamboni
Total Direct Funding: $221,332
Total Period of Support: 05/01/09 – 08/30/10
Percent Effort: 10% Effort / 10% Salary for Zamboni
Project Title: Assay Development and LC-MS/MS Analysis as part of the Study Evaluating Plasma, Tissue, and Tumor PK of XMT-1001 and CPT-11 in Mice Bearing HT-29 Human Colon Carcinoma Xenografts

Source of Support: Carmel Pharma
Principal Investigators: WC Zamboni
Total Direct Funding: $68,279
Total Period of Support: 05/01/09 – 04/30/10
Percent Effort: 2.5% Effort / 2.5% Salary for Zamboni
Project Title: Development of Wipe Sampling Kits, Methods, and Analytical Assays for Paclitaxel and Docetaxel as Related to Environmental Contamination in Pharmacies and Healthcares Areas

Source of Support: Hana Biosciences, Inc.
Principal Investigator: William C. Zamboni, PharmD, PhD
Total Direction Funding: $72,000
Total Period of Support: 05/01/08 – 5/01/10
Percent Effort: 15% Effort / 15% Salary Support
Project Title: Analytical Studies of Encapsulated, Released, and Sum Total Topotecan in Plasma as part of the Phase I Study of TLI

Source of Support: Sanofi-Aventis Oncology
Principal Investigators: R Edwards, K Zorn, WC Zamboni
Total Direct Funding: $125,000
Total Period of Support: 07/01/07 – 10/01/10
Percent Effort: 8% Effort / 8% Salary
Project Title: Parallel Phase I Studies of Docetaxel IV in combination with Oxaliplatin IP and Docetaxel IP in combination with Oxaliplatin IV in patients with Persistent or Recurrent Ovarian Cancer

Internal UNC Projects Administered Via Recharge Center – Past:

Source of Support: NINDS (R01NS097507)
Principal Investigator(s): Kristy Ainslie
Total Direct Funding: $3,084.32
Total Period of Support: 10/14/19– 04/14/20
Percent Effort: 1% Effort / 1% Salary
Project Title: Pharmacokinetic study of paclitaxel (PTX) in mouse brain via interstitial drug delivery (PTX scaffold)

Source of Support: UNC LCCC Development Grant
Principal Investigators: Hayes, Alyssa
Total Direct Funding: $50,000
Total Period Support: 02/01/21 to 12/31/22 (NCE)
Project Title: Pediatric Oncology Doxorubicin Implant

Source of Support: NIH 5R01AI162246-02 (PSID 5120650)
Principal Investigators: Rahima Benhabbour
Total Direct Funding: $1,496,202 current awarded; $3,740,241 Total award (5-year project)
Total Period Support: 04/13/2021 – 03/31/2026
Project Title: *Increasing tumoral drug uptake in pancreatic tumors using focused ultrasound and paclitaxel in-situ forming implants* (*UNC/NCSU BE - paclitaxel implant project)*

Source of Support: NCATS U01TR003715 (Account: 537210)
Principal Investigators: Hingtgen, Shawn (UNC); Floyd, Scott (Duke); Flores, Catherine (U. Florida)
Total Direct Funding: $2,999,304
Total Period Support: 04/01/2021 – 03/31/2025
Project Title: A consortium effort to translate therapies for neurological diseases via an ex vivo organotypic platform

University of Pittsburgh – Past Grants:

Source of Support:	Scaife Foundation Grant for Ovarian Cancer Research
Principal Investigator:	William C. Zamboni
Total Direct Funding:	$50,000
Total Period of Support:	09/01/06 – 05/01/08
Percent Effort:	5% Effort / 5% Salary
Project Title:	Pilot Study Evaluating Phenotypic Measures of the Reticuloendothelial System as Predictors of Doxil Pharmacokinetic and Pharmacodynamic Disposition in Patients with Refractory Ovarian Cancer

Source of Support:	NIH RO1 (Grant PI: Jennifer Grandis)
Co-Investigator:	W.C. Zamboni
Total Direct Funding:	$197,020
Total Period of Funding:	07/01/04 – 12/31/06
Percent Effort:	10% Effort / 10% Salary
Project Title:	Stat3 as a Therapeutic Target in Head and Neck Cancer

Source of Support::	Pittsburgh Foundation
Co-Investigator:	W.C. Zamboni
Total Direct Funding:	$24,319
Total Period of Funding:	07/01/04 – 06/30/06
Project Title:	The Role of Pharmacogenetics in Development of Individualized Chemotherapy for Women with Advanced Ovarian Cancer

Source of Support:	NIH
Principal Investigator:	Chandra Belani
Total Direct Funding:	$480,382
Total Period of Support:	12/01/01 – 11/30/06
Percent Effort:	2.5% Effort / 2.5% Salary
Project Title:	Phase I Clinical Trials of Novel Anticancer Agents

Source of Support:	ACCP– Aventis Oncology Fellowship
Principal Investigator:	William C. Zamboni
Total Direct Funding:	$30,000
Total Period of Support:	07/01/01 – 07/01/02
Percent Effort:	10% Effort / 0% Salary
Project Title:	Evaluation of Cisplatin Tumor Disposition Using Microdialysis in Patients with Melanoma.

Source of Support:	NIH, NCI
Principal Investigator:	W.C. Zamboni
Total Direct Funding:	$47,061
Total Period of Support:	04/01/01 - 03/30/02
Percent Effort:	5% Effort / 0% Salary
Project Title:	STTR Phase I Grant R41-CA91700: Potent Topoisomerase I inhibition by the Silatecan, DB-67

Source of Support:	The American Academy of Otolaryngology-Head and Neck Surgery Foundation
Principal Investigator:	Paul L. Leong

Total Direct Funding: $6,000
Total Period of Support: 08/01/00 to 07/31/01
Percent Effort: 5% Effort / 0% Salary
Project Title: Targeting Activated Stat3 in HNSCC

Source of Support: Papa John's / V Foundation
Principal Investigator: W.C. Zamboni
Total Direct Funding: $5,000
Total Period of Support: 07/01/00 to 06/30/01
Percent Effort: 0% Effort / 0% Salary
Project Title: Factors Affecting the Tumor Disposition of Anticancer

Source of Support: NIH / NCI
Identification No.: RFP NCI N01-CM-97019-58
Principal Investigator: M.J. Egorin
Total Direct Funding: $1,159,960
Total Period of Support: 12/1/99 to 12/01/04
Percent Effort: 10% Effort / 10% Salary
Project Title: Preclinical Pharmacologic Studies of Antitumor Agents

Source of Support: American College of Clinical Pharmacy and Rhone-Poulenc Rorer Pharmaceuticals Inc.
Principal Investigator: W.C. Zamboni
Total Direct Funding: $10,000
Total Period of Support: 7/1/99 to 6/30/00
Percent Effort: 10% Effort / 0% Salary
Project Title: Disposition of Liposomal-Cisplatin (SPI-77) and Cisplatin in Solid Tumors

University of Pittsburgh – Past Contracts:

Source of Support: Sanofi-Aventis Pharmaceuticals, Inc. (Grant PI: Dr. Levi Downs, Univ. of Minnesota)
Principal Investigator: W.C. Zamboni, Pharm.D., Ph.D.
Total Direct Funding: $35,658
Total Period of Support: 07/01/07 – 10/01/09
Percent Effort: 5% Effort / 5% Salary
Project Title: LC-MS and Pharmacokinetics of Docetaxel as Part of Phase I Trial of Docetaxel as a Continuous IV infusion in Patients with Advanced Ovarian Cancer

Source of Support: Hana Biosciences, Inc.
Principal Investigator: William C. Zamboni
Total Direction Funding: $84,441
Total Period of Support: 05/01/07 – 5/01/08
Percent Effort: 10% Effort / 10% Salary Support
Project Title: Development of Sample Processing Methods and LC-MS Assay for the Measurement of Liposomal Encapsulated and Released Drug for Liposomal Topotecan in Human Plasma

Source of Support: GlaxoSmithKline
Principal Investigator: William C. Zamboni
Total Direct Funding: $55,576
Total Period of Support: 10/01/06 – 10/01/07
Percent Effort: 15% Effort / 15% Salary
Project Title: Pharmacokinetic Studies of Carboplatin Alone and In Combination with Lapatinib

Source of Support:	ALZA Pharmaceuticals, Inc.
Principal Investigator:	W.C. Zamboni
Total Direct Funding:	$65,000
Total Period of Support:	04/01/06 – 04/01/07
Percent Effort:	10% Effort / 10% Salary
Project Title:	Evaluation between the disposition of STEALTH liposomal CKD-602 (S-CKD602) and the Reticuloendothelial System in Preclinical Tumor Models

Source of Support:	ALZA Pharmaceuticals, Inc.
Principal Investigator:	W.C. Zamboni
Total Direct Funding:	$50,000
Total Period of Support:	04/01/06 – 04/01/07
Percent Effort:	30% Effort / 30% Salary
Project Title:	Pharmacokinetic Analysis of STEALTH liposomal CKD-602 (S-CKD602) as part of a Phase I Study

Source of Support:	SuperGen Pharmaceuticals, Inc.
Co-Investigator:	W.C. Zamboni
Total Direct Funding:	$22,250
Total Period of Funding:	10/01/04 – 07/01/05
Percent Effort:	5% Effort / 5% Salary
Project Title:	Disposition of 9NC and 9AC in Relation to ABC Genotypes

Source of Support:	Sanofi-Aventis Pharmaceuticals, Inc.
Principal Investigator:	Joe Kelly, M.D.
Co-Principal Investigator:	W.C. Zamboni, Pharm.D., Ph.D.
Total Direct Funding:	$66,850
Total Period of Funding:	07/01/04 – 06/30/09
Percent Effort:	15% Effort / 15% Salary
Project Title:	The use of MDR1 and CYP Pharmacogenetic Variables in Designing Individualized Therapy for the Treatment of Ovarian Cancer

Source of Support:	SuperGen Pharmaceuticals, Inc.
Co-Investigator:	W.C. Zamboni
Total Direct Funding:	$57,404
Total Period of Funding:	02/01/04 – 01/31/05
Percent Effort:	5% Effort / 5% Salary
Project Title:	PK Analysis of 9NC and 9AC as Part of the Study Evaluating the Effect of Food on the Oral Absorption of Rubitecan

Source of Support:	SuperGen Pharmaceuticals, Inc.
Co-Investigator:	W.C. Zamboni
Total Direct Funding:	$32,780
Total Period of Funding:	10/01/03 – 07/01/05
Percent Effort:	5% Effort / 5% Salary
Project Title:	Bioequivalent Study of Two formulations of Rubitecan

Source of Support:	Aventis and Sanofi Pharmaceuticals, Inc. (Grant PI: Jimmy Wong, MD, Georgetown University Cancer Ctr, Washington, DC)
Principal Investigator:	W.C. Zamboni
Total Direct Funding:	$85,600
Total Period of Support:	08/01/03 – 10/31/07
Percent Effort:	5% Effort / 5% Salary

Project Title: Phase I and Pharmacokinetic study of docetaxel and oxaliplatin

Source of Support: Aventis Pharmaceuticals, Inc. (Grant PI: Marwan Fakih, MD Roswell Cancer Center, Buffalo, NY)
Principal Investigator: W.C. Zamboni
Total Direct Funding: $40,000
Total Period of Support: 04/01/03 – 10/01/07
Percent Effort: 5% Effort / 5% Salary
Project Title: Phase I and Pharmacokinetic study of docetaxel, oxaliplatin, and cisplatin

Source of Support: ALZA Pharmaceuticals, Inc.
Principal Investigator: W.C. Zamboni
Total Direct Funding: $245,000
Total Period of Support: 04/01/03 – 08/01/07
Percent Effort: 25% Effort / 25% Salary
Project Title: Plasma, tissue, and tumor disposition of STEALTH liposomal and non-liposomal CKD602 in preclinical models

Source of Support: ALZA Pharmaceuticals, Inc.
Principal Investigator: W.C. Zamboni
Total Direct Funding: $68,898
Total Period of Support: 04/01/03 – 07/01/07
Percent Effort: 12.5% Effort / 12.5% Salary
Project Title: Phase I and pharmacokinetic study of STEALTH liposomal CKD602 in patients with refractory solid tumors

Source of Support: Aventis Pharmaceuticals, Inc.
Principal Investigator: W.C. Zamboni
Total Direct Funding: $32,000
Total Period of Support: 04/01/03 – 10/01/05
Percent Effort: 5% Effort / 5% Salary
Project Title: HPLC and Pharmacokinetics of Docetaxel as Part of Phase I Study of Docetaxel and Capecitabine in Patients with Solid Tumors

Source of Support: Aventis Pharmaceuticals, Inc.
Principal Investigator: W.C. Zamboni
Total Direct Funding: $134,599
Total Period of Support: 03/01/03 – 08/01/07
Percent Effort: 15% Effort / 15% Salary
Project Title: Plasma and tumor pharmacokinetics of EGFR AS oligonucleotide and docetaxel as part of the optimization of EGFR antisense oligonucleotides plus docetaxel for treatment of head and neck cancer

Source of Support: Aventis Pharmaceuticals, Inc. (Grant PI: Dr. Yuhchyau Chen, Univ. of Rochester Medical Center)
Principal Investigator: W.C. Zamboni
Total Direct Funding: $30,000
Total Period of Support: 04/01/02 – 08/31/07
Percent Effort: 5% Effort / 5% Salary
Project Title: HPLC and Pharmacokinetics of Docetaxel as Part of Phase II Study of Triple-Agent Chemotherapy Followed by Pulsed Radiosensitizing Docetaxel and Radiation for NSCLC

Source of Support:	Aventis Pharmaceuticals, Inc. (Grant PI: Kunle Odunsi, Roswell Cancer Center, Buffalo, NY)
Principal Investigator:	W.C. Zamboni
Total Direct Funding:	$42,500
Total Period of Support:	04/01/02 – 08/31/07
Percent Effort:	7.5% Effort / 7.5% Salary
Project Title:	Pharmacogenetic, Pharmacologic, and Pharmacokinetic Study of Docetaxel as Part of Phase II Study of Weekly Docetaxel in Patients with Relapsed Ovarian Cancer

Source of Support:	Eli Lilly Pharmaceuticals, Inc. (Grant PI: Dr. Sridhar Mani, Montefiore University Hospital, NY, NY)
Principal Investigator:	W.C. Zamboni
Total Direct Funding:	$10,000
Total Period of Support:	04/01/02 – 03/31/02
Percent Effort:	5% Effort / 5% Salary
Project Title:	HPLC and Pharmacokinetics of Gemcitabine as Part of the Phase I Trial of Gemcitabine, Oxaliplatin, and 5FU in Patients with Solid Tumors

Source of Support:	Supergen Pharmaceutical Inc.
Principal Investigator:	W.C. Zamboni
Total Direct Funding:	$33,508
Total Period of Support:	11/1/99 to 11/30/01
Percent Effort:	5% Effort / 5% Salary
Project Title:	HPLC and Pharmacokinetic Analysis of 9-NC as Part of the Study Evaluating the Effect of Food on 9-NC Oral Absorption

Source of Support:	Rhone-Poulenc Rorer Pharmaceutical Inc.
Principal Investigator:	W.C. Zamboni
Total Direct Funding:	$156,863
Total Period of Support:	10/1/99 to 12/01/05
Percent Effort:	5% Effort / 5% Salary
Project Title:	Evaluating the Response and Pharmacokinetics of the Combination of Docetaxel and 9-NC in Mice Bearing Tumor Xenografts

Source of Support:	Supergen Pharmaceutical Inc.
Principal Investigator:	W.C. Zamboni
Total Direct Funding:	$60,616
Total Period of Support:	10/1/99 to 10/30/01
Percent Effort:	5% Effort / 5% Salary
Project Title:	HPLC and Pharmacokinetic Analysis of RFS2000 and its 9-AC Metabolite as Part of a Phase I Trial of RFS2000 in Patients with Refractory Solid Tumors

Source of Support:	Supergen Pharmaceutical Inc.
Principal Investigator:	W.C. Zamboni
Total Direct Funding:	$58,900
Total Period of Support:	7/1/99 to 6/30/01
Percent Effort:	10% Effort / 10% Salary
Project Title:	HPLC and Pharmacokinetic Analysis of RFS2000 and its 9-AC Metabolite as Part of a Phase II Trial of RFS2000 in Patients with Advanced Colo-Rectal Cancer

Source of Support:	Supergen Pharmaceutical Inc.
Principal Investigator:	W.C. Zamboni
Total Direct Funding:	$87,510
Total Period of Support:	7/1/99 to 6/30/00

Percent Effort: 15% Effort / 15% Salary
Project Title: Evaluating the Relationship between Plasma Exposure of RFS2000 in Mice Bearing Human Colon Xenografts

University of Maryland Cancer Center – Past Grants:

Source of Support: NIH, NCI
Identification No.: 1U01CA69854
Principal Investigator: D. Van Echo
Annual Total Direct Cost: $271,551
Total Period of Support: 3/1/98 to 2/28/03
Percent Effort: 15% Effort / 15% Salary
Project Title: Phase I Trials of Anticancer Agents

Source of Support: NIH, NCI
Identification No.: REP NCI-CM-57199-12
Principal Investigator: M.J. Egorin
Annual Total Direct Cost: $172,429
Total Direct Funding: $938,279
Total Period of Support: 3/1/98 to 11/30/99
Percent Effort: 20% Effort / 10% Salary
Project Title: Preclinical Pharmacological Studies of Antitumor and Anti-HIV Agents

University of Maryland Cancer Center – Past Contracts:

Source of Support: Sequus Pharmaceutical Inc.
Principal Investigator: W.C. Zamboni
Total Direct Funding: $47,061
Total Period of Support: 3/15/99 to 3/14/00
Percent Effort: 10% Effort / 0% Salary
Project Title: Tumor Extracellular Fluid and Systemic Disposition of SPI-77 Alternative in Mice Bearing B16 Murine Melanoma Tumors

Source of Support: Sequus Pharmaceutical Inc.
Principal Investigator: W.C. Zamboni
Total Direct Funding: $47,061
Total Period of Support: 3/1/99 to 2/28/00
Percent Effort: 10% Effort / 0% Salary
Project Title: SPI-77 Tumor Extracellular Fluid and Systemic Disposition in Mice Bearing B16 Murine Melanoma Tumors

St. Jude Children's Hospital – Past Grants:

Source of Support: ACCP, Rhone-Poulenc Rorer
Principal Investigator: C. F. Stewart; W Zamboni
Total Direct Funding: $22,000
Total Period of Support: 7/1/97 to 6/30/98
Percent Effort: 80% Effort / 75% Salary
Project Title: Cerebrospinal Fluid Disposition of Topoisomerase I Inhibitors in the Nonhuman Primate Model

RESEARCH STATEMENT

Summary of Accomplishments (2012 to Present):

Scholarship. Since my promotion to Associate Profession with Tenure in January 2012, approximate 70% of my effort as a faculty member has been devoted to scholarship, with a focus on translational pharmacology studies and the translational development of drugs, especially complex drugs such as nanoparticles, conjugates, biologics, antibodies, and antibody drug conjugates.

My research program has several high impact areas of research that are as listed below:

1) Translational Pharmacology Studies of Nanoparticle, Carrier Mediated Agents (CMA), and Biologics
2) Biomarkers for the Bi-Directional Interaction between Carrier-Mediated Agents (CMA) and the Innate Immune System (IIS) / Mononuclear Phagocyte System (MPS)
3) Biomarkers for the Relationship between the Innate Immune System (IIS) / Mononuclear Phagocyte System (MPS) and Pharmacokinetics (PK) and Pharmacodynamics (PD) of Monoclonal Antibodies (mAbs) and Antibody Drug Conjugates (ADCs)
4) Profiling and Modulating Factors that Inhibit the Tumor Delivery of Carrier-Mediated Agents (CMAs) and Biologics
5) Evaluation and Removal of Surface Exposures of Hazardous Drugs in Hospitals.

The significance, innovation, impact, and summary of my publications for each of these areas of research are described below in the section entitled **Major Research Accomplishments**.

I serve as the director of the UNC Advanced Translational Pharmacology and Analytical Chemistry (ATPAC) Lab and Recharge Center in the UNC Eshelman School of Pharmacy (ESOP), the UNC Lineberger Comprehensive Cancer Center (LCCC), and the Carolina Institute of Nanomedicine. The UNC ATPAC Lab consists of the UNC Translational Oncology and Nanoparticle Drug Development Initiative (TONDDI) Lab and the UNC LCCC Analytical Chemistry and Pharmacology Core (ACPC) Lab. The UNC ATPAC Lab supports research

from my own lab, and highly collaborative and team science-based research with faculty members in the UNC ESOP, UNC LCCC, and CIN, as well as investigators from the National Institutes of Health, U.S. Food and Drug Administration, other academic research centers, and the pharmaceutical companies.

Summary of Research Program:

My research program is part of the Division of Pharmacotherapy and Experimental Therapeutics in the Eshelman School of Pharmacy at the University of North Carolina (ESOP). My research program is also part of UNC Lineberger Comprehensive Cancer Center (LCCC), and Carolina Institute of Nanomedicine (CIN). I am also the director of the UNC Advanced Translational Pharmacology and Analytical Chemistry (ATPAC) Lab. The UNC ATPAC Lab supports research from my own lab, and highly collaborative and team science-based research with faculty members in the UNC ESOP, UNC LCCC, and CIN, as well as investigators from the National Institutes of Health, U.S. Food and Drug Administration, other academic research centers, and the pharmaceutical companies. I consider myself as translational pharmacologists where I apply standard and novel analytical chemistry, pharmacology, pharmacokinetic, pharmacodynamic, and biomarker methods to preclinical, translational, and clinical development of drugs, especially anticancer agents.

I have been involved in translational development and pharmacology studies of small molecule drugs, nanoparticles, conjugates, biologics, and implantable agents for greater than 25 years. A majority of my work and interests has been on anticancer agents. My research interests focus on the application of pharmacokinetic, pharmacodynamic, phenotypic and pharmacogenetic principles in the optimization of the chemotherapeutic treatment of cancer. Information obtained from preclinical and clinical translational studies can greatly add to the understanding of the pharmacology of anticancer agents, allow for the rational design of therapeutic regimens, and permit individualization of treatment via precision medicine approaches.

A focus of my research is evaluating the processes and mechanisms associated with the delivery and distribution of anticancer agents into solid tumors. I am especially interested in identifying barriers to the delivery of agents into solid tumors and developing novel methods to measure these barriers. In addition, I am extremely interested into development novel technologies and modulators to overcome these barriers and increase the delivery and efficacy of anticancer agents in the treatment of solid tumors.

A second focus of my research is on the development of complex agents, such as nanoparticles, liposomes, conjugates, biologics, antibodies, and antibody drug conjugates (ADCs). As part of these studies, our group has developed methods and technologies to differentiate between the inactive-conjugated and active-released forms of these agents in blood, tumor, and tissues. I also focus on evaluating the bi-directional interaction between these agents and the mononuclear phagocyte system (MPS), which part of the innate immune system (IIS), and is the primary clearance pathway for these agents. We have developed biomarkers of the IIS/MPS, which can be used to predict the pharmacokinetics, pharmacodynamics, and the potential for drug-drug and drug-disease interactions of these complex agents, especially immune-oncology agents, antibodies, and nanoparticles. The IIS/MPS biomarkers are also being evaluated as a method to optimize the dose and regimen of these complex agents, in special populations, such as in obesity, inflammatory diseases, and COVID-19 infection.

In summary, the clinical relevance of my research is underscored by the need to optimize the selection of the best agent, dose, regimen, and combination therapies for the treatment of cancer and other diseases as a path to increase efficacy and reduce toxicities.

Laboratories:

I am the Director of the following laboratories at UNC Eshelman School of Pharmacy (ESOP) and UNC Lineberger Comprehensive Cancer Center (LCCC):

1) **Director, UNC Advanced Translational Pharmacology and Analytical Chemistry (ATPAC) Lab and Recharge Center**

   The UNC ATPAC Lab is a UNC Office of Sponsored Research approved recharge center that supports analytical chemistry and preclinical, translational, and clinical pharmacology studies with UNC and non-UNC investigators and institutions. The UNC ATPAC Lab consists of the following two labs with specific areas of research and support: 1) UNC Translational Oncology and Nanoparticle Drug Development Initiative ($TOND_2I$) Lab; 2) Analytical Chemistry and Pharmacology Core (ACPC) Lab.

The UNC ATPAC Lab supports research from my own lab, and highly collaborative and team science-based research with faculty members in the UNC ESOP, UNC LCCC, and CIN, as well as investigators from the National Institutes of Health, U.S. Food and Drug Administration, other academic research centers, and the pharmaceutical companies.

2) Director, UNC Translational Oncology and Nanoparticle Drug Development Initiative ($TOND_2I$) Lab in UNC ESOP and Carolina Institute of Nanomedicine (CIN)

The UNC $TOND_2I$ Lab supports my personal academic research related to the translational development of anticancer agents with a focus on nanoparticle and carrier mediated agents and how these agents interact with the MPS. This lab also directly supports research Carolina Institute of Nanomedicine (CIN) and is a partner lab with the Nanomedicine Characterization Core Facility in the Center for Nanotechnology in Drug Delivery, UNC Eshelman School of Pharmacy, that is directed by Dr. Alexander Kabanov.

3) Director, Analytical Chemistry and Pharmacology Core (ACPC) Lab in UNC LCCC

This lab supports analytical chemistry, pharmacology and pharmacokinetic studies as related to preclinical and clinical drug development in the UNC LCCC.

As well as supporting my own research, the UNC ATPAC, UNC $TOND_2I$ Lab and ACPC have and will support and collaborate on analytical and pharmacology projects for preclinical and clinical studies from several research groups and centers at UNC. The source of funding and projects associated with these studies are from the NIH, foundations, UNC, the State of NC, and pharmaceutical companies. A summary of the UNC and non-UNC groups collaborating with the $TOND_2I$ Lab and UNC LCCC ACPC Lab are listed below:

1) UNC Eshelman School of Pharmacy (ESOP)
2) UNC ESOP Center for Integrative Chemical Biology and Drug Discovery (CICBDD)
3) UNC ESOP Center for Nanotechnology in Drug Delivery (CNBD)
4) UNC ESOP Institute for Pharmacogenomics and Individualized Therapy (IPIT)
5) UNC Carolina Center for Cancer Nanotechnology Excellence (CCCNE)
6) UNC School of Medicine (SOM)
7) UNC Chemistry Department
8) UNC LCCC
    a. Molecular Therapeutics
    b. Cancer Cell Biology
    c. Clinical Research
    d. Cancer Genetics
    e. Mouse Phase I Unit (MP1U)
    f. Developmental Therapeutics Program
    g. Phase I Program
9) NIH
    a. NCI
    b. NIAID
    c. NINDS
10) U.S. FDA
11) Other academic universities and cancer centers
12) Pharmaceutical Companies

TEACHING ACTIVITIES

Summary and Teaching Philosophy

My teaching role in the UNC ESOP has been and is to teach via didactic lectures, student advising, mentoring PharmD students on research projects [as part of the Research and Scholarship in Pharmacy (RASP), UNC ESOP Honors Program, and research internships in the UNC TOND$_2$I Lab], and advise PhD students and fellows and post docs.

My philosophy for didactic and experiential teaching is to stimulate the minds of the students so that they can become independent and creative thinkers. I want the students to be able to be make sound decisions and be creative in finding the answers to tough questions and situations, but more importantly also be able to ask the questions that are not being asked. I strongly feel that the most brilliant and successful people are not the people who find the answers but the people who find the next set of unanswered or unidentified questions. In order to do this a teacher must be able to stimulate and excite the students to be free thinkers.

Pharmaceutical sciences and the process of drug development is an ever-evolving area of research. Thus, pharmaceutical scientists need to have a wide range of knowledge but also have in depth knowledge of a specific area where they can become an expert. In order to educate and train the next generation of researchers a teacher must be able to communicate and facilitate a stimulating learning environment. I do this by not only lecturing to the students but also involving the students in the lecture via direct questions, problem solving paradigms, and real-life examples. In addition, I tie important information to clinical examples in an interactive exchange of information. For example, in my lecture on "Phases of Drug Development in Oncology" I highlight each important point with a discussion as if we (the class and I) were the directors of a pharmaceutical company and what decision(s) would we make based on available information presented in the lecture.

My teaching philosophy for student mentoring is to train PharmD and PhD students to become experts in the translational develop of anticancer agents, nanoparticles, conjugates, and biologics. In addition, a goal is to develop the students as creative, independent and self-directed investigators. I try to achieve this goal by providing students the opportunity to experience the studies, infrastructure, and methodologies required for this type of research. This is accomplished by including PhD and PharmD students, fellows, RASP students, honors students, and research interns as active members of our research program in the Translational Oncology and Nanoparticle Drug Development Initiative (TOND$_2$I) Lab. The more the students are involved and take charge of a project the more they are excited and energized by research and drug development. This is also a method to identify and recruit the best and brightest UNC students to our research program. This also results in a pipeline of outstanding students into the PhD and fellowship programs in the UNC ESOP. This process is already starting to produce results as several of our honors students and research interns are evaluating research careers and PhD and fellowship programs at UNC and other outstanding research institutions.

Accomplishments. I have used my teaching philosophy in my lectures to the PharmD students, PhD students, fellows, post docs, other trainees, and other medical professionals at UNC and throughout the U.S> and the world. The effectiveness of my teaching methods is highlighted in the outstanding reviews I have received in the course and lecture evaluations. In addition, I have extensive experience in mentoring fellows, post docs, PhD students and PharmD students as research interns and honors students. The students and trainees I have mentored have been highly successful in their programs at UNC and after leaving UNC. In addition, I have taken an active and administrative role in the Young Innovator Program (YIP) in the UNC Eshelman Institute of Innovation (EII), Honors Program, and RASP Program. Details on these accomplishments are included in the Teaching Portfolio section.

Teaching Activities:

University of North Carolina School of Pharmacy: 2008 - Present

UNC Didactic Courses:

Course Coordinator:

Co-Coordinator, Pharmacotherapy: Hematology and Oncology (PHCY 447) 2015
UNC Eshelman School of Pharmacy

Coordinator, Pharmacotherapy: Hematology and Oncology (PHCY 447) 2015
UNC Eshelman School of Pharmacy

Co-Course Coordinator, Graduate Course in Science and Methods in Drug Development (DPET 841), UNC Eshelman School of Pharmacy 2013 - 2018

Co-Course Coordinator, Advanced Hematology and Oncology (DPET 812) 2010 - 2012
UNC Eshelman School of Pharmacy

Lectures - Current:

Fundamentals of Research Study Design: Types of Studies, Endpoints, and Measurement Scales (RASP 1) 2024 - Present
UNC Eshelman School of Pharmacy, Chapel Hill, NC

Introduction to the Institutional Review Board (IRB) (RASP 1) 2024 - Present
UNC Eshelman School of Pharmacy, Chapel Hill, NC

Fundamentals of Data Analysis: Data Visualization (RASP 3) 2024 - Present
UNC Eshelman School of Pharmacy, Chapel Hill, NC

Pharmacokinetics and Pharmacodynamics of Nanoparticle Agents 2009 - 2021
Nanomedicine Graduate Course (MOPH 738) 2024 – Present
UNC Eshelman School of Pharmacy, Chapel Hill, NC

Lectures - Past:

Non-clinical Safety Assessment of Drugs, Graduate Course in Science and Methods in Drug Development (DPET 841), UNC Eshelman School of Pharmacy 2014 - 2019

Oncologic Emergencies, Recitation Case Review, Hematology and Oncology (PHCY 447), UNC Eshelman School of Pharmacy 2014

Interspecies Scaling, Graduate Course in Pharmacokinetics (DPET 855) 2013 - 2019
UNC Eshelman School of Pharmacy

Steps in the Preclinical and Clinical Development of Drugs 2013 - 2014
UNC Eshelman School of Pharmacy Honors Program

Confirmatory Animal Pharmacology Studies, Graduate Course in Science and Methods in Drug Development (DPET 841), UNC Eshelman School of Pharmacy 2012 - 2019

Hematology and Oncology Recitation, Anemia Case 2011 - 2015
Hematology and Oncology (PHCY 447), UNC Eshelman School of Pharmacy

Prostate Cancer, Pharmacotherapy: Hematology and Oncology (PHCY 447) 2011 - 2013
UNC Eshelman School of Pharmacy

Hematology and Oncology Recitation, Breast Cancer Case 2011 - 2013
Hematology and Oncology (PHCY 447), UNC Eshelman School of Pharmacy

Phases of Drug Development in Oncology, Advanced Hematology and Oncology (DPET 812), UNC Eshelman School of Pharmacy 2010 - 2017

Gynecologic Cancers, Pharmacotherapy: Hematology and Oncology (PHCY 447) 2010 - 2017
UNC Eshelman School of Pharmacy

Translational Development of Anticancer Agents, Lunch and Learn Lecture Series 2009 - 2010
in the UNC Graduate Training Program in Translational Medicine, UNC School of Medicine

UNC Training Courses

Lectures – Current:

Precision Dosing of Biologics Based on Body Habitus and Innate Immune System Factors 2024
UNC-Duke T32 Clinical Pharmacology Training Program
UNC Eshelman School of Pharmacy, Chapel Hill, NC

Effect of Body Habitus on the Precision Dosing of Complex Drugs and Biologics 2023
UNC ESOP Innovations and Transformations in Pharmaceutical Sciences (ITPS)

Introduction to Clinical Pharmacology, NIH Principles of Clinical Pharmacology. 2019 - Present

Effect of MPS on Pharmacokinetics, Pharmacodynamics, and Tumor Delivery 2018 - Present
of Nanomedicines. Carolina Nanoformulations Workshop.

Lectures – Past:

Conflict of Interest Cases in Academic Research, UNC ESOP Graduate Education Retreat 2020 - 2022

Bi-directional interaction between the innate immune system and complex 2020 - 2022
drugs and biologics.
UNC ESOP Innovations and Transformations in Pharmaceutical Sciences (ITPS)

Conflict of Interest Issues and Case in Academia, UNC Eshelman School of Pharmacy 2021
T32 Clinical Pharmacology Fellowship Program

Lead Roundtable Discussion on Networking Skills in Research. DPET Graduate Students. 2017

Preclinical Characterization of ADME, PK, PD and toxicology of Nanoformulations; 2016 - 2017
Use of nano agents in non-cancer diseases. Carolina Nanoformulations Workshop.

Factors affecting nano delivery to tumors in animal models and patients 2016 - 2017
Clinical PK and PD (efficacy and toxicity) aspects of nano agents.
Carolina Nanoformulations Workshop, UNC Eshelman School of Pharmacy.

Pharmacokinetics and Pharmacodynamics of Nanoparticles and Carrier-Mediated Agents 2015 - 2017
in Preclinical Animal Models and in Patients, T32 Clinical Pharmacology Forum
UNC Duke Collaborative Clinical Pharmacology Postdoctoral NIH T32 Training Program.

Course Coordinator and Developer, Steps and Methodology for the 2011 - 2013
Translational Development of Nanoparticle Agents
Carolina Center for Cancer Nanotechnology Excellence.

UNC Doctoral Student Major Advisor or Committee Chair

Gina Song, UNC Eshelman School of Pharmacy 2009 - 2014

-Primary Advisor
-Royster Society of Fellows Fellowship
-Globalization of Pharmaceutics Education Network (GPEN) 2012 Sponsored Graduate Student
Dissertation entitled “Immune Mechanisms Regulating Pharmacokinetics and Pharmacodynamics of PEGylated Liposomal Anticancer Agents”.

Whitney Caron, UNC Eshelman School of Pharmacy 2009 - 2013
- Primary Advisor
- American Foundation for Pharmaceutical Education (AFPE) Pre-Doctoral Fellowship in Pharmaceutical Sciences 2011
- St. Jude National Graduate Student Symposium (NGSS) – 2013
Dissertation entitled “The Mononuclear Phagocyte System as a Phenotypic Probe for Nanoparticle Pharmacokinetics and Pharmacodynamics in Preclincial and Clinical Systems”.

Huali Wu, UNC Eshelman School of Pharmacy 2008 - 2010
- Primary Advisor
Dissertation entitled “Clinical Pharmacokinetics and Pharmacodynamics of Anticancer Agents Delivered via PEGylated Liposomes”.

Venita Gresham, UNC Eshelman School of Pharmacy 2008 - 2010
- Committee Chair
Dissertation entitled “An Ex Vivo Familial Genetic Strategy For Determining Mechanism of Action”.

UNC Thesis/Dissertation Committee Member

Zhongbo Li, PhD Committee, UNC Eshelman School of Pharmacy	2022 - Present
Rachel Cooke, PhD Committee, UNC Chemistry Department	2021 - Present
Sean McCann, PhD Committee, UNC Eshelman School of Pharmacy	2021 - 2022
Natasha Vinod, PhD Committee, UNC Eshelman School of Pharmacy	2018 - 2021
Christine Lee, PhD Committee, UNC Eshelman School of Pharmacy	2015 - 2020
Xiaomeng Wan, PhD Committee, UNC Eshelman School of Pharmacy	2015 - 2018
Nancy Gillis, PhD Committee, UNC Eshelman School of Pharmacy	2014 - 2017
Matthew Haynes, PhD Committee, UNC Eshelman School of Pharmacy	2014 - 2017
Hao Cai, PhD Committee, UNC Eshelman School of Pharmacy	2014 - 2016
Katherine Moga, PhD Committee, UNC Eshelman School of Pharmacy	2014 - 2015
Tammy Shen, PhD Committee, UNC Eshelman School of Pharmacy	2012 - 2014
James Huckle, PhD Committee, UNC Eshelman School of Pharmacy	2012 - 2014
Kevin Chu, PhD Committee, UNC Eshelman School of Pharmacy	2012 - 2013
Jessica Sorrentino, PhD Committee, UNC Pharmacology Department	2011 - 2013
Yong Zhang, PhD Committee, UNC Eshelman School of Pharmacy	2011 - 2013
Kai Chen, PhD Committee, UNC Chemistry Department	2011 - 2012
Dongyun Liu, PhD Committee, UNC Eshelman School of Pharmacy	2010 - 2013
Timothy Merkel, PhD Committee, UNC Chemistry Department	2010 - 2011
Lamar Mair, PhD Committee, UNC Applied Sciences and Engineering	2008 - 2012
Wesley Sivak, PhD Committee, University of Pittsburgh	2004 - 2007
Khalid Alkharfy, PhD Committee, University of Pittsburgh	2000 - 2002

UNC Fellowship Director and Advisor 2008 - Present
Fellowship Program in Drug Development and Hematology and Oncology

UNC Eshelman School of Pharmacy, University of North Carolina

Li Chen, UNC Eshelman School of Pharmacy, Pharmacokinetics/Pharmacodynamics Fellow 2023 - 2024

Matthew Rich, CCCNE CCNTP Nano T32 Fellow 2023 - Present
-Co-mentor with William Polacheck, PhD, Joint Dept of Biomedical Engineering, UNC and NCSU
-"Translational Studies of the Linear and Non-Linear Tumor Delivery of Nanoparticles and Small Molecules in Novel In Vivo and In Vitro Models of Solid Tumors"

Taek Lee, UNC Eshelman School of Pharmacy, Pharmacokinetics/Pharmacodynamics Fellow 2022 - 2023

Jacob Ramsey, F99/K00 Fellow, Co-sponsor 2021 - Present

Amber Moody, CCCNE Nano T32 Fellow 2019 - 2021

Lauren Price, Hematology-Oncology Research Fellow, UNC Eshelman School of Pharmacy 2016 - 2018

Andrew Lucas, Hematology-Oncology Research Fellow, UNC Eshelman School of Pharmacy 2017 - 2017

Andrew Madden, Hematology-Oncology Research Fellow, UNC Eshelman School of Pharmacy 2012 - 2015

Linsey Phillips, UNC SPIRE Postdoc Program funded by NIGMS 2011 - 2014

Summit Rawal, Hematology-Oncology Research Fellow, UNC Eshelman School of Pharmacy 2011 - 2012

Parag Kumar, Drug Development Fellow UNC Eshelman School of Pharmacy 2011 - 2012

Jeff Huang, Drug Development Fellow UNC Eshelman School of Pharmacy 2010 - 2011

Mark Walsh, Hematology-Oncology Research Fellow, UNC Eshelman School of Pharmacy 2009 - 2011
2011 ASCO Oncology Trainee Award for study entitled "Technetium-99m sulfur colloid (TSC) as a phenotypic probe for the pharmacokinetics (PK) and pharmacodynamics (PD) of PEGylated liposomal doxorubicin (PLD) in patients (pts) with recurrent epithelial ovarian cancer (EOC)"

Austin Combest, Drug Dev. Fellow UNC Eshelman School of Pharmacy 2009 - 2010
- 2010 AACR Sanofi-Aventis Scholar-in-Training Award for study entitled "Plasma and Tumor Pharmacokinetics (PK) of Carboplatin in Genetically Engineered Mouse Models of Melanoma (GEMMs), Murine Melanoma, and in Patients with Cutaneous Melanoma"
- 2010 ASCO Cancer Foundation Merit Award for study entitled "Pharmacokinetics (PK) of oxaliplatin (OX) after Intravenous (IV) and intraperitoneal (IP) administration in patients with gynecological malignancies

Irene La, Hematology-Oncology Research Fellow, UNC Eshelman School of Pharmacy 2008 - 2010
- 2009 Rho Chi Clinical Research Scholarship Awardee

Angela Yu, Drug Dev. Fellow, UNC Eshelman School of Pharmacy 2008 - 2009

UNC School of Medicine Graduate Training Program in Translational Medicine
Clinical Mentor

Rachel Cooke 2020 - 2023
Translational Development of Decodable Polymer Libraries for Protein Stabilization (PI: Abigail Knight, PhD)

UNC ESOP RASP Students

RASP Faculty Mentor

Reanna Jereb 2021 - 2023
Crowed Bus Theory: PK Modeling of the Linear and Non-Linear Delivery of Nanoparticles in Preclinical Models of Solid Tumors

Sydney Stocks 2020 - 2023
Preliminary Evaluation of the Effects of Body Habitus and Race on Pembrolizumab Response and Toxicity in Patients with Endometrial Cancer
(Honors Carolina 2023)

William Bailey Burks 2019 - 2020
Evaluation of the Effects of Body Habitus and Race on Pembrolizumab Response and Toxicity

Zachary Whitehead 2018 - 2021
Effects of Obesity on the Efficacy of PEGylated Liposomal Doxorubicin in Patients with Platinum Refractory Ovarian Cancer
(Honors Carolina 2021)

RASP Division Director

Melissa Roverse 2023 - Present
Sara Jubas 2023 - Present
Emily Ong 2023 - Present
Angela Su 2023 - Present
Allison Yang 2022 - Present
Melissa Maas 2022 - Present
Philip Quyang 2022 - Present
Ashley Gleaton 2021 - 2023
Brian Lam 2021 - 2023
Kelsey Chaykowski 2021 - 2023
Melanie Mills 2021 - 2023
J Bernard Collins 2020 - 2022
Monica Conzad 2020 - 2022
Taek Lee 2020 - 2022
Marissa Ross 2019 - 2021
Sarah Mills 2019 - 2021

UNC ESOP Research Honor Students or Independent Study Students

Esha Thakkar, Independent Study Student, UNC Eshelman School of Pharmacy 2021 - 2023
Project entitled “Effect of Body Habitus on Bevacizumab Pharmacokinetics in Adult and Pediatric Patients with Refractory Solid Tumors”

Rachel Tyson, Research Honors Student, UNC School of Pharmacy 2014 - 2018
Honors project entitled “Preclinical Development of Nanogel Formulations of Cisplatin”

Jeffery Roth, Research Honors Student, UNC School of Pharmacy 2014 - 2018
Honors project entitled “Quantitation, Localization and Pharmacokinetics of Erlotinib Small Molecule and Nanoformulations in a GBM Mouse Model”

Leah Herity, Research Honors Student, UNC School of Pharmacy 2013 - 2017
Honors project entitled “A High Throughput Screening Platform to Evaluate the Interactions between Nanoparticle and Non-Nanoparticle Agents and the Mononuclear Phagocyte System (MPS) in Humans and Animal Models”

Brittney Roberts, Research Honors Student, UNC School of Pharmacy 2013 - 2017

Honors project entitled “Evaluation of Mediators of Mononuclear Phagocyte System (MPS) Function and Nanoparticle Pharmacology in Obese and Non-Obese Patients with Ovarian and Endometrial Cancer enrolled on the UNC Cancer Survivorship Cohort (CSC)”

William McAdoo, Research Honors Students, UNC School of Pharmacy 2012 - 2014
Honors project entitled “Modifying mononuclear phagocyte system in tumor to enhance the delivery of nanoparticle agents”

Amanda Keeler, Research Honors Student, UNC School of Pharmacy 2011 - 2014
Honors project entitled “Pharmacokinetic, biomarker and pharmacodynamic studies of nanoparticle formulations of platinum analogues in the treatment of solid tumors and brain tumors”

Taylor White, Research Honors Student, UNC School of Pharmacy 2011 - 2014
Honors project entitled “Profiling mononuclear phagocyte system in tumors: effects on clearance and tumor delivery of nanoparticle agents”

Andrew Lucas, Research Honors Student, UNC School of Pharmacy 2010 - 2014
Honors project entitled “Sample processing and analytical methods to measure doxorubicin binding to DNA in biological samples”

Shane Moore, Research Honors Student, UNC School of Pharmacy 2010 - 2013
Honors project entitled “Profiling the mononuclear phagocyte system (MPS) in solid tumors and the effects on nanoparticle tumor delivery”

Anthony Chhay, Research Honors Student, UNC School of Pharmacy 2010 - 2012
Honors project entitled “Development of methods to count the number of nanoparticles in a dose and how this affects the PK and PD of the nanoparticle”

Ryan Schell, Research Honors Student, UNC School of Pharmacy 2010 - 2012
Honors project entitled “Evaluation of inter-patient pharmacokinetic variability of liposomal and non-liposomal anticancer agents”

Hugh Giovinazzo, Research Honors Student, UNC School of Pharmacy 2010 - 2012
Honors project entitled “Technetium-99m sulfur colloid as a phenotypic probe for the pharmacokinetics and pharmacodynamics of PEGylated liposomal doxorubicin (PLD)”

Katie Parise, Research Honors Student, UNC School of Pharmacy 2009 - 2011
Honors project entitled “Comparison of toxicity and study design issues of nanoparticle and small molecule anticancer agents in preclinical models and phase I clinical trials.”

Lakia Scoggins, Research Honors Student, UNC School of Pharmacy 2008 - 2010
Honors project entitled “Evaluating the effects of bortezomib n the pharmacokinetics (PK) of pegylated liposomal doxorubicin”

UNC ESOP Research Interns

Angelia Stein, UNC 2024 - Present

Corey Haswell, UNC 2023 - Present

Claire O’Connor, UNC Eshelman School of Pharmacy 2022 - Present

Kashish Patel, UNC Eshelman School of Pharmacy 2022 - Present

Rowena Dzorvakpor, UNC Eshelman School of Pharmacy 2022 - 2024

Alex Irmscher, UNC 2021 - 2023

Alex Bean, UNC 2021 - 2022

Mallory Storrie, UNC 2019 - 2021

Hunter Hughes 2021

Esha Thakkar, UNC Eshelman School of Pharmacy	2019 - 2021
Aaron Hamm, UNC	2019 - 2021
Taek Lee, UNC Eshelman School of Pharmacy	2018 - 2020
Natalie Huggins, UNC	2018 - 2019
Qiongqiong Mei, UNC Eshelman School of Pharmacy	2018 - 2019
Jisun Ban, UNC Eshelman School of Pharmacy	2017 - 2020
Emili Brooks Anderson, UNC	2017 - 2020
Jesse Lewandowski, UNC Eshelman School of Pharmacy	2017 - 2018
Juan Razo, UNC Eshelman School of Pharmacy	2016 - 2020
Savannah Megeau, UNC Eshelman School of Pharmacy	2016 - 2019
Joseph Piscitelli, UNC and UNC Eshelman School of Pharmacy	2015 - 2020
Amy Lin, UNC Eshelman School of Pharmacy	2015 - 2018
Leah Osae, UNC Eshelman School of Pharmacy	2015 - 2017
Zachary Kornblum, UNC Eshelman School of Pharmacy	2014 - 2017
Sarah Montgomery, Northwood High School	2014 - 2017
Fatimah Bori, UNC- North Carolina Central University Partners in Basic Cancer Research Intern Program	2013
Bernard Roles, Research Intern, NC State University	2013 - 2014
Candice Sherwood, Research Intern, UNC School of Pharmacy	2012 - 2014
Jennifer Coleman, Research Intern, UNC School of Pharmacy	2011 - 2013
Benjamin Guiastrennec, Res Intern, University of Montpellier, France Honors project entitled “Study of the Relationship between MPS Activity and the PK Disposition of Nanoparticle Formulations of Cisplatin in Tumors”	2011
Brian Sidone, Res Intern, Duquesne University School of Pharmacy, Pittsburgh	2011
Lavanya Rao, Research Intern, NC State University	2011
Elaine Yee-Ling, Research Intern, UNC School of Pharmacy	2010 - 2011
Whitney Davis, Research Intern, UNC School of Pharmacy	2010 - 2011
Katie Sandison, Research Intern, UNC School of Pharmacy	2009 - 2012
Ming Wu, Research Intern, UNC School of Pharmacy	2009 - 2010
Hiep C. Tu, Research Intern, UNC School of Pharmacy	2009 - 2010
Jeremy Sen, Research Intern, UNC School of Pharmacy	2009 - 2010
Vinh Hoang, Research Intern, UNC School of Pharmacy	2008 - 2011
Maureen Bottino, Research Intern, UNC School of Pharmacy	2008 - 2009
Elizabeth Neuffer, Research Intern, UNC School of Pharmacy	2008 - 2009
Xuefang Bai, Research Intern, UNC School of Pharmacy	2008 - 2009

UNC Eshelman Institute of Innovation Young Innovators Program (YIP)

Co-Faculty Director and Preceptor 2015 - 2018

YIP Students:

Jennifer Spores, Chapel Hill High School	2019
Alex Bean, Northwood High School	2019
Sara Eve, Northwood High School	2018

Megan Kanaby, Cardinal Gibbons High School 2018
Mallory Storrie, Northwood High School 2017
Hunter Hughes, Northwood High School 2017
Salem Williams, Northwood High School 2016

UNIVERSITY OF PITTSBURGH SCHOOL OF PHARMACY: 1999 - 2008

Didactic Courses:

Drug Development of Anticancer Agents, Elective Independent Study for P3 Students, School of Pharmacy, University of Pittsburgh 2004 - 2008

Phase I and Phase II Study Designs in Oncology 2001 - 2008
Clinical Scientist-Ph.D. Program: School of Pharmacy
University of Pittsburgh, Pittsburgh, PA.

Co-Course Coordinator, Principles of Clinical Pharmacology 2000 - 2001
Presented by National Institutes of Health
University of Pittsburgh, Pittsburgh, PA.

Pharmacokinetics of Anticancer Agents, Pharmacotherapy: 1999 - 2008
Oncology and Hematology (Pharm 5315)
School of Pharmacy, University of Pittsburgh, Pittsburgh, PA.

Drug Development in Oncology, Pharmacotherapy: 1999 - 2008
Oncology and Hematology (Pharm 5315)
School of Pharmacy, University of Pittsburgh, Pittsburgh, PA.

Ovarian Cancer, Pharmacotherapy: Oncology and Hematology (Pharm 5315) 1999 - 2002
School of Pharmacy, University of Pittsburgh, Pittsburgh, PA.

Comprehensive Chemotherapy Course: Plant Alkaloids: Taxanes, 1999 - 2002
Vinca Alkaloids, and Epipodophyllotoxins
University of Pittsburgh Cancer Institute, Pittsburgh, PA.

Training Program

Co-Director of the Fellowship Program in Drug Development of Anticancer Agents in Program of Molecular Therapeutics/ Drug Discovery at University of Pittsburgh Cancer Institute. 2000 - 2008

Fellowship Advisor

Laura Jung, Hematology-Oncology Research Fellow 2000 - 2003
University of Pittsburgh Cancer Institute

DUQUESNE UNIVERSITY

Lectures:

Co-Course Coordinator, Pharmacotherapy: Hematology/Oncology 2006 - 2008
Duquesne University School of Pharmacy.

UNIVERSITY OF MARYLAND

Lectures:

Clinical Pharmacokinetics of Chemotherapeutic Agents, 1998 - 1999
Clinical Pharmacokinetics (PHMY-562),
University of Maryland School of Pharmacy, Baltimore, MD.

Training Programs:

Co – Director Program in Oncology Pharmacy Research, 1998 - 1999
Greenebaum Cancer Center and School of Pharmacy

UNIVERSITY OF TENNESSEE

Lectures:

Pharmacotherapeutics of Cancer Therapy 1996 - 1997
Department of Clinical Pharmacy
University of Tennessee College of Pharmacy, Memphis, TN.

PROFESSIONAL SERVICE

Current:

American Society of Clinical Oncology Annual Meeting 2020 - Present
Development Therapeutics & Cytotoxic Chemotherapy Committee
American College of Clinical Pharmacy, Full Member 2001 - Present
American Association of Cancer Research, Active Member 1997 - Present
American Society of Clinical Oncology, Active Member 1997 - Present

Past:

NCI SBIR Special Emphasis Panel on Development of Cancer 2011 - 2017
Therapeutics, Imagining Technologies, Interventional Devices,
Diagnostics and Prognostics Toward Commercialization (R44)
NC Center of Innovation for Nanobiotechnology (COIN), Scientific Advisory Board 2010 - 2015
Drug Information Association Regulatory Affairs: The IND Phase 2009
University of Pittsburgh Alumni Association Board of Directors, 2009 - 2011
Senior Advisor
American Society of Clinical Oncology 2006 Annual Meeting, 2006
Development Therapeutics & Cytotoxic Chemotherapy,
Co-Chair of Oral Discussion Session
Eastern Cooperative Oncology Group, Developmental Therapeutics Committee, Member 2005 - 2010
Gynecologic Oncology Group, Phase I and Pharmacology Committees, Member 2005 - 2010
American Society of Clinical Oncology 2005 Annual Meeting, 2005
Development Therapeutics & Cytotoxic Chemotherapy,
Co-Chair of Poster Discussion Section
American Society of Clinical Oncology, Development Therapeutics & Cytotoxic 2004 - 2010
Chemotherapy, Member
Pennsylvania Cancer Control Consortium, Research Committee 2004 - 2007

University of Pittsburgh Alumni Association Board of Directors, Director-At-Large & Nominations Committee	2003 - 2008
University of Pittsburgh Board of Trustees, Athletics Committee, Faculty Representative	2003 - 2008
University of Pittsburgh Athletics Compliance Committee	2001 - 2008
University of Pittsburgh Athletics Advisory Committee on Admission of Student Athletes	2001 - 2008
University of Pittsburgh Alumni Association, Regional Director	2001 - 2003
University of Pittsburgh Senate Athletics Committee, Co-Chair	2000 - 2008
University of Pittsburgh Alumni Association, Board of Directors	1997 - 2008
University of Pittsburgh Alumni Association, Pitt Club Representative	1997 - 2001
University of Pittsburgh Memphis Area Pitt Organization, Alumni Leader	1995 - 1997
American College of Clinical Pharmacy, Associate Member	1994 - 2001
University of Pittsburgh School of Pharmacy Alumni Association	1994 - 1998
American Society of Health-Related Pharmacy	1993 - 1995
Rho Chi Pharmacy Honor Society, Secretary-Treasurer	1991 - 1992
Phi Delta Chi Fraternity	1989 - 1992

NIH STUDY SECTION PARTICIPATION

Past:

NCI SBIR Special Emphasis Panel on Development of Cancer Therapeutics, Imagining Technologies, Interventional Devices, Diagnostics and Prognostics Toward Commercialization (R44)	2010 - 2017
National Cancer Institute Nanotech Study Section	2009 - 2011
National Cancer Institute Development Therapeutics Study Section	2008 - 2009

ADVISORY COMMITTEE APPOINTMENTS

Current:

NuVeta Radiotherapy, Scientific Advisory Board, Durham, NC	2023 - Present
Member, Pharmaceutical Science and Clinical Pharmacology Advisory Committee of the US Food and Drug Administration, Silver Spring, MD	2022 - Present
Member, St. Jude Comprehensive Cancer Center Pharmacokinetic Shared Resource External Advisory Board, Memphis, TN	2022 - Present
Member, Champions Advisory Board, University of Pittsburgh Department of Athletics Pittsburgh, PA	2021 - Present
Deep Creek Pharma, Scientific Advisory Board, Winston Salem, NC	2021 - Present
Akagera Medicines, Scientific Advisory Board, Kigali, Rwanda	2020 - Present

Past:

Advisor, Cancer Nanotechnology Challenge	2015 - 2019
The Center for Advancing Innovation and Translation of Nanotechnology in Cancer (TONIC) Consortium	2014 - 2020

Advisor, Neuro Startup Challenge, The Center for Advancing Innovation	2014 - 2017
NanoEngineering for Medicine and Biology (NEMB) Workshop on Challenges for Engineers in Biomedical and Clinical Sciences	2012
NCI Alliance for Nanotechnology in Cancer: Animal Models Working Group, Co-Chair	2012 - 2020
NCI Alliance for Nanotechnology in Cancer Nanomedicine Drug Delivery Clinical Trial Working Group (NDD CTWR)	2012 - 2017
Pharmacologic and Regulatory Issues for the Translational Development of Nanoparticle Agents Workshop, Controlled Release Society Meeting 2011, Co-Chair	2011
Nanomedicine Product Development Summit: Turning Nanoparticle Delivery Systems into Innovative Medicines. Controlled Release Society Meeting 2011	2011
Controlled Release Society Educational Workshop entitled “Nanoparticle and Liposomal Regulatory and Pharmacology Issues”, Co-Chair	2011
NCI Alliance for Nanotechnology in Cancer: Pharmacology and Biodistribution Working Group	2011 - 2020
NC Biomedical Innovation Network Symposium on Cutting-Edge Approaches to Drug and Device Development 2010, Co-Chair	2010
NC Center of Innovation for Nanobiotechnology (COIN) Scientific Advisory Board	2010 - 2013
Environmentally Responsible Development of Nanotechnology NC Summit	2009
NCI Best Practices in Cancer Nanotechnology Workshop	2009
NCI Alliance for Nanotechnology in Cancer, Pharmacology Committee	2009
Yakult Pharmaceutical Advisory Board	2008 - 2012
Neopharm, Inc., Liposomal Advisory Board	2006 - 2007
University Pharmacotherapy Associates	2004 - 2008
ALZA Inc., Oral Delivery Advisory Board	2002 - 2008
ALZA Inc., CDK602 Advisory Board	2002 - 2008
Amgen Inc., Oncology Advisory Board	2001 - 2005
Supergen Advisory Board	1998 - 2006
Optimized Analysis in Kinetics Consulting	1998 - 2000
SmithKline Beecham Regional Oncology Advisory Board	1998 - 1999

COMMITTEES

PROFESSIONAL ORGANIZATIONS (Including offices held)

Current:

ASCO Education Committee for Developmental Therapeutics and Tumor Biology	2019 - Present

Past:

12th International Symposium on Polymer Therapeutics: From Laboratory to Clinical Practice, Scientific Advisory Board	2018
American Association for Cancer Research Annual Meeting Program Committee	2014
Carolina Institute for NanoMedicine and Joint UNC-NC State BioMedical Engineering Dept. Conference, Core Development/Training Panel, Co-Chair	2012
Pharmacologic and Regulatory Issues for the Translational Development of Nanoparticle Agents Workshop	2011

Controlled Release Society Meeting, Co-Chair	
Symposium on Nanotechnology in Products: Pitfalls and Successes in the Path to a Commercial Product at the MANCEF/COMS Nanotechnology Meeting 2011, Greensboro, NC.	2011
Hematology Oncology Pharmacist Association, Research Committee	2010 - 2011
Southeastern Phase 2 Consortium (SEP2C), Pharmacology Committee	2009 - 2014
American Society of Clinical Oncology 2006 Annual Meeting, Development Therapeutics & Cytotoxic Chemotherapy, Co-Chair of Oral Discussion Session	2006
Eastern Cooperative Oncology Group, Developmental Therapeutics Committee, Member	2005 - 2017
Gynecologic Oncology Group, Phase I and Pharmacology Committees, Member	2005 - 2017
American Society of Clinical Oncology 2005 Annual Meeting, Development Therapeutics & Cytotoxic Chemotherapy, Co-Chair of Poster Discussion Section	2005
Pennsylvania Cancer Control Consortium, Research Committee	2004 - 2008
University of Pittsburgh Alumni Association	1992 - 2005
Rho Chi Pharmacy Honor Society, Secretary-Treasurer	1991 - 1992
Phi Delta Chi Professional Fraternity, Alumni Officer	1989 - 1992

UNIVERSITY AND SCHOOL

University of North Carolina:

Current:

UNC Eshelman School of Pharmacy, Conflict of Interest (COI) Committee, Lead Co-Chair	2023 - Present
UNC Eshelman School of Pharmacy DPET PK Metric Faculty Position Committee	2023
PharmAlliance Student Training Program – University College of London School of Pharmacy	2022
UNC Eshelman School of Pharmacy MMI PharmD Student Interview Committee	2022 - Present
J Heyward Hall Award Committee	2022 - 2023
UNC University Conflicts of Interest (COI) Advisory Committee	2020 - Present
UNC Eshelman School of Pharmacy, Conflict of Interest (COI) Committee, Co-Chair	2019 - 2022
UNC Eshelman School of Pharmacy RASP Committee	2018 - Present
NC TraCS Liaison from UNC Eshelman School of Pharmacy	2017 - Present
UNC Eshelman School of Pharmacy, Conflict of Interest (COI) Committee	2008 - Present

Past:

UNC Eshelman School of Pharmacy Research & Graduate Education Retreat Committee	2020 - 2022
UNC Eshelman School of Pharmacy Campbell Mentoring Program	2020 - 2022
UNC Technology-enable Clinical Services (TeCS) Company Commercialization Plan Committee	2020 - 2022
UNC Eshelman School of Pharmacy Accreditation Self-Study Committee: Standard 21 Sub-Committee	2018 - 2020
UNC Faculty Council, Tenured Representative for UNC Eshelman School of Pharmacy	2017 - 2019
UNC CFE Leadership Advanced Program	2017 - 2018
Eshelman Institute of Innovation (Eii), Review Committee for Student and Trainee Grant Proposals	2016 - 2017
Faculty Advisor for Dr. Eric Bachelder's KL2 Application	2015 - 2017
Carolina Nanoformulations Workshop, UNC Eshelman School of Pharmacy.	2015

UNC Eshelman School of Pharmacy, Faculty Search Committee for Clinical Scientist, Chair.	2014 - 2015
UNC Eshelman School of Pharmacy Curriculum Design and Execution Committee on Inquiry, Innovation and Problem Solving	2013 - 2017
UNC Eshelman School of Pharmacy Educational Renaissance – Scholarship Committee	2012 - 2013
UNC Eshelman School of Pharmacy ACPE Self-Study Committee on Administrative Relationships	2010
UNC LCCC Animal Studies Core Advisory Committee	2010 - 2019
UNC Eshelman School of Pharmacy Honors Program Committee	2010 - 2018
UNC Eshelman School of Pharmacy, DPET, PhD Qualifying Exam Committee	2010 - 2014
Faculty Advisor for Dr. Carey Anders' K23 Grant	2010 - 2014
Tgen / TD2 Drug Development Round Table	2009 - 2010
UNC Lineberger Comprehensive Cancer Center, Developmental Therapeutics Program, Clinical Pharmacology Co-Chair	2008 - 2020
UNC Lineberger Comprehensive Cancer Center, Mouse Phase I Unit Program, Co-Director	2008 - 2015
Committee on the Design and Implementation of the Phase I Unit of the UNC Lineberger Comprehensive Cancer Center in NCCH	2008 - 2009

University of Pittsburgh:

Protocol Review Committee, University of Pittsburgh Cancer Institute	2006 - 2008
University of Pittsburgh School of Pharmacy Admissions Committee	2006
University of Pittsburgh Alumni Association Board of Directors, Director at Large	2003 - 2008
University of Pittsburgh Board of Trustees, Athletic Committee	2003 - 2008
University of Pittsburgh Athletic Department Committee for NCAA Interim Report on Academic Integrity	2002
Pitt's Generation Next of the Metro Pitt Club, Chair	2002 - 2006
University of Pittsburgh Advisory Committee for the Admission of Student Athletes	2001 - 2008
University of Pittsburgh Alumni Association Board of Directors, Regional Director	2001 - 2003
University of Pittsburgh Faculty Senate	2000 - 2008
Senate Athletics Committee, Co-Chair	
University of Pittsburgh Alumni Association Board of Directors, Scholarship Committee	1997 - 2017
Chair	2001 - 2015
University of Pittsburgh Alumni Association Board of Directors, Pitt Club Representative	1997 - 2001

CONSULTANT

Current:

Genentech	2024 - Present
Ingenus Pharmaceuticals	2024 - Present
NuVeta Radiotherapy	2023 - Present
Inimmune	2021 - Present
Akagera Medicines	2020 - Present
GlaxoSmithKline	2020 - Present
Syros Pharmaceuticals	2017 - Present

Glolytics, LLC, Co-Founder and CSO	2016 - Present
ChemoGLO, LLC, Co-Founder and CSO	2012 - Present
MediGLO Pharmaceutical Consulting, LLC, Founder and CEO	2002 - Present

Past:

Glycomine	2022 - 2024
Gilead Sciences	2022 - 2024
Eagle Pharmaceuticals	2020 - 2022
Adaptimmune Therapeutics	2021 - 2022
Ellipses Pharma	2020
OBI Pharmaceuticals	2018 - 2020
BlueLink Pharmaceuticals	2017 - 2020
Cerulean Pharma	2016 - 2017
NuVue	2016 - 2017
Cristal Therapeutics, Scientific Advisory Board	2015 - 2016
Mallinckrodt Pharmaceuticals, Scientific Advisory Board	2015 - 2015
Wildcat-Nanoglo, LLC, Co-Founder; Chair of Scientific Advisory Board	2014 - 2015
Merrimack Pharmaceuticals	2013 - 2019
Nanovector, Scientific Advisory Board	2012 - 2016
Onyx Pharmaceuticals	2012 - 2015
Nektar Therapeutics	2012 - 2013
AZAYA Therapeutics	2011 - 2012
Covidien-Mallinkrodt	2010 - 2013
Terumo Corporation	2010 - 2012
Endece	2010 - 2011
Aura Biosciences	2010 - 2011
Guide Point Global Consulting	2009 - 2012
Liquidia	2009 - 2010
Yakult Pharmaceuticals	2008 - 2010
Genentech	2008 - 2009
Enzon Pharmaceuticals	2008 - 2009
Labopharm	2008 - 2009
Hana Biosciences	2007 - 2009
Clinical Advisors, Network of Advisors Consulting	2006 - 2009
MEDACorp, Medical Consulting	2006 - 2009
Neopharm, Inc.	2006 - 2007
Alza Corp.	2002 - 2008
Amgen Inc. Oncology Advisory Board	2001 - 2005
Supergen Advisory Board	2000 - 2008
SmithKline Beecham Regional Oncology Advisory Board	1998 - 1999
Optimized Analysis in Kinetics Consulting	1998 - 1999

REVIEWER

Journal Reviewer

Reviewer, American Journal of Health-System Pharmacy	2022 - Present
Reviewer, PNAS	2015 - Present
Reviewer, Journal of Oncology Pharmacy Practice	2014 - Present
Reviewer, Advanced Drug Delivery Reviews	2012 - Present
Reviewer, International Journal of Pharmaceutics	2012 - Present
Reviewer, Journal of Liposomal Research	2009 - Present
Reviewer, Journal of Pharmacology and Experimental Therapeutics	1999 - Present
Reviewer, Journal of Clinical Oncology	1999 - Present
Reviewer, Clinical Cancer Research	1998 - Present
Reviewer, Cancer Chemotherapy and Pharmacology	1996 - Present

Editorial Advisory Board

Editorial Board Member, Drugs of the Future	2009 - 2023

Other

Medical Writer for Oncology, Medscape, Inc.	1999 - 2001