

CURRICULUM VITAE

Richard C. Brundage, Pharm.D., Ph.D., FISOP
Professor, Department of Experimental and Clinical Pharmacology
Distinguished University Teaching Professor
University of Minnesota

PERSONAL INFORMATION

Business Address: University of Minnesota
College of Pharmacy
717 Delaware Street S.E., room 464
Minneapolis, MN 55414
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Home Address: 1464 N. Victoria Street
Saint Paul, MN 55117
(651) 489-6674

Birth Record: 6 December 1952
Saint Paul, MN
Ramsey County

Citizenship: United States of America

EDUCATION AND TRAINING

1989 - 1996 Ph.D., Pharmaceutics
University of Minnesota Graduate School

1984 - 1985 American Society of Hospital Pharmacists
Fellow in Clinical Pharmacokinetics
St. Paul Ramsey Medical Center, St. Paul, MN

1983 - 1984 Post-Doctoral Fellow in Neuropharmacology
and Pharmacokinetics
St. Paul Ramsey Medical Center, St. Paul, MN

1981 - 1983 Doctor of Pharmacy
College of Pharmacy, University of Minnesota

1974 - 1977 B.S. in Pharmacy (with distinction)
College of Pharmacy, University of Minnesota

1970 - 1974 B.A. in Psychology
College of Liberal Arts, University of Minnesota

PROFESSIONAL EXPERIENCE

2010 – present Graduate Faculty in Experimental and Clinical Pharmacology

Jan 2010 – Mar 2011 Interim Associate Dean of Graduate Studies, College of Pharmacy

2008 – present Professor
Experimental and Clinical Pharmacology
College of Pharmacy, University of Minnesota

Jan – May 2008 University of Minnesota Semester Leave; Visiting Scientist; Food and Drug Administration, Silver Spring, MD

2002 – 2008 Associate Professor
Experimental and Clinical Pharmacology
College of Pharmacy, University of Minnesota

2002 – 2010 Senior Member, Graduate Faculty in Social, Administrative and Clinical Pharmacy, Graduate School, University of Minnesota

2001 – 2012 Director of Graduate Studies/Director, Graduate Track in Experimental and Clinical Pharmacology

2000 – 2002 Associate Member, Graduate Faculty in Social, Administrative and Clinical Pharmacy, Graduate School, University of Minnesota

1996 – 2002 Research Associate
College of Pharmacy, University of Minnesota

1985 – 1989 Assistant Professor of Pharmacy
College of Pharmacy, Medical University of South Carolina
and
Director, Clinical Pharmacokinetics Service
Medical University Medical Center, Charleston, SC

1977 – 1981 Instructor, Educational Development Services
College of Pharmacy, University of Minnesota

1979 – 1981 Registered Pharmacist, Dvorak Drug
Minneapolis, MN

1977 – 1993 Registered Pharmacist, Desnick Drug
Saint Paul, MN

HONORS AND AWARDS

2016	Bristol-Myers Squibb Mentorship Award; American College of Clinical Pharmacology
2014	Fellow, International Society of Pharmacometrics; Inaugural cohort
2012	Outstanding Adviser Award; University of Minnesota Graduate and Professional Student Association (GAPSA)
2008	Distinguished University Teaching Professor; Award for Outstanding Contributions to Graduate and Professional Education; University of Minnesota Alumni Association
2008	Excellence in Graduate Education; College of Pharmacy
1999	AAPS Meritorious Manuscript Award Yang Z, Brundage RC, Barbhuiya RH, and Sawchuk RJ; "Microdialysis Studies of the Distribution of Stavudine into the Central Nervous System in the Freely-Moving Rat"; <i>Pharm Res</i> 1997; 14(7):865-72.
1986	Certificate of Merit, Epilepsy Association of South Carolina
1984	ASHP Fellowship in Clinical Pharmacokinetics
1983	Roche Pharmacy Communications Award
1977	Graduation with Distinction
1977	Harold R. Popp Award
1977	Eleventh Annual SPhA Paper Review Forum, 2 nd place
1976	John Y. Breckenridge Memorial Award
1976	Kappa Psi Scholarship Award

PROFESSIONAL MEMBERSHIPS

International Society of Pharmacometrics
American College of Clinical Pharmacology
American Society of Clinical Pharmacology and Therapeutics
American Association of Pharmaceutical Scientists

HONORARY/FRATERNAL MEMBERSHIPS

Academy of Distinguished Teachers, University of Minnesota
Rho Chi Professional Pharmacy Honor Society
Kappa Psi Pharmaceutical Fraternity
Century Mortar Club, University of Minnesota Foundation
Who's Who in American Colleges and Universities

PHARMACY LICENSURE

1977 – 2014 Minnesota

PUBLICATIONS, Refereed Journals

- Garnett C, Needleman K, Liu J, Brundage R, Wang Y. Operational Characteristics of Linear Concentration-QT Models for Assessing QTc Interval in the Thorough QT and Phase 1 Clinical Studies. *Clin Pharmacol Ther.* 2016 Mar 4. doi: 10.1002/cpt.361. [Epub ahead of print]. PMID:26946218.
- Sanghavi K, Wiseman A, Kirstein MN, Cao Q, Brundage R, Jensen K, Rogosheske J, Kurtzweil A, Long-Boyle J, Wagner J, Warlick ED, Brunstein CG, Weisdorf DJ, Jacobson PA. Personalized fludarabine dosing to reduce nonrelapse mortality in hematopoietic stem-cell transplant recipients receiving reduced intensity conditioning. *Transl Res.* 2016 Mar 31. pii: S1931-5244(16)30001-9. doi: 10.1016/j.trsl.2016.03.017. [Epub ahead of print]. PMID: 27094990.
- Liang S, **Brundage RC**, Jacobson PA, Blaes A, Kirstein MN. Pharmacokinetic-pharmacodynamic modeling of acute N-terminal pro B-type natriuretic peptide after doxorubicin infusion in breast cancer. *Br J Clin Pharmacol.* 2016; Apr 29. doi: 10.1111/bcp.12989. [Epub ahead of print]; PMID: 27128712.
- Sanghavi K, **Brundage RC**, Miller MB, Schladt DP, Israni AK, Guan W, Oetting WS, Mannon RB, Rimmel RP, Matas AJ, Jacobson PA. Genotype-guided tacrolimus dosing in African-American kidney transplant recipients. *Pharmacogenomics J.* 2015; Dec 15. doi: 10.1038/tpj.2015.87. [Epub ahead of print]; PMID: 26667830.
- Ahmed MA, Kartha RV, **Brundage RC**, Cloyd J, Basu C, Carlin BP, Jones RO, Moser AB, Fatemi A, Raymond GV. A model-based approach to assess the exposure-response relationship of Lorenzo's oil in adrenoleukodystrophy. *Br J Clin Pharmacol.* 2016; Jun;81(6):1058-66. PMID: 26836218.
- Lim CN, Birnbaum AK, **Brundage RC**, Leppik IE, Cloyd JC, Clark A, Marino SE. Pharmacokinetic-pharmacodynamic modeling of intravenous and oral topiramate and its effect on the symbol digit modalities test in adult healthy volunteers. *J Clin Pharmacol.* 2016; Jun;56(6):714-22. PMID: 26395889.
- Polepally AR, Rimmel RP, **Brundage RC**, Leppik IE, Rarick JO, Ramsay RE, Birnbaum AK. Steady-state pharmacokinetics and bioavailability of immediate-release and extended-release formulations of lamotrigine in elderly epilepsy patients: Use of stable isotope methodology. *J Clin Pharmacol.* 2015; 55(10):1101-8. PMID: 25903807.
- Sarafoglou K, Zimmerman CL, Gonzalez-Bolanos MT, Willis B, **Brundage RC**. Interrelationships among cortisol, 17-hydroxyprogesterone, and androstenedione exposures in the management of children with congenital adrenal hyperplasia. *J Invest Med* 2015; 63(1):35-41. PMID: 25386671.
- Sarafoglou K, Gonzalez-Bolanos MT, Zimmerman CL, Boonstra T, Yaw AO, **Brundage RC**. Comparison of cortisol exposures and pharmacodynamic adrenal steroid responses to hydrocortisone suspension vs. commercial tablets. *J Clin Pharmacol* 2015; 55(4):452-7. PMID: 25385533.
- Ahmed GF, Marino SE, **Brundage RC**, Pakhomov SV, Leppik IE, Cloyd JC, Clark A, Birnbaum AK. Pharmacokinetic-pharmacodynamic modeling of intravenous and oral topiramate and its effect on phonemic fluency in adult healthy volunteers. *Br J Clin Pharmacol* 2015; 79(5):820-30. PMID: 25403343.
- Bart G, Lenz S, Straka RJ, **Brundage RC**. Ethnic and genetic factors in methadone pharmacokinetics: A population pharmacokinetic study. *Drug Alcohol Depend* 2014; 145:185-93. PMID: 25456325.
- Vezina HE, **Brundage RC**, Balfour HH. Population Pharmacokinetics of valganciclovir prophylaxis in paediatric and adult solid organ transplant recipients. *Br J Clin Pharmacol* 2014; 78(2):343-52. PMID: 24528138.
- Polepally AR, Pennell PB, **Brundage RC**, Stowe ZN, Newport DJ, Viguera AC, Ritchie JC, Birnbaum AK. Model-based lamotrigine clearance changes during pregnancy: Clinical implication. *Ann Clin Transl Neurol.* 2014;1(2):99-106. PMID: 24883336.

- Salem AH, Fletcher CV, **Brundage RC**. Pharmacometric characterization of efavirenz developmental pharmacokinetics and pharmacogenetics in HIV-infect children. *Antimicrob Agents Chemother* 2014; 58(1):136-43. PMID:24145522.
- Wang T, Baron K, Zhong W, **Brundage R**, Elmquist W. Bayesian approach to estimate AUC, partition coefficient and drug targeting index for studies with serial sacrifice design. *Pharm Res* 2014; 31:649-659. PMID:240920512.
- Khatri A, Williams BW, Fisher J, **Brundage RC**, Gurvich VJ, Lis LG, Skubitz KM, Dudek AZ, Greeno EW, Kratzke RA, Lamba JK, Kirstein MN. SLC28A3 genotype and gemcitabine rate of infusion affect dFdCTP metabolite disposition in patients with solid tumours. *Br J Cancer* 2014; 110(2):304-12. PMID:24300978.
- Clark AM, Kriel RL, Leppik IE, White JR, Henry TR, **Brundage RC**, Cloyd JC. Intravenous topiramate: Safety and pharmacokinetics following a single dose in patients with epilepsy or migraines taking oral topiramate. *Epilepsia* 2013; 54(6):1106-11. PMID:23586686.
- Clark AM, Kriel RL, Leppik IE, Marino SE, Mishra U, **Brundage RC**, Cloyd JC. Intravenous topiramate: Comparison of pharmacokinetics and safety with the oral formulation in healthy volunteers. *Epilepsia*; 2013; 54(6):1099-105. PMID:23506041.
- Agarwal SK, Kriel RL, **Brundage RC**, Ivaturi VD, Cloyd JC. A pilot study assessing the bioavailability and pharmacokinetics of diazepam after intranasal and intravenous administration in healthy volunteers. *Epilepsy Res* 2013; 105(3):362-7. PMID:23561287.
- Ahmed GF, **Brundage RC**, Marino SE, Cloyd JC, Leppik IE, Pennell PB, Ramsay RE, Birnbaum AK. Population pharmacokinetics of unbound and total drug concentrations following intravenously administered carbamazepine in elderly and younger adult patients with epilepsy. *J Clin Pharmacol* 2013; 53(3):276-84. PMID:23408495.
- Munn MS, Sibley S, **Brundage RC**, Ismail B, Earthman CP. Angiotensin-converting enzyme inhibitory effects of dairy- and soy-derived peptides in pre-hypertensive overweight men and women. *Functional Foods in Health and Disease* 2013; 3(1):37-47.
- Milan Segovia RC, Dominguez Ramirez AM, Jung Cook H, Magana Aquino M, Vigna Perez M, **Brundage RC**, Romano Moreno S. Population pharmacokinetics of rifampicin in Mexican patients with tuberculosis. *J Clin Pharmacol Therap* 2013; 38:56-61. PMID:23167603.
- Ivaturi V, Kriel R, **Brundage RC**, Loewen G, Mansbach H, Cloyd JC. Bioavailability of intranasal vs. rectal diazepam. *Epilepsy Res* 2013 Feb; 103(2-3):254-61. PMID:22981338.
- Holman CJ, Karger AB, Mullan BD, Brundage RC, Balfour HH Jr Quantitative Epstein-Barr virus shedding and its correlation with the risk of post-transplant lymphoproliferative disorder. *Clin Transplant* 2012; 26:741-7. PMID:22385033.
- Punyawudho B, Ramsay ER, **Brundage RC**, Macias FM, Collins JF, Birnbaum AK. Population pharmacokinetics of carbamazepine in elderly patients. *Ther Drug Monit* 2012; 34(2):176-81. PMID:22406657.
- Marino SE, Birnbaum AK, Leppik IE, Conway JM, Musib LC, **Brundage RC**, Ramsay RE, Pennell PB, White JR, Gross CR, Rarick JO, Mishra U, Cloyd JC. Steady-state carbamazepine pharmacokinetics following oral and stable-labeled intravenous administration in epilepsy patients: Effects of race and sex. *Clin Pharmacol Therap* 2012; 91(3):483-8. PMID:22278332.
- Passey C, Birnbaum AK, **Brundage RC**, Schladt DP, Oetting WS, Leduc RE, Israni AK, Guan W, Matas AJ, Jacobson PA. Validation of tacrolimus equation to predict troughs using genetic and clinical factors. *Pharmacogenomics* 2012; 13(10):1141-7. PMID:22909204.

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