Guohua An, MD, PhD

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EMPLOYMENT

July 2020 –present Associate Professor
Division of Pharmaceutics and Translational Therapeutics
College of Pharmacy
University of Iowa
Iowa City, Iowa

Sep 2014 – June 2020 Assistant Professor
Division of Pharmaceutics and Translational Therapeutics
College of Pharmacy
University of Iowa
Iowa City, Iowa

Dec 2012 – Aug 2014 Assistant Professor
Center for Pharmacometrics and Systems Pharmacology
Department of Pharmaceutics (Orlando Campus)
College of Pharmacy
University of Florida
Orlando, Florida

Aug 2010 – Nov 2012 Senior Clinical Pharmacokineticist
Department of Clinical Pharmacology and Pharmacometrics
Global Pharmaceutical R&D
Abbott Laboratories
Abbott Park, Illinois

2003 – 2005 Clinical Pharmacist and Research Scientist
Clinical Pharmacology Lab
Department of Pharmacy
Ruijin Hospital
Shanghai, China

EDUCATION

2005~2010 Ph.D. in Pharmaceutical Sciences, SUNY at Buffalo, Buffalo, NY, USA

Ph.D. Project: The effects of flavonoids on the BCRP-mediated pharmacokinetics and pharmacodynamics of Mitoxantrone (PhD Advisor: Marilyn E. Morris)

2000~2003 **M.S. in Clinical Pharmacology**, Fudan University, Shanghai, China

1995~2000 **M.D.** Taishan Medical College, Shandong, China

PROFESSIONAL EXPERIENCE

2010 Aug ~ 2012 Nov **Senior Clinical Pharmacokineticist**
Department of Clinical Pharmacology and Pharmacometrics
Global Pharmaceutical R&D
Abbott Laboratories

Clinical Study Support

- Provided scientific and technical input to clinical protocols, clinical development plans, investigator's brochure and clinical pharmacology section of regulatory filing documents
- Author and reviewer of 14 Phase I clinical study reports, 4 Phase 2 clinical study reports, and 1 Phase 3 clinical study report
- Provided modeling& simulation support for dose selection and clinical trial design for Phase 1, Proof of Concept and Phase 2b studies
- Developed various mechanistic modeling (e.g. PK/PD modeling on uric acid, exposure-response model on pain intensity, exposure-heart rate model, exposure-adverse event model, exposure-adverse event-dropout model, target-mediated drug disposition model and drug-drug interaction model)
- Predicted PK behavior of two ABT compounds in humans and recommended the first-in-human dose based on in vitro-in vivo correlation and allometric scaling analysis
- Predicted drug-drug interaction in humans based on the preclinical data for one ABT compound.
- Wrote a white paper on the pharmacokinetic interaction between valproic acid (Depakote) and ritonavir (Norvir) to support the labeling update of Depakote

Research Projects

- Exposure-response Modeling for Pharmacokinetics, Efficacy, Safety and Dropout of ABT-652 in Subjects with Osteoarthritic Pain.
- CYP3A-Mediated Interaction Model between ABT-384 and Ketoconazole in Humans.
- Population Pharmacokinetics and Pharmacodynamic Modeling of ABT-639 after Single and Multiple Dose Administration in Healthy Volunteers
- Development of Target-Mediated Drug Disposition (TMDD) Model to Explain Unusual Nonlinear PK of ABT-384 in Human
- Model-based Meta-Analysis (MBMA) on the Pain Related Endpoints in OA Pain Clinical Trials.

2003 ~2005 **Clinical Pharmacist and Research Scientist** *Clinical Pharmacology Lab, Department of Pharmacy. Ruijin Hospital, Shanghai, China*

1999 ~ 2000 **Medical Intern,** rotations in the First Affiliated Hospital Taishan Medical College. China

PUBLICATIONS

Single-Author Book

- **An G.** Essentials in Clinical Pharmacokinetics – Concepts, Dose Optimization, and Biologics. **May 2024.** ISBN: 978-1-964623-00-9. Independently published. (https://www.amazon.com/dp/1964623006)

Book Chapters

- **An G** and Morris ME. Chapter 22 of the book *Enzyme- and Transporter-Based Drug-Drug Interactions- Progress and Future Challenges*, book edited by Pang KS, Rodrigues AD and Peter RM. Springer **2010**, pp.555-584. ISBN-10: 1441908390
- **An G** and Morris ME. Chapter 3 of the book *Drug Efflux Pumps in Cancer Resistance Pathways: From Molecular Recognition to Inhibition Strategies in Chemotherapy*. book edited by Alejandro Sosnik, Reina Bendayan. Springer **2020.** ISBN-10: 0128164344.

Peer-Reviewed Articles

Complete List of Published Work in MyBibliography (total 96 peer-reviewed publications)
https://www.ncbi.nlm.nih.gov/myncbi/1NU3b-piulp5-/bibliography/public/

1. Xu M, Sun D, and **An G** *. Exploring the Impact of Pharmacological Target-Mediated Low Plasma Exposure in Lead Compound Selection in Drug Discovery – a Modeling Approach. *The AAPS Journal* **2024** Oct 28;26(6):112. doi: 10.1208/s12248-024-00979-7. PMID: 39467882 * **Corresponding author**
2. Rolsma SL, Sokolow A, Patel P, Sokolow K, Jimenez-Truque N, Fissell WH, Ryan V, Kirkpatrick CM, Nation RL, Gu K, Teresi M, Fishbane N, Kontos M, **An G,** Winokur P, Landersdorfer CB, Creech CB. Population Pharmcokinetics Modeling of Cefepime, Meropenem, and Piperacillin-tazobactam in Patients with Cystic Fibrosis. J Infect Dis. **2024** [Online ahead of print]. PMID: 39344185.
3. Yuan X, **An G*.** A Target-mediated Drug Disposition Model to Explain the Nonlinear Pharmacokinetics of the 11-Beta-Hydroxysteroid Dehydrogenase Type 1 Inhibitor BI-187004 in Healthy Subjects. Journal of Clinical Pharmacology **2024** Apr 23. doi: 10.1002/jcph.2438. Online ahead of print. PMID: 38652112 *** Corresponding author**
4. Wu N, and **An G***. A Quantitative Systems Pharmacology Model of the Incretin Hormones GIP and GLP1, Glucagon, Glucose, Insulin, and the Small Molecule DPP-4 Inhibitor, Linagliptin. *J Pharm Sci* **2024** Jan; 113(1): 278-289. doi: 10.1016/j.xphs.2023.09.006. PMID: 37716531 *** Corresponding author**
5. **An G***. Pharmacokinetics and pharmacodynamics of GalNAc-conjugated siRNAs. *J Clin Pharmacol.* **2024** Jan; 64(1):45-57. doi: 10.1002/jcph.2337. PMID: 37589246 *** Corresponding author**

6. Xu M, and **An G***. A pharmacometric model to characterize a new type of target-mediated drug disposition (TMDD) – nonlinear pharmacokinetics of small-molecule PF-07059013 mediated by its high-capacity pharmacological target hemoglobin with positive cooperative binding. *The AAPS Journal* **2023** Apr 13;25(3):41. doi: 10.1208/s12248-023-00808-3. PMID: 37055588 *** Corresponding author**

7. Wu N, Katz D, and **An G***. Population Target-Mediated Pharmacokinetics/Pharmacodynamics Modeling to Quantitatively Evaluate SPI-62 Exposure and Its Inhibition on Hepatic 11β-Hydroxysteroid Dehydrogenase Type 1 (HSD-1) In Healthy Adults. *Clinical Pharmacokinetics* **2023** Sep; 62(9):1275-1288. doi: 10.1007/s40262-023-01278-8. PMID: 37452998 *** Corresponding author**

8. **An G*,** Creech B, Wu N, Nation RL, Gu K, Nalbant D, Jimenez-Truque N, Fissell W, Rolsma S, Patel P, Watanabe A, Fishbane N, Kirkpatrick CMJ, Landersdorfer CB, and Winokur P,* Evaluation of Empirical Dosing Regimens for Meropenem in ICU Patients Using Population Pharmacokinetic Modeling and Target Attainment Analysis. *Antimicrob Agents Chemother* **2023**;67(1):e0131222. doi: 10.1128/aac.01312-22. PMID: 36622154 *** Corresponding author**

9. **An G*,** Creech B, Wu N, Nation RL, Gu K, Nalbant D, Jimenez-Truque N, Fissell W, Rolsma S, Patel P, Watanabe A, Fishbane N, Kirkpatrick CMJ, Landersdorfer CB, and Winokur P,*. Population Pharmacokinetics and Target Attainment Analysis to Identify a Rational Empiric Dosing Strategy for Cefepime in Critically Ill Patients. *J Antimicrob Chemother* **2023** Jun 1;78(6):1460-1470. doi: 10.1093/jac/dkad106. PMID: 37071586 *** Corresponding author**

10. Bach T, Wu N, **An G***. Pharmacometric Model of Agalsidase-Migalastat Interaction in Human: A Novel Mechanistic Model of Drug-Drug Interaction Between a Therapeutic Protein and a Small Molecule. *Journal of Pharmacokinetics and Pharmacodynamics* **2023** Feb;50(1):63-74. doi: 10.1007/s10928-022-09830-y. *** Corresponding author** PMID: 36376611

11. Reeder JA, O'Sullivan CT, Xu M, Wu N, Ince D, Rogers WK, **An G***. Model-Informed Clinical Practice - Determining an Appropriate Ampicillin-Sulbactam Redosing Regimen in Surgical Patients by Utilizing Population Pharmacokinetics and Target Attainment Analysis. *Antimicrob Agents Chemother* **2023** Apr 18;67(4):e0124822. doi: 10.1128/aac.01248-22. PMID: 36920230 *** Corresponding author**

12. **An G*,** Katz D. Importance of target-mediated drug disposition (TMDD) of small-molecule compounds and its impact on drug development – example of the class effect of HSD-1 inhibitors. Journal of Clinical Pharmacology **2023** May;63(5):526-538. doi: 10.1002/jcph.2185. *** Corresponding author** PMID: 36479709

13. Hemmersbach-Miller M, Mvic SJB, Winokur P, Landersdorfer C, Gu K, Chan AW, Cohen-Wolkowiez M, Conrad T, **An G**, Kirkpatrick C, Swamy GK, Walter EB, Schmader KE. Population Pharmacokinetics of Piperacillin/Tazobactam across the Adult Lifespan. *Clinical Pharmacokinetics.* **2023**;62(1):127-139. doi: 10.1007/s40262-022-01198-z. PMID: 36633812

14. Wu N, Widness, JA, Yan X, Veng-Pedersen P, and **An G***. A full Target-Mediated Drug Disposition (TMDD) model to explain the changes in recombinant human erythropoietin (rhEpo) pharmacokinetics in patients with different bone marrow integrity following hematopoietic transplantation. *J Pharm Sci* **2022**;111(9):2620-2629. doi: 10.1016/j.xphs.2022.06.003. *** Corresponding author** PMID: 35691608

15. Bach T, and **An G*** . Importance of Utilizing Natural Isotopologue Transitions in Expanding the Linear Dynamic Range of LC-MS/MS Assay for Small-Molecule Pharmacokinetic Sample Analysis – a Mini-review. J Pharm Sci **2022**;111(5):1245-1249. doi: 10.1016/ j.xphs.2021.12.012. *** Corresponding author** PMID: 34919967

16. Reeder J, Abdallah I, Bach T, Xu Y, Nalbant D, O'Sullivan C, **An G*** . Development and validation of a simple, fast, and sensitive LC/MS/MS method for the quantification of cefazolin in human plasma and its application to clinical pharmacokinetic study. J Pharm Biomed Anal. **2022** Feb 20;210:114521. doi: 10.1016/j.jpba.2021.114521 *** Corresponding author** PMID: 34979494

17. Bach T, Deye G, Codd E, Horton J, Winokur P, **An G*** . Population pharmacokinetic-pharmacodynamic model of oxfendazole in healthy adults in a multiple ascending doses and food effect study and target attainment analysis. *Antimicrob Agents Chemother. **2022** Jan 18;66(1):e0143221. doi: 10.1128/AAC.01432-21.* *** Corresponding author** PMID: 34606333

18. Bach T, and **An G*** . Comparing the Performance of First-Order Conditional Estimation (FOCE) and Different Expectation-Maximization (EM) Methods in NONMEM: Real Data Experience with Complex Nonlinear Parent-Metabolite Pharmacokinetic Model. *Journal of Pharmacokinetics and Pharmacodynamics* **2021** Aug;48(4):581-595. doi: 10.1007/s10928-021-09753-0 *** Corresponding author** PMID: 33884580

19. Wu N, Katz D, and **An G*** . A Target-Mediated Drug Disposition (TMDD) Model to Explain Non-Linear Pharmacokinetics of the 11β-Hydroxysteroid Dehydrogenase Type 1 Inhibitor SPI62 in Healthy Adults. *J Clinical Pharmacology* **2021** Nov;61(11):1442-1453. doi: 10.1002/jcph.1925. *** Corresponding author** PMID: 34110620

20. Nalbant D, Reeder J, Li P, O'Sullivan C, Rogers WK, **An G*** . Development and validation of a simple, fast, and sensitive LC/MS/MS method for the quantification of ampicillin and sulbactam in human plasma and its application to clinical pharmacokinetic study. *J Pharm Biomed Anal.* **2021** March 20;196:113899. doi: 10.1016/j.jpba.2021.113899. *** Corresponding author** PMID: 33508765

21. Bach T, Murry DJ, Stebounova LV, Deye G, Winokur P, and **An G*** Population Pharmacokinetic Model of Oxfendazole and Metabolites in Healthy Adults following Single Ascending Doses. *Antimicrob Agents Chemother* **2021** March 18;65(4):e02129-20. doi: 10.1128/AAC.02129-20. *** Corresponding author** PMID: 33526484

22. **An G*** , Lee KSS, Yang J, Hammock BD. Target-Mediated Drug Disposition (TMDD) – a Class Effect of Soluble Epoxide Hydrolase (sEH) Inhibitors. *J Clinical Pharmacology* **2021**; 61(4):531-537. doi: 10.1002/jcph.1763. *** Corresponding author** PMID:33078430

23. Hong B, D'Cunha R, Li P, Al-Shaer MH, Alghamdi WA, **An G**, Peloquin C. A systematic review and meta-analysis of isoniazid pharmacokinetics in healthy volunteers and TB patients. *Clinical Therapeutics* **2020** Oct 5:S0149-2918(20)30459-8. doi: 10.1016/j.clinthera.2020.09.009. PMID: 33032843

24. Wu N, and **An G*** . Incorporating target-mediated drug disposition (TMDD) in a whole-body physiologically-based pharmacokinetic (PBPK) model of linagliptin in rat and scale up to human. *The AAPS Journal* **2020** Sep 29;22(6):125. doi: 10.1208/s12248-020-00481-w. *** Corresponding author** PMID: 32996028

25. **An G***. The Utility of Pharmacometric Models in Clinical Pharmacology Research in Infants. *Current Pharmacology Reports* **2020**; 6(5):260-266. DOI 10.1007/s40495-020-00234-5 *** Corresponding author** PMID: 33767946

26. Bach T, Galbiati S, Kennedy J, Deye G, Nomicos E, Codd EE, Garcia HH, Horton J, Gilman RH, Gonzalez AE, Winokur P*, and **An G*** Pharmacokinetics, Safety, and Tolerability of Oxfendazole in Healthy Adults in an Open Label Phase 1 Multiple Ascending Dose and Food Effect Study. *Antimicrob Agents Chemother* **2020** Oct 20;64(11):e01018-20. doi: 10.1128/AAC.01018-20. *** Corresponding author** PMID: 32816721

27. Alghamdi WA, Al-Shaer MH, **An G,** Alsultan A, Kipiani M, Barbakadze K, Mikiashvili L, Cegielski PJ, Kempker RR, Peloquin CA. Population Pharmacokinetics of Linezolid in TB Patients: Dosing Regimens Simulation and Target Attainment Analysis. *Antimicrob Agents Chemother* **2020**;64(10):e01174-20. doi: 10.1128/AAC.01174-20. PMID: 32778547

28. Al-Shaer MH, Märtson AG, Alghamdi WA, Alsultan A, **An G,** Ahmed S, Alkabab Y, Banu S, Houpt ER, Ashkin D, Griffith DE, Cegielski JP, Heysell SK, Peloquin CA. Ethionamide population pharmacokinetic model and target attainment in multidrug-resistant tuberculosis. *Antimicrob Agents Chemother* **2020**;64(9):e00713-20. doi: 10.1128/AAC.00713-20 PMID: 32631828

29. Wu N, Hammock BD, Lee KSS*, **An G***. Simultaneous Target-Mediated Drug Disposition (TMDD) Model for Two Small-Molecule Compounds Competing for Their Pharmacological Target: Soluble Epoxide Hydrolase. *Journal of Pharmacology and Experimental Therapeutics* **2020**;374(1):223-232 PMID:32238455 *** Corresponding author**

30. Carroll PD, Zimmerman BM, Nalbant D, Gingerich EL, **An G**, Cress GA, Veng-Pedersen P, Widness JA. Neonatal umbilical arterial catheter removal is accompanied by a marked decline in phlebotomy blood loss. *Neonatology* **2020**;117(3):294-299. PMID: 32564030

31. **An G*,** Bach T, Abdallah I, Nalbant D. Aspects of Matrix and Analyte Effects in Clinical Pharmacokinetic Sample Analyses using LC-ESI/MS/MS – Two Case Examples. *J Pharm Biomed Anal.* **2020**; 183:113135. PMID:32062015 *** Corresponding author**

32. **An G*.** Concept of Pharmacologic Target-Mediated Drug Disposition (TMDD) in Large-Molecule and Small-Molecule Compounds. *Journal of Clinical Pharmacology.* **2020**;60(2):149-163. PMID:31793004 *** Corresponding author**

33. D'Cunha R, Schmidt R, Widness JA, Mock DM, Yan X, Cress GA, Kuruvilla D, Veng-Pedersen P, **An G***. Target-Mediated Disposition Population Pharmacokinetics Model of Erythropoietin in Premature Neonates Following Multiple Dosing Regimens. *European Journal of Pharmaceutical Sciences*. **2019**; 138:105013. PMID:31340188 *** Corresponding author**

34. D'Cunha R, Murry DJ, **An G***. Nilotinib alters the efflux transporter-mediated pharmacokinetics of afatinib in mice. *Journal of Pharmaceutical Sciences*. **2019**; 108(10): 3434-3442. PMID: 31163185 *** Corresponding author**

35. Al-Shaer MH, Alghamdi WA, Alsultan A, **An G,** Ahmed S, Alkabab Y, Banu S, Barbakadze K, Houpt E, Kipiani M, Mikiashvili L, Cegielski JP, Kempker RR, Heysell SK, Peloquin CA. Fluoroquinolones in drug-resistant tuberculosis: culture conversion and pharmacokinetic/pharmacodynamic target attainment to guide dose selection. *Antimicrob Agents Chemother*. **2019;** 63(7**)**:e00279-19. PMID: 31061152

36. Bach T, Bae S, D'Cunha R, Winokur P, **An G***. Development and validation of a simple, fast, and sensitive LC/MS/MS method for the quantification of oxfendazole in human plasma and its application to clinical pharmacokinetic study. *J Pharm Biomed Anal.* **2019**;171:111-117. PMID: 30981954 *** Corresponding author**

37. Alghamdi, WA, Alsultan, A, Al-Shaer, MH, **An G**, Ahmed S, Alkabab Y, Banu S, Barbakadze K, Houpt E, Kipiani M, Mikiashvili L, Schmidt S, Heysell SK, Kempker RR, Cegielski P, Peloquin CA. Cycloserine Population Pharmacokinetics and Pharmacodynamics in Patients with Tuberculosis. *Antimicrob Agents Chemother.* **2019** Apr 25;63(5):e00055-19. PMID: 30858211

38. **An G***, Murry DJ, Gajurel K, Bach T, Deye G, Stebounova LV, Codd EE, Horton J, Gonzalez AE, Garcia HH, Ince D, Hodgson-Zingman D, Nomicos EYH, Conrad T, Kennedy J, Jones W, Gilman RH, Winokur P*. Pharmacokinetics, Safety, and Tolerability of Oxfendazole in Healthy Volunteers: a Randomized, Placebo-Controlled First-in-Human Single-Dose Escalation Study. *Antimicrob Agents Chemother.* **2019** Mar 27;63(4):e02255-18. PMID: 30745383 *** Corresponding author**

39. D'Cunha R, Widness JA, Yan X, Schmidt R, Veng-Pedersen P, **An G***. A Mechanism-Based Population Pharmacokinetics Model of Erythropoietin in Premature Infants and Healthy Adults Following Multiple Intravenous Doses *Journal of Clinical Pharmacology* ***2019***;59(6):835-846 PMID:30618050 *** Corresponding author**

40. Bach T, Jiang Y, Zhang X, **An G***. General Pharmacokinetic Features of Small-Molecule Compounds Exhibiting Target-Mediated Drug Disposition (TMDD): A Simulation-Based Study. *J Clin Pharmacol.* **2019;**59(3):394-405. PMID: 30387863 ***Corresponding author**

41. Yu L, Qi H, **An G**, Bao J, Ma B, Zhu J, Ouyang G, Zhang P, Fan H, Zhang Q. Association between metabolic profiles in urine and bone mineral density of pre- and postmenopausal Chinese women. *Menopause*. **2019**; 26(1):94-102**.** PMID: 29975282

42. **An G*,** Schmidt RL, Mock DM, Veng-Pedersen P, Widness JA,. Overlooked Issues on Pharmacokinetics Data Interpretation of Protein Drugs-a Case Example of Erythropoietin. *The AAPS Journal*. **2018** Nov 26**;**21(6):1-4. PMID: 30478521 ***Corresponding author**

43. D'Cunha R, Bach T, Young BA, Li P, Nalbant D, Zhang J, Winokur P, **An G***. Quantification of Cefepime, Meropenem, Piperacillin and Tazobactam in Human Plasma using a Sensitive and Robust LC-MS/MS Method- Part I. Assay Development and Validation. *Antimicrob Agents Chemother.* **2018**;62(9):e00859-18. PMID:29941654 . ***Corresponding author**

44. D'Cunha R, Bach T, Young BA, Li P, Nalbant D, Zhang J, Winokur P, **An G***. Quantification of Cefepime, Meropenem, Piperacillin and Tazobactam in Human Plasma using a Sensitive and Robust LC-MS/MS Method- Part II. Stability Evaluation. *Antimicrob Agents Chemothe*r. **2018**;62(9):e00861-18. PMID:29941653 ***Corresponding author**

45. Marsh E, Verhoven SM, Groszek JJ, Fissell WH, **An G**, Patel P, Creech B, Shotwell M. Beta-lactam carryover in arterial and central venous catheters is negligible. *Clin Chim Acta* **2018**; 486:265-268. PMID: 30118674

46. Mock DM, Nalbant D, Kyosseva SV, Schmidt RL, **An G**, Matthews NI, Vlaar APJ, van Bruggen R, de Korte D, Strauss RG, Cancelas JA, Franco RS, Veng-Pedersen P, Widness JA. Development, validation, and potential applications of biotinylated red blood cells for posttransfusion kinetics and other physiological studies: evidenced-based analysis and

recommendations.*Transfusion.***2018**;58(8):2068-2081.PMID:29770455.

47. Bae S, D'Cunha R, Shao J, **An G***. Effect of 5,7-dimethoxyflavone on Bcrp1-mediated transport of sorafenib in vitro and in vivo in mice. *European Journal of Pharmaceutical Sciences* **2018**;117:27-34. PMID: 29425861 ***Corresponding author**

48. Wang Y, Guo SH, Shang XJ, Yu LS, Zhu JW, Zhao A, Zhou YF, **An G**, Zhang Q, Ma B. Triptolide induces Sertoli cell apoptosis in mice via ROS/JNK-dependent activation of the mitochondrial pathway and inhibition of Nrf2-mediated antioxidant response. *Acta Pharmacologica Sinica.* **2018**;39(2):311-327. PMID: 28905938

49. Awasthi R, **An G**, Donovan MD, Boles Ponto LL. Relating Observed Psychoactive Effects to the Plasma Concentrations of Delta-9-Tetrahydrocannabinol and Its Active Metabolite: An Effect-Compartment Modeling Approach. *Journal of Pharmaceutical Sciences* **2018**; 107(2): 745-755. PMID: 28942005

50. **An G*,** Ohls RK, Christensen RD, Widness JA, Mock DM, Veng-Pedersen P. Population Pharmacokinetics of Darbepoetin in Infants Following Single Intravenous and Subcutaneous Dosing. *Journal of Pharmaceutical Sciences*. **2017;**106(6):1644-1649. PMID: 28189627 ***Corresponding author**

51. Jiang Y, Milavetz G, James MO, **An G***. A Mechanism-based Pharmacokinetic Enzyme Turnover Model for Dichloroacetic Acid Auto-Inhibition in Rats. *Journal of Pharmaceutical Sciences*. **2017;**106(5):1396-1404. PMID: 28163135 *** Corresponding author**

52. Tang B, Shang X, Qi H, Li J, Ma B, **An G**, and Zhang Q. Metabonomic analysis of fatty acids in seminal plasma between healthy and asthenozoospermic men based on gas chromatography mass spectrometry. *Andrologia*. **2017**; 49(9): 1-13. PMID: 28124472

53. Kuruvilla D, Widness JA, Nalbant D, Schmidt RL, Mock DM, **An G**, and Veng-Pedersen P. Estimation of Adult and Neonatal RBC Lifespans in Anemic Neonates using RBCs Labeled at Several Discrete Biotin Densities. *Pediatric Research.* **2017;**81(6):905-910. PMID: 28099421

54. **An G*.** Small-Molecule Compounds Exhibiting Target-Mediated Drug Disposition (TMDD): A Minireview. *Journal of Clinical Pharmacology* **2017**;57(2):137-150. PMID: 27489162 *** Corresponding author**

55. D'Cunha R, Bae S, Murry DJ, **An G***.TKI combination therapy: strategy to enhance dasatinib uptake by inhibiting Pgp- and BCRP-mediated efflux. *Biopharmaceutics & Drug Disposition.* **2016**;37(7):397-408. PMID: 27418107 *** Corresponding author**

56. **An G*,** Widness JA, Mock DM, Veng-Pedersen P. A Novel Physiology-Based Mathematical Model to Estimate Red Blood Cell Lifespan in Different Human Age Groups. *The AAPS Journal. **2016***;18(5):1182-91. PMID: 27215601 *** Corresponding author**

57. Qi H, Bao J, **An G**, Ouyang G, Zhang P, Wang C, Ying H, Ouyang P, Ma B, Zhang Q. Association between the metabolome and bone mineral density in pre- and post-menopausal Chinese women using GC-MS. *Molecular Biosystems.* **2016**;12(7):2265-75. PMID: 27168060

58. Bi Y, Deng J, Murry DJ, **An G***. A Whole-Body Physiologically Based Pharmacokinetic Model of Gefitinib in Mice and Scale-Up to Humans. *The AAPS Journal.* **2016**;18(1):228-238. PMID: 26559435 *** Corresponding author**

59. Bei D and **An G***. Pharmacokinetics and tissue distribution of 5,7-dimethoxyflavone in mice following single dose oral administration. *Journal of Pharmaceutical and Biomedical Analysis. **2016**;119:65-70.* PMID: 26657177 *** Corresponding author**

60. Ma B, Qi H, Li J, Xu H, Chi B, Zhu J, Yu L, **An G**, Zhang Q. Triptolide disrupts fatty acids and peroxisome proliferator-activated receptor (PPAR) levels in male mice testes followed by testicular injury: A GC-MS based metabolomics study. *Toxicology.* **2015**;336:84-95. PMID: 26219505

61. **An G***, Kaur Mukker J, Derendorf H, Frye RF. Enzyme- and transporter-mediated beverage-drug interactions: An update on fruit juices and green tea. *Journal of Clinical Pharmacology*. **2015**;55(12):1313-31. PMID: 26095990 *** Corresponding author**

62. Ziegler D, Duan R, **An G**, Thomas JW, and Nothaft W. A Randomized Double-blind, Placebo- and Active-Controlled Study of T-Type Calcium Channel Blocker ABT-639 in Patients with Diabetic Peripheral Neuropathic Pain. *Pain.* **2015**; 156(10): 2013-20. PMID: 26067585

63. Cope J, Bushwitz J, **An G**, Antigua A, Patel A, and Zumberg M. Reply: Clinical experience with fondaparinux in critically ill patients with moderate to severe renal impairment and renal failure requiring renal replacement therapy. *Annals of Pharmacotherapy* **2015**;49(5):614-615. PMID: 25870447

64. Alsultan A, **An G**, and Peloquin CA. Limited Sampling Strategy and Target Attainment Analysis for Levofloxacin in Patients with Tuberculosis. *Antimicrobial Agents & Chemotherapy* **2015**;59(7):3800-7. PMID: 25870068

65. **An G***, Liu W, and Dutta S. Small Molecule Compounds Exhibiting Target Mediated Drug Disposition (TMDD) – a Case Example of ABT-384. *Journal of Clinical Pharmacology* **2015**;55(10):1079-85. PMID: 25931139 *** Corresponding author**

66. Cope J, Bushwitz J, **An G**, Antigua A, Patel A, and Zumberg M. Clinical experience with fondaparinux in critically ill patients with moderate to severe renal impairment and renal failure requiring renal replacement therapy. *Annals of Pharmacotherapy* **2015**;49(3):270-7. PMID: 25515864

67. **An G***, Liu W, Duan R, Nothaft W, Awni W, and Dutta S. Population Pharmacokinetics and Exposure-Uric Acid Analyses after Single and Multiple Doses of ABT-639, a Calcium Channel Blocker, in Healthy Volunteers. *The AAPS Journal* **2015**;17(2):481-92. PMID: 25676842 *** Corresponding author**

68. Fleisher B, Uum J, Shao J, and **An G***. Ingredients in Fruit Juice Interact with Dasatinib through Inhibition of BCRP: A New Mechanism of Beverage-Drug Interaction. *Journal of Pharmaceutical Sciences* **2015**;104(1):266-75. PMID: 25418056 ***Corresponding author.**

69. Bei D and **An G***. Quantification of 5,7-Dimethoxyflavone in Mouse Plasma using Liquid Chromatography-Tandem Mass Spectrometry (LC-MS/MS) and its Application to a Pharmacokinetic Study. *Journal of Chromatography B* **2015;** 978-979:11-7. PMID: 25531865 *** Corresponding author**

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Poster Abstracts

1. Adamu Y, **An G,** Adamcakova-Dodd A, and Thorne PS. Physiologically-based pharmacokinetic (PBPK) modeling to characterize tissue disposition of 2,2',5,5'-tetrachlorobiphenyl (PCB52) exposure in rats. T he Central States and Midwest Regional Chapters-Society of Toxicology (**CS-SOT**) 2024. Iowa City, Iowa. Oct 17-18, **2024**
2. Xu M, Sun D, and **An G**. Exploring the Impact of Pharmacological Target-Mediated Low Plasma Exposure in Lead Compound Selection in Drug Discovery – a Modeling Approach. Nov 10-13, 2024, Phoenix, Arizona. **ACOP 2024**
3. Li P, and **An G.** A semi-mechanistic pharmacometrics model to quantitatively characterize delta-9-tetrahydrocannabinol (THC) and its metabolites' disposition among oral cannabis users. Nov 10-13, 2024, Phoenix, Arizona. **ACOP 2024**
4. Reeder J, Yuan X, Creech B, Nation RL, Gu K, Nalbant D, Jimenez-Truque N, Fissell W, Rolsma S, Patel P, Watanabe A, Fishbane N, Kirkpatrick CMJ, Landersdorfer CB, Winokur P, **An G**. Utilizing Opportunistic Clinical Study and Population-Based Pharmacometric Models to Identify Rational Empiric Dosing Regimens for Piperacillin-Tazobactam in Critically Ill Patients. Nov 10-13, 2024, Phoenix, Arizona **ACOP 2024**
5. Al Hroot J, Reeder J, Yuan X, Gu K, **An G**. Determining an Appropriate Fosfomycin Dosing Regimen in Pneumonia Patients by Utilizing minimal PBPK Modeling and Target Attainment Analysis. Nov 10-13, 2024, Phoenix, Arizona **ACOP 2024**
6. Wu N, Creech B, Nation RL, Gu K, Nalbant D, Jimenez-Truque N, Fissell W, Rolsma S, Patel P, Watanabe A, Fishbane N, Kirkpatrick CMJ, Landersdorfer CB, Winokur P, **An G**. Population Pharmacokinetics and Target Attainment Analysis to Identify a Rational Empiric Dosing Strategy for Cefepime in Critically Ill Patients. Nov 5-8, 2023. National Harbor, Maryland, **ACOP 2023**
7. Wu N, **An G**. How many subjects are necessary for opportunistic pharmacokinetics studies conducted in vulnerable populations with the sparse sampling strategy? Nov 5-8, 2023. National Harbor, Maryland, **ACOP 2023**
8. Xu M, **An G**. A Pharmacometrics Model to Characterize a New Type of Target-Mediated Drug Disposition (TMDD) – Nonlinear Pharmacokinetics of Small-Molecule PF-07059013 Mediated by Its High-capacity Pharmacological Target Hemoglobin with Positive Cooperative Binding. Nov 5-8, 2023. National Harbor, Maryland, **ACOP 2023**
9. Li P, **An G**. Population pharmacokinetic modeling of THC and its metabolites in human following oral THC administration. Sep 9-12, 2023. Bellevue, WA **ACCP 2023**
10. Yuan X, **An G**. A Target-mediated Drug Disposition Model to Explain the Nonlinear Pharmacokinetics of the 11-Beta-Hydroxysteroid Dehydrogenase Type 1 Inhibitor BI-187004 in Healthy Subjects. Sep 9-12, 2023. Bellevue, WA **ACCP 2023**
11. Maxwell JR, Jantzie L, **An G,** Beauman S, Ohls R. Development of a specific and robust electrochemiluminescence assay to measure serum darbepoetin concentrations in extremely premature infants. **Pediatric Academic Societies** (PAS) Annual Meeting. Washington, D.C. April 27 - May 1, **2023**

12. Rezaei L, Reeder JA, Strouse C, Sieg A, Farooq U, Donovan MD, **An G**. Methotraxate population pharmacokinetics in patients with primary CNS lymphoma: a single institution retrospective study. **ASCPT,** Atlanta, GA, March 22-24, **2023**

13. Bach T, **An G**. Population pharmacokinetic model of agalsidase-migalastat interaction: a novel mechanistic model of drug-drug interaction between a therapeutic protein and a small molecule. **ACOP**, Aurora, Colorado, Oct 30 - Nov 2, **2022**

14. Rolsma S, Sokolow A, Sokolow K, Patel P, Jimenez N, Fissell W, Landersdorfer C, Kirkpatrick C, Nation R, Gu K, **An G**, Teresi M, Winokur P, Thompson M, Creech B. Are We Dosing Correctly? Population Pharmacokinetic Modeling of Cefepime, Piperacillin-Tazobactam, and Meropenem in Individuals with Cystic Fibrosis. **IDWeek,** Washington, DC. Oct 19 – 23**, 2022**

15. Reeder J, O'Sullivan CT, Xu M, Wu N, **An G**. Population Pharmacokinetic Modeling to Identify Appropriate Ampicillin-Sulbactam Redosing Regimen for Surgical Prophylaxis. **ACCP,** N Bethesda, Sep 25-27, **2022**

16. Wu N, Katz D, **An G**. A Target-Mediated Drug Disposition Model to Explain Nonlinear Pharmacokinetics of the 11β-Hydroxysteroid Dehydrogenase Type 1 Inhibitor SPI-62 in Healthy Adults. **ACCP,** N Bethesda, Sep 25-27, **2022**

17. Li P, Xu M, Yuan X, Wu N, **An G**. Development and validation of a simple, fast, and robust LC/MS/MS method for the quantification of albendazole, albendazole metabolites and praziquantel in human plasma. **Pharmacological and Pharmaceutical Sciences Research Retreat**, Iowa City, Iowa. August **2022**

18. Reeder J, Abdallah I, Bach T, Xu Y, Nalbant D, O'Sullivan C, **An G**. Development and Validation of a Simple and Sensitive LC-MS/MS Method for the Quantification of Cefazolin in Human Plasma and Its Application to a Clinical Pharmacokinetic Study. **AAPS,** Oct 17- 20, Philadelphia, PA, **2021**

19. Bach T, Galbiati S, Kennedy J, Deye G, Nomicos E, Codd EE, Garcia HH, Horton J, Gilman RH, Gonzalez AE, Winokur P, **An G.** Pharmacokinetics, Safety, and Tolerability of Oxfendazole in Healthy Adults in an Open Label Phase 1 Multiple Ascending Dose and Food Effect Study. **ASCPT,** Mar **2021**

20. Wu N, **An G**. Incorporating pharmacological target-mediated drug disposition (TMDD) in a whole-body physiologically based pharmacokinetic (PBPK) model of linagliptin in rat and scale up to human. **ACOP**, November 9-13, **2020** [*this work was selected in ACoP11 Trainee Communication Challenge to give dynamic 5-minute presentation*]

21. Wu N, Veng-Pedersen P, Widness JA. **An G.** Target-mediated disposition pharmacokinetics (TMDD) model of recombinant human erythropoietin (rHuEpo) in patients undergoing hematopoietic transplantation. **AAPS,** Oct 26- Nov 5, **2020** [*this work was selected to give 15 min rapid fire oral presentation*]

22. Bach T, Abdallah I, Nalbant D, **An G**. Aspects of Matrix and Analyte Effects in Clinical Pharmacokinetic Sample Analyses using LC-ESI/MS/MS – Two Case Examples. **AAPS**, Oct 26- Nov 5, **2020**

23. Lee KSS, Yang J, **An G,** Hammock BD. Slow, Tight-Binding sEH Inhibitors Exhibit Target-Mediated Drug Disposition. **Winter Eicosanoid Conference,** Oct 15, **2020**.

24. Wu N, **An G**. Incorporating pharmacological target-mediated drug disposition (TMDD) in a whole-body physiologically based pharmacokinetic (PBPK) model of linagliptin in rat and scale up to human. **Pharmacological and Pharmaceutical Sciences Research Retreat**, Iowa City, Iowa. Aug 21, **2020** [*short talk - 8 min oral presentation*]
25. Bach T, **An G**. Translation of Oxfendazole from Veterinary Medicine to Human Antiparasitic Treatment. **Pharmacological and Pharmaceutical Sciences Research Retreat**, Iowa City, Iowa. Aug 21, **2020** [*short talk - 8 min oral presentation]*
26. Wu N, Hammock BD, Lee KSS, **An G**. Simultaneous target-mediated disposition population pharmacokinetics (TMDD) model of two competitive small molecules, TPPU and TCPU binding with more than one targets. **ASCPT,** Mar **2020** [poster abstract was published. Conference canceled due to coronavirus]
27. Sieg AG, Strouse C, Mott SL, Reeder J, Sutamtewagul G, Link BK, Syrbu S, **An G**, Farooq U. Methotrexate and Area Under the Curve Exposure in Patients Receiving MT-R for Primary CNS Lymphoma: A Single Institution Retrospective Study. **ASH**, Orlando, FL, Dec 7-10, **2019**
28. Bach T, Winokur P, **An G**. Comparing the performance of first-order conditional estimation (FOCE) and different expectation-maximization (EM) methods in handling complex nonlinear parent-metabolite pharmacokinetic model. **AAPS,** San Antonio, TX, Nov 3-7, **2019**
29. Bhatt-Mehta V, Schumacher RE, An G, Zhu H. Methadone and Metabolite Concentration Correlation in Maternal and Cord Serum and Neonatal Abstinence Syndrome Outcomes. **AAPS,** San Antonio, TX, Nov 3-7, **2019**
30. Widness JA, Mock DM, Kiosseva SV, Franco RS, Nalbant D, Schmidt RL, **An G,** Cress GA, Strauss RG, Cancelas JA. Induction of Anti-Biotin Labeled Red Blood Antibodies Shortens Post-Transfusion Red Cell Survival. **AABB,** San Antonio, TX, Nov **2019**
31. Bach T, Murry DJ, Winokur P, **An G**. Population Pharmacokinetic Model of Oxfendazole and Metabolites in Healthy Adults Following Single Ascending Doses. **ACOP,** Orlando, Oct 20-23, **2019**
32. Singla SK, **An G**, Donovan M, Ponto L. Pharmacodynamic Modeling of the Relationship between THC Concentrations and Corresponding Changes in the Heart Rate. **ACCP,** Chicago, Sep 14-17, **2019**
33. Alghamdi W, Al-Shaer M, **An G,** Alsultan A, Kipiani M, Kempker RR, Cegielski P, Peloquin CA. Population Pharmacokinetics of Linezolid in TB Patients:Dosing Regimens Simulation and Target Attainment Analysis **International Workshop on Clinical Pharmacology of Tuberculosis Drugs.** London, United Kingdom. Sep 10, **2019**
34. Alshaer M, Alghamdi W, Alsultan A, **An G**, Peloquin C. Ethionamide population pharmacokinetics model and monte carlo simulation in patients with multidrug-resistant tuberculosis. **International Workshop on Clinical Pharmacology of Tuberculosis Drugs.** London, United Kingdom. Sep 10, **2019**
35. Bach T, Jiang Y, Zhang X, **An G**. General Pharmacokinetic Features of Small Molecule Compounds Exhibiting Target-Mediated Drug Disposition (TMDD) – a Simulation-Based Study. **AAPS**, Washington DC, Nov 04-07, **2018**

36. Alghamdi W, Alshaer M, Sultan A, **An G**, Peloquin C. Pharmacokinetic-Pharmacodynamic Target Attainment Analysis of Cycloserine in TB Patients. **International Workshop on Clinical Pharmacology of Tuberculosis Drugs.** The Hague, The Netherlands. Oct 23, **2018**

37. Alshaer M, Alghamdi W, Sultan A, **An G**, Peloquin C. Fluoroquinolones in the treatment of multidrug-resistant tuberculosis: Experience from three US TB treatment centers. **International Workshop on Clinical Pharmacology of Tuberculosis Drugs.** The Hague, The Netherlands. Oct 23, **2018**

38. Carroll PD, Widness JA, Nalbant D, Gingerich EL, **An G**, Cress GA, Veng-Pedersen P. Availability of neonatal umbilical arterial catheter results in greater phlebotomy loss. **Pediatric Academic Societies (PAS)**, San Francisco. May 5 - 8, **2018**

39. Suliman S, **An G**. Model-Based Meta-Analysis to Compare Primary Efficacy Endpoint and Efficacy Time Course for Opioids Used for Treatment of Osteoarthritis Pain. **Health Sciences Research Week**, Iowa City, April 17-18, **2018**

40. D'Cunha R, Widness JA, Yan X, Schmidt R, Veng-Pedersen P, **An G**. An integrated mechanism-based population pharmacokinetics model of erythropoietin in adults and premature neonates following multiple intravenous doses**. ASCPT,** Orlando, Mar 21-24, **2018**.

41. Bach T, Bae S, D'Cunha R, Winokur P, **An G**. The development of a liquid chromatography-tandem mass spectrometry method for the quantification of oxfendazole in human plasma**. ASCPT,** Orlando, Mar 21-24, **2018**.

42. Suliman S, **An G**. Model-Based Meta-Analysis to Compare Primary Efficacy Endpoint and Efficacy Time Course for Opioids Used for Treatment of Osteoarthritis Pain. **AAPS**, San Diego, Nov 12-15, **2017**

43. D'Cunha R, Bae S, Murry, DJ, and **An G**. Nilotinib Alters Efflux Transporter-Mediated Pharmacokinetics and Tissue Distribution of Afatinib in Mice. **AAPS**, San Diego, Nov 12-15, **2017**

44. D'Cunha R, and **An G**. A Whole-Body Physiologically Based Pharmacokinetic Model of Afatinib in Mice and Scale-Up to Humans. **ACOP,** Fort Lauderdale, Oct 15-18, **2017**.

45. Alsultan A, Neely M, Alghamdi WA, Alshaer M, Heysell S, Kempker RR, Mpagama SG, Kipiani M, Chongolo A, Houpt ER, **An G**, Peloquin C. Population pharmacokinetics of cycloserine. **ACOP,** Fort Lauderdale, Oct 15-18, **2017**

46. Bae S, D'Cunha R, and **An G**. Effect of 5,7-Dimethoxyflavone on Sorafenib Pharmacokinetics in Mice. **ACCP,** San Diego, Sep17 - 19, **2017**

47. Carroll PD, Widness JA, Nalbant D, Gingerich EL, **An G**, Cress GA, Veng-Pedersen P. Does Umbilical Arterial Catheter Use Result In Greater Phlebotomy Loss? **Pediatric Academic Societies (PAS)**, San Francisco. May 06 - 09, **2017**

48. Jiang Y, Milavetz G, James MO, Stacpoole PW, and **An G**. A Semi-Mechanistic Pharmacokinetic Enzyme-Turnover Model for Dichloroacetic Acid (DCA) Auto-Inhibition in Rats. **ACOP**, Oct 22-26, **2016**

49. D'Cunha R, Bae S, and **An G**. TKI Combination Therapy: Strategy to Enhance Dasatinib Uptake by Inhibiting Pgp- and BCRP- Mediated Efflux. **PGSRM**, Kansas City. May **2016**.

50. Bae S, D'Cunha R, and **An G**. BCRP-mediated Interaction between Fruit Juice Ingredients and Pazopanib. **Health Sciences Research Week**, Iowa City, April **2016**

51. Bae S, D'Cunha R, and **An G**. Exploring the Synergy of TKIs Combination Therapy – A Pilot Study of Transporter-mediated Interaction between Dasatinib and Other TKIs in Vitro. **ICRU**, Iowa City, Nov 18, **2015**.

52. Awasthi R, **An G**, Donovan M, and Ponto L. An Effect-Compartment Modeling Approach to Relate the Plasma Concentrations of Delta-9-Tetrahydrocannabinol (THC) and Active Metabolite to the Observed Psychoactive Effects. **AAPS**, Orlando, Oct 25-29, **2015**

53. Fleisher B, Uum J, Shao J, and **An G**. Grapefruit Juice Ingredients Interact with Dasatinib through Inhibition of Breast Cancer Resistance Protein (BCRP): A New Type of Beverage-Drug Interaction. **ASCPT,** March **2015**

54. Uum J, Fleisher B, Shao J, and **An G**. Orange Juice and Apple Juice Ingredients Inhibit Dasatinib Efflux via P-Glycoprotein and Breast Cancer Resistance Protein: A New Type of Beverage-Drug Interaction. **ASCPT,** March **2015**

55. Bei D and **An G**. Quantification of 5,7-Dimethoxyflavone in Mouse Plasma using Liquid Chromatography-Tandem Mass Spectrometry (LC-MS/MS) and its Application to a Pharmacokinetic Study. **AAPS,** San Diego, Nov 1-5, **2014**

56. Alsultan A, Derby R, **An G**, and Peloquin C. Bayesian Estimation of Levofloxacin Pharmacokinetics in Patients with Tuberculosis. **ICAAC, 2014**.

57. Tsiklauri L.K., **An G**, Tsagareishvili G.V., Alaniya M, Kemertelidze E, Morris M.E. Investigation of Functional Role of Membrane Transporters in Oral Bioavailability of Robinin. **III International Scientifi c and Practical Conference "Topical issues in medicine"**, West Kazakhstan Marat Ospanov State Medical University. Aktobe, Kazakhstan, April 17-18, **2014**

58. Gottipati G, Lin C, Venitz J, Lesko L, and **An G**. Model-based Meta-analysis (MBMA) of Adverse Events (AE) and Dropouts (DO) for Drugs Evaluated for the Treatment of Fibromyalgia pain (FMP), **ASCPT,** Atlanta, Mar 18-21, **2014**.

59. Gottipati G, Trame, MN, Lin C, Venitz J, Lesko L, and **An G**. Model-based Meta-analysis (MBMA) of Efficacy at End-of-Trial and Efficacy-Time Course for Drugs Evaluated for the Treatment of Fibromyalgia pain (FMP). **ASCPT,** Atlanta, Mar 18-21, **2014**. **[Gottipati received Presidential Trainee Award for this poster]**.

60. Deng J, Lesko L, and **An G**. A Physiologically Based Pharmacokinetic Model of Gefitinib Disposition: from Rat to Man. **ASCPT,** Atlanta, Mar 18-21, **2014**.

61. Deng J, Lesko L, and **An G**. Prediction of Gefitinib Human Pharmacokinetics From Animal Data - Comparative Assessment of Different Allometric Scaling Approaches. **ASCPT,** Atlanta, Mar 18-21, **2014**.

62. Shao J*, Deng J*, Bei D, and **An G**. Nilotinib is a dual P-gp and BCRP inhibitor and inhibits P-gp-mediated dasatinib efflux and BCRP-mediated gefitinib efflux. (*contributed equally) **UF Health Cancer Center Research Poster Day**. Gainesville, Mar 11, **2014**

63. Shao J, Deng J, Bei D, and **An G**. Exploring the Synergy of TKIs Combination Therapy – A Pilot Study of P-gp-mediated Interaction between Dasatinib and Imatinib in LLC PK1 Cells. **UF COP Research Showcase**. Gainesville, Feb 20, **2014.**

64. Cope J, Antigua A, Bushwitz J, **An G**, Patel A, and Zumberg M. Fondaparinux Use in Severe Renal Impairment and Renal Failure Requiring Renal Replacement Therapy. **Society of Critical Care Medicine Annual Congress**. San Francisco, January 9-13, **2014**.

65. Deng J, Lesko L, and **An G**. A Physiologically Based Pharmacokinetic Model of Gefitinib Disposition: from Rat to Man. **Graduate Research Day**, Gainesville, Oct 31st, **2013**.

66. Deng J, Jiang XL, Schmidt S, Lesko L, and **An G**. Physiologically-Based Pharmacokinetic Model for the CYP3A-mediated Inhibition of Midazolam Inhibition by Itraconazole. **9th Retrometabolism Based Drug Design and Targeting Conference**, Orlando, May 12-15, **2013**.

67. **An G***, Wang X*, and Morris ME. Dietary Flavonoid Fisetin is a Substrate and Inhibitor of Human Organic Anion Transporter 1 (OAT1). (* contributed equally) **AAPS**, Chicago, Oct 14-18, **2012**.

68. **An G**, Liu W, Awni W, and Dutta S. Model-Based Meta-Analyses of Efficacy and Safety of COX-2 Inhibitors in Patients with Osteoarthritis Pain. **AAPS**, Chicago, Oct 14-18, **2012**.

69. Liu W, **An G**, Dutta S, Nothaft W, Duan R, Jain R, Awni W. ABT-652 Phase 2b Dose Selection Based on Exposure-Response Analyses of Efficacy, Safety (Heart Rate, Adverse Effects) and Dropout from Proof of Concept Study in Subjects with Osteoarthritic Pain. **Abbott Day of Science and Technology,** Chicago, Nov 14-15, **2011.**

70. **An G** and Morris ME. A physiologically based pharmacokinetic model of mitoxantrone in mice: a mechanism-based model incorporating DNA and protein binding. **ACoP**, San Diego, April 3-6, **2011**

71. **An G** and Morris ME. The bioflavonoid kaempferol is an Abcg2 substrate and inhibits Abcg2-mediated quercetin efflux. **AAPS**, New Orleans, Nov 14-18, **2010**

72. **An G** and Morris ME. The sulfated conjugate of biochanin A is a substrate of breast cancer resistant protein (ABCG2). **AAPS**, New Orleans, Nov 14-18, **2010**

73. **An G** and Morris ME. A PBPK model of mitoxantrone in mice: a mechanism-based model incorporating macromolecule binding. **Pharmacology Day**, University at Buffalo, July 27, **2010**

74. **An G** and Morris ME. Determination of mitoxantrone in mouse plasma and tissues by an improved HPLC method and its application in a pharmacokinetic study. **AAPS**, Los Angeles, Nov 7-11, **2009**

75. **An G** and Morris ME. Transport and efflux of quercetin and biochanin A in MDCK cell monolayers- role of efflux transporters. **AAPS**, Los Angeles, Nov 7-11, **2009**

76. Liu JH, **An G** and Morris ME. The effect of flavonoids on transport of mitoxantrone in ABCG2 transfected MDCK cells. **Sigma Xi**, University at Buffalo, April, **2009**

77. **An G** and Morris ME. Inhibition of the BCRP-mediated transport of mitoxantrone by the flavonoids Biochanin A and Kaempferide. **AAPS**, Atlanta, Nov7-11, **2008**.

78. **An G** and Morris ME. Effect of multiple flavonoid combinations on Breast Cancer Resistance Protein (ABCG2) mediated transport. **AAPS**, Atlanta, Nov 7-11, **2008**

INVITED PRESENTATIONS

1. **An G.** A Career as a Pharmaceutical Scientist. Oct 12, **2024**. Webinar to Shenyang Pharmaceutical University Alumni Association – North America Branch.
2. **An G.** Importance of Target-Mediated Drug Disposition (TMDD) of Small-Molecule Compounds and Its Impact on Drug Development and Discovery. April 22-24, **2024.** Genentech. San Francisco, California.
3. **An G.** Importance of Target-Mediated Drug Disposition (TMDD) of Small-Molecule Compounds and Its Impact on Drug Development. April 1-2, **2024.** University of Texas at Austin. Austin, Texas.
4. **An G.** Importance of Target-Mediated Drug Disposition (TMDD) of Small-Molecule Compounds and Its Impact on Drug Development. Oct 3, **2023**. Invited webinar, **ISSX**.
5. **An G.** Experiences in TMDD Modeling of Small Molecules. July 27-29, **2023**. **15th Buffalo Pharmaceutics Symposium**, Buffalo, NY.
6. **An G.** Pharmacometric Modeling in Drug Development, Clinical Care, and Pharmaceutical Research. May 3, **2023**. **University of Michigan**.
7. **An G.** Model-Informed Drug Development – Case Examples of Small-Molecule Compounds Exhibiting Target-Mediated Drug Disposition. Oct 6-7, **2022, Pharmaceutical and BioScience Society (PBSS)**
8. **An G.** The Utility of Pharmacometric Models in Clinical Pharmacology Research in Infants-a Case Example of Erythropoietin. Sep 17-21, **2022. Shanghai Pujiang Pharmaceutical Care Forum**. Shanghai, China
9. **An G.** Model-Informed Drug Development – Case Examples of Small-Molecule Compounds Exhibiting Target-Mediated Drug Disposition. April 29, **2022.** Human Toxicology Seminar. The Environmental Health Sciences Research Center. Iowa City, Iowa
10. **An G.** Concept of Pharmacologic Target-Mediated Drug Disposition (TMDD) in Small-Molecule Compounds. Invited talk. Jan 24- Jan 26, **2022**. **3rd Alpine Winter Conference on Medicinal and Synthetic Chemistry.**
11. **An G.** Concept of Pharmacologic Target-Mediated Drug Disposition (TMDD) in Large-Molecule and Small-Molecule Compounds. Invited talk (via zoom). April 19, **2021**. **University of Michigan**.
12. **An G.** Concept of Pharmacologic Target-Mediated Drug Disposition (TMDD) in Large-Molecule and Small-Molecule Compounds. American College of Clinical Pharmacology (ACCP) webinar. May 20, **2020. [hot topic. 180 people, mainly from various pharmaceutical companies, registered this webinar]**
13. **An G.** Translation of Oxfendazole from Veterinary Medicine to Human Antiparasitic Treatment. **Executive Leadership Board Meeting**. Iowa City, Iowa. Oct 18, **2019**.
14. **An G**. Pharmacometric Modeling in Pharmaceutical Research, Drug Development, and Clinical Care. College of Pharmacy, University of Iowa. Iowa City, Iowa. Sep 20, **2019**. [this was a tenure application seminar]

15. **An G**. Pharmacokinetics and Safety Evaluation of Oxfendazole in Healthy Volunteers – Results from Two Phase I Studies. NIH Vaccine and Treatment Evaluation Unit **(**VTEU) annual meeting. June 7, **2019**

16. **An G.** A novel physiology-based mathematical model for RBC lifespan prediction and its potential clinical application in pediatric diabetes. College of Pharmacy, Subtract of Clinical Pharmaceutical Sciences (CPS) seminar. Iowa City, Iowa. Oct 18**, 2016**

17. Veng-Pedersen P, Widness J, and **An G.** Optimized Epo Treatment of Neonatal Anemia. NIH Program Project Group (PPG) annual meeting. Iowa City, Iowa. April 13, **2015**.

18. **An G**. Effects of Flavonoids on the BCRP-Mediated Pharmacokinetics and Pharmacodynamics of Mitoxantrone. University of Iowa. Iowa City, Iowa. Feb **2014**

19. **An G**. Exposure-Response Analysis of Two Drug Candidates in Human – Examples of Leveraging Quantitative Clinical Pharmacology to Impact Trial Design and Decision Making. University of Florida. Orlando, Florida. August 24, **2012**

20. **An G**. Effects of Flavonoids on the BCRP-Mediated Pharmacokinetics and Pharmacodynamics of Mitoxantrone. Ohio State University. Columbus, Ohio. Jan 26, **2012**

TEACHING

The University of Iowa (Sep 2014 – Present)

- ***Professional Program:***

  PHAR8148 Pharmacokinetics and Dose Optimization *(2 credits | total 30 lectures | I am the sole instructor | size of the class: ~100 PharmD students)*
  Spring 2020; Spring 2021; Spring 2022; Spring 2023

  PHAR8146 Foundations of Pharmaceutical Sciences III *(2 credits | total 30 lectures | I am the sole instructor | size of the class: ~110 PharmD students)*
  Spring 2016, Spring 2017, Spring 2018, Spring 2019

- ***Graduate Program:***

  PHAR6700 Advanced Pharmacokinetics and Pharmacodynamics *(3 credits | total 45 lectures | I am the sole instructor | size of the class: ~16 to 18 graduate students)*
  Spring 2016; Spring 2018; Fall 2019; Fall 2021; Fall 2023

  PHAR5800 Concepts in Preclinical Drug Development *(1 credit | total 15 lectures | I am the sole instructor | size of the class: ~8 graduate students)*
  Fall 2022

  PHAR6710 Pharmaceutics Student Seminar (1 credit; course coordinator)
  Spring 2022; Spring 2023; Spring 2024

- ***Undergraduate Program:***
  PHAR4146 Drug Disposition and Pharmacokinetics *(2 credit |/ total 30 lectures | all lectures were given via Panopto recording | 6 contact hours | I am the sole instructor | size of the class: ~3 to 5 undergraduate students)*
  Spring 2017, Spring 2018, Spring 2019, Fall 2019; Spring 2021; Fall 2021; Fall 2023

The University of Florida (Dec 2012 – Aug 2014)
- **PHA5128** ***Dose Optimization II*** *(2 credits | total 30 lectures | I taught 7 lectures)*
  Spring 2013, Spring 2014

SUNY, University at Buffalo (Spring 2009)
- **PHM527** I taught one lecture on "*Drug interactions with herbal supplements"*
  Spring 2009

Ruijin Hospital, Shanghai, China (Aug 2013 – May 2015)
- **Rational Drug Use** I taught two lectures on "*Rational use of Antibiotics"*
  Spring 2004, Spring 2005

SERVICES

External Services

- **ACCP Publication Committee** Sep 2024 – present
- **Tenure promotion external reviewer** Oct 2024
- **Action Medical Research, UK** Panel reviewer Dec 2023
- **External Thesis Reviewer** August 2023 [PhD candidate Peng Xu from The Chinese University of Hong Kong, Thesis Advisor: Dr. Xiaoyu Yan]
- **ACCP Honors & Awards Committee** Sep 2022 – Sep 2024
- **PhRMA Foundation Panel Reviewer** Oct 2022 Drug Delivery Review Committee
- **NSF Panel Reviewer** March 2022 [SBIR/STTR Phase I: Drug Discovery panel]
- **NSF Panel Reviewer** November 2021 [SBIR/STTR Phase I: Drug Discovery Methods and Platforms panel]
- **NSF Panel Reviewer** August 2021 [SBIR/STTR Phase I: Pharm Tech - Therapeutic Molecules panel]

- **NIH Panel Reviewer** July 2021 [Study Section: *Xenobiotic and Nutrient Disposition and Action (XNDA)*]

- **External Thesis Reviewer** May 2021 [PhD candidate Bei Zhao from SUNY, U at Buffalo. Thesis Advisor: Dr. Marilyn E. Morris]

- **NSF Panel Reviewer** May 2021 (Ad Hoc review for this round) [SBIR/STTR Phase I: Pharm Tech - Therapeutic Molecules panel]

- **NSF Panel Reviewer** February 2021 [SBIR/STTR Phase I: Pharm Tech - Therapeutic Molecules panel]

- **NSF Panel Reviewer** December 2020 [SBIR/STTR Phase I: Pharm Tech - Therapeutic Molecules panel]

- **NIH/NIAID consultant** (2020 - present) – involved in sNDA submission of several antibiotics in their extended indications/labeling

- **Nomination subcommittee member of JPharmSci™ 2021 Ebert Prize paper**
  Sep 2020; Sep 2021

- **NIH Panel Reviewer** June 2019 [Study Section: *Xenobiotic and Nutrient Disposition and Action (XNDA)*]
- **NIH Panel Reviewer** Feb 2019 [Study Section: *Xenobiotic and Nutrient Disposition and Action (XNDA)*]
- **NIH Panel Reviewer** June 2017 [Study Section: *Xenobiotic and Nutrient Disposition and Action (XNDA)*]
- **AAPS PPDM SPOD Committee member** (Nov 2013 – Oct 2015)

- **AAPS PPDM EPDC Committee member** (Nov 2015 – Oct 2016)

- **External Thesis Reviewer** June 2018 [PhD candidate Xiaowen Guan from SUNY, U at Buffalo. Thesis Advisor: Dr. Marilyn E. Morris]

- **Editor or Editorial Board Member:**
  - ***Journal of Pharmacokinetics and Pharmacodynamics*** *(2023-present; editorial board member)*
  - ***Journal of Pharmaceutical Sciences***
    -**Jan 2022 -present, Editor**
    -2016-2021, Editorial Board Member
  - ***The AAPS Journal*** *(2020 – present; editorial board member)*
  - ***Journal of Clinical Pharmacology*** *(2014 –present; editorial board member)*
  - ***Drugs in R&D*** *(2013 – present; editorial board member)*

- **Journal Reviewer:**

-Antimicrobial Agents and Chemotherapy
-Biopharmaceutics & Drug Disposition
-British Journal of Clinical Pharmacology
-Cancer Chemotherapy and Pharmacology
-Clinical Pharmacokinetics
-Clinical Pharmacology in Drug Development
-Clinical Therapeutics
Journal of Antimicrobial Chemotherapy
-Molecular Pharmaceutics
-The AAPS Journal
-The Journal of Pharmacology and Experimental Therapeutics
-Therapeutic Advances in Medical Oncology
-Pharmaceutical Research
- Journal of Pharmaceutical and Biomedical Analysis
PLOS Neglected Tropical Diseases
-Asian Biomedicine
-Drug Metabolism and Disposition
-Drug Metabolism Reviews
-Drugs in R&D
-Drug Discovery Today
-Journal of Chromatography B
-Journal of Clinical Pharmacology
-Journal of Pharmaceutical Sciences
-Pediatric Diabetes
-TALANTA
-The Journal of Pharmacokinetics and Pharmacodynamics
-Xenobiotica
- Journal of Radiation and Applied Sciences
-CPT: Pharmacometrics and Systems Pharmacology

Internal Services

- Faculty 3rd year review committee (2023)
- Committee member of the faculty search (the biotherapeutics position, 2023-2024)
- PharmD admission committee (Sep 2023 – present)
- Reviewers for the OVPR Early Career Scholars Program (Nov 2021)
- Committee member of the faculty search (the pharmaceutics position, 2021-2022)
- Committee member of Assistant Dean of DEI (2021)
- Committee member of assessment committee (Aug 2020 – present)
- Committee member of the faculty search (the pharmacogenomics position, 2019- 2020)
- Committee member of Graduate Education and Research Advisory Committee (GERC) (2018- 2020)
- Committee member of lab safety (2015- 2018)
- Committee member of the faculty search (the PK position, 2015- 2016)

- Committee chair of following graduate students:
    - Ronilda Raymond D'Cunha (PhD, graduated in Aug 2018)
    - Thanh Bach (PhD, graduated in June 2021)
    - Nan Wu (PhD, graduated in Oct 2023)
    - Joshua Reeder (PhD student, 2019-present)
    - Min Xu (PhD student, 2021-present)

- Xuanzhen Yuan (PhD student, 2021-present)
- Peizhi Li, PharmD (PhD student, 2022-present)
- Jomana Al Hroot (PhD student, 2023-present)

- Committee member of following graduate students:
  - Wisam Al Bakri
  - Rakesh Awasthi
  - Megan N Kelchen
  - Yu Jiang
  - Ana C. Ferreira
  - Zainab Bakri
  - Nattawut Leelakanok
  - Leyla Rezaei
  - Emily Liang
  - Yau Adamu

PROFESSIONAL AFFILIATIONS

- American Association of Pharmaceutical Sciences (AAPS), since 2006
- American Society for Clinical Pharmacology and Therapeutics (ASCPT), since 2010
- American Society of Pharmacometrics (ASOP), 2012; 2023
- International Society for the Study of Xenobiotics (ISSX), 2013
- American College of Clinical Pharmacology (ACCP), since 2014
- American Society for Microbiology (ASM), since 2018
- American Society for Pharmacology and Experimental Therapeutics (ASPET), 2020