

CURRICULUM VITAE

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Education:

- B.S. (Pharmacy), College of Pharmacy, Seoul National University; 1980-1984
- M.S. (Pharmaceutics), Department of Pharmaceutics, Seoul National University; 1984-1986
- Ph.D. (Pharmaceutics), Dept of Pharmaceutical Sciences, SUNY at Buffalo; 1986-1992. Thesis Entitled "Vascular metabolism of organic nitrates to nitric oxide" Thesis advisor: Professor H.-L. Fung

Professional Experience:

2006 – present:	Professor, Dept. of Pharmaceutics, Seoul National University
1999 - 2006:	Associate professor, Dept. of Pharmaceutics, Seoul National University
1995 - 1999:	Assistant professor, Dept. of Pharmaceutics, Seoul National University
1992 - 1995:	Post-doctoral fellow, University of California at San Francisco
1992 - 1995:	Post-doctoral fellow, State University of New York at Buffalo

Professional Society Memberships:

- American Association of Pharmaceutical Scientists (AAPS)
- International Society for the Study of Xenobiotics (ISSX)

Editorial Board (SCI Journals, Past):

- Drug Metabolism and Pharmacokinetics (Associate Editor)
- Journal of Pharmacokinetics and Pharmacodynamics (Associated Editor)

Awards/Honors:

- Recipient of Graduate Scholar Award, Department of Pharmaceutics, State University of New York at Buffalo (1991)

Publications (SCI Journals):

1. Corcoran GB, Chung SJ and Salazar DE; Early inhibition of the Na⁺/K⁺-ATPase ion pump during acetoaminopen-induced hepatotoxicity in rat. Biochem. Biophys. Res. Comm. 149: 203-207, 1987
2. Fung HL, Chung SJ, Chong S, Hough K, Kakemi M and Kowaluk E; Cellular mechanism of nitrate anion. Z. Kardiol. 78 (suppl. 2): 14-17, 1989
3. Chung SJ and Fung HL; Identification of the subcellular site for nitroglycerin metabolism to nitric oxide in bovine coronary smooth muscle cells. J. Pharmacol. Exp. Ther. 253: 614-619, 1990
4. Chung SJ, Chong S, Seth P, Jung CY and Fung HL; Conversion of nitroglycerin to nitric oxide in microsomes of the bovine coronary artery smooth muscle is not primarily mediated by glutathione-S-transferases. J. Pharmacol. Exp. Ther. 260: 652-659, 1992
5. Fung HL, Chung SJ, Bauer JA, Chong S and Kowaluk EA; Biochemical mechanisms of organic nitrate action. Am. J. Cardiol. 70: 4B-10B, 1992
6. Chung SJ and Fung HL; A common enzyme may be responsible for the conversion of organic nitrates to nitric oxide in vascular smooth muscle microsomes. Biochem. Biophys. Res. Comm. 185: 932-937, 1992
7. Chung SJ and Fung HL; Removal of ammonia interference in the redox chemiluminescence assay of nitric oxide. Anal. Lett. 25: 2021-2036, 1992
8. Chung SJ and Fung HL; Relationship between nitroglycerin-induced vascular relaxation and nitric oxide production. Probes with inhibitors and tolerance development. Biochem. Pharmacol. 45: 157-163, 1993
9. Kowaluk EA, Chung SJ and Fung HL; Nitrite ion is not an active intermediate in the

vascular metabolism of organic nitrates and organic nitrites to nitric-oxide. Drug Metabol. Disp. 21: 967-969, 1993

10. Chung SJ, Ramanathan V, Giacomini KM and Brett CM; Characterization of a sodium-dependent taurine transporter in rabbit choroid plexus. Biochim. Biophys. Acta. 1193: 10-16, 1994
11. Bachert EL, Li A, Zhao LZ, Chung SJ and Fung HL; A modified product inhibition model describes the nonlinear pharmacokinetics of nicorandil in rats. Pharm. Res. 11: 1190-1198, 1994
12. Chung SJ, Ramanathan VK, Brett CM and Giacomini KM; Saturable disposition of taurine in the rat cerebrospinal fluid, J. Pharmacol. Exp. Ther. 276: 676-682, 1996
13. Choi MS, Chung SJ and Shim CK; Rectal absorption of omeprazole from suppository in humans. J. Pharm. Sci. 85: 893-894, 1996
14. Ramanathan VK, Chung SJ, Giacomini KM and Brett CM; Taurine transport in cultured choroid plexus. Pharm. Res. 14: 406, 1997
15. Kim MK, Chung SJ, Lee MH, Cho AR and Shim CK; Targeted and sustained delivery of hydrocortisone to normal and stratum corneum-removed skin without enhanced skin absorption using a liposome gel. J. Cont. Rel. 46: 243-251, 1997
16. Yu IL, Chung SJ and Shim, CK; Pharmacokinetics of 1-(5-fluoro-2-pyridyl) -6-fluoro-7-(4-methyl-1-piperazinyl) -1,4-dihydro-4-oxoquinolone-3-carboxylic acid hydrochloride (DW-116), a new quinolone antibiotic in rats. J. Pharm. Sci. 86: 550-553, 1997
17. Lee YJ, Chung SJ, Lee MH and Shim CK; Decreased oral bioavailability of cyclosporine at second administration in human. Br. J. Clin. Pharmacol. 44: 343-345, 1997
18. Hwang BY, Jung BH, Chung SJ, Lee MH and Shim CK; In vitro skin permeation of nicotine from proliposomes, J. Cont. Rel. 49: 177-184, 1997
19. Lee YJ, Chung SJ, and Shim CK; Bioequivalence of Neoplanta capsule to Sandimmune Neoral, microemulsion formulations oral cyclosporin A in human subjects. Int. J. Clin. Pharmacol. Ther. 36: 210-215, 1998
20. Hong SS, Lee SH, Lee YJ, Chung SJ, Lee MH and Shim CK; Accelerated oral absorption of gliclazide in human subjects from a soft gelatin capsule containing a PEG 400 suspension of gliclazide. J. Cont. Rel. 51: 185-191, 1998
21. Kim MK, Chung SJ, Lee MW and Shim CK; Delivery of hydrocortisone from liposomal suspensions to the hairless mouse skin following topical application under non-occlusive and occlusive conditions, J. Microencap. 15: 21-29, 1998

22. Lee YR, Shim CK and Chung SJ; Determination of dimethyl-4,4'-dimethoxy 5,6,5',6'-dioxybiphenyl dicarboxylate in human serum by high performance liquid chromatography. Anlal. Lett. 32: 945-954, 1999
23. Song IS, Chung SJ and Shim CK; Different activity of ATP dependent transport across the canalicular membrane for tributylmethyl ammonium and triethylmethyl ammonium as a potential mechanism of the preferential biliary excretion for tributyl methyl ammonium in the rat. Pharm. Res. 16: 540-544, 1999
24. Jung BH, Chung BC, Chung SJ, Lee MH and Shim CK; Simultaneous GC-MS determination of nicotine and cotinine in plasma for the pharmacokinetic characterization of nicotine in rats. J. Pharmaceut. Biomed. Anal. 20: 195-202, 1999
25. Rhu JM, Chung SJ, Lee MH, Kim CK and Shim CK; Increased bioavailability of propranolol in rats by retaining thermally gelling liquid suppositories in the rectum. J. Cont. Rel., 59: 163-72, 1999
26. Han YH, Chung SJ and Shim CK; Canalicular efflux is primarily responsible for the molecular weight threshold of hepatobiliary excretion of organic cations. Drug Met.. Disp. 27: 872-879, 1999
27. Chung SJ; Future drug delivery research in South Korea. J. Cont. Rel., 62: 73-79, 1999
28. Kim IW, Choo KS, Han TG, Kim KS, Chung SJ, Lee MH, and Shim CK; Decreased oral bioavailability of loxoprofen at second administration in human subjects, Int. J. Clin. Pharmacol. Ther. 38: 10-14, 2000
29. Lee YJ, Chung SJ and Shim CK; The potential replacement of HPLC by ^{125}I -RIA for the characterization of cyclosporin A: a bioavailability study after oral administration in healthy human subjects. J. Pharmaceut. Biomed. Anal. 22: 183-188, 2000.
30. Jung BH, Chung BC, Chung SJ, Lee MH and Shim CK; Prolonged delivery of nicotine in rats via nasal administration of proliposomes. J. Cont. Rel. 66: 73-79, 2000
31. Hong SS, Chung SJ and Shim CK; Functional impairment of sinusoidal membrane transport of organic cations in rats with CCl₄-induced hepatic failure. Pharm. Res. 17: 833-838, 2000
32. Choo KS, Kim IW, Jung JK, Suh YG, Chung SJ, Lee MH and Shim CK; Simultaneous determination of loxoprofen and its diasteromeric alcohol metabolites in human plasma and urine by a simple HPLC-UV detection method, J. Pharmaceut. Biomed. Anal. 25: 639-650, 2000
33. Li H, Chung SJ, Kim DC, Kim HS, Lee JW and Shim CK; The transport of a reversible proton pump antagonist, 5,6-dimethyl-2-(4-fluorophenylamino)-4-(1-methyl- 1,2,3,4-

tetrahydroisoquinole-2-yl) pyrimidine hydrochloride (YH1885), across Caco-2 cell monolayers. *Drug Met. Disp* 29: 54-59, 2001

34. Song IS, Chung SJ and Shim CK; Contribution of ion-pair complexation with bile salts to biliary excretion of organic cations in rats. *Am. J. Physiol.* 281: G515-G525, 2001

35. Lee YJ, Chung SJ and Shim CK; The prevention of cyclosporin A adsorption to Transwell surfaces by human plasma. *Int. J. Pharmaceut.* 224: 201-204, 2001

35. Jung BH, Chung BC, Chung SJ and Shim CK; Different pharmacokinetics of nicotine following intravenous administration of nicotine base and nicotine hydrogen tartarate in rats. *J. Cont. Rel.* 77: 183-190, 2001

36. Kim YG, Cho MK, Kwon JW, Kim SG, Chung SJ, Shim CK and Lee MG; Effects of cysteine on the pharmacokinetics of intravenous phenytoin in rats with protein-calorie malnutrition. *Int. J. Pharmaceut.* 229: 45-55, 2001

37. Jung BH, Chung SJ and Shim CK; Proliposomes as prolonged intranasal drug delivery systems. *S.T.P. Pharma Sciences* 12: 22-28, 2002

38. Lee J, Lee J, Kang MS, Kim KP, Chung SJ, Blumberg PM, Yi JB and Park YH; Phenolic modification as an approach to improve the pharmacology of the 3-acyloxy-2-benzylpropyl homovanillic amides and thioureas, a promising class of vanilloid receptor agonists and analgesics. *Bioorg. Med. Chem.* 10: 1171-1179, 2002

39. Han H, Kim SG, Lee MG, Shim CK and Chung SJ, Mechanism of the reduced elimination clearance of benzylpenicillin from cerebrospinal fluid in rats with intracisternal administration of lipopolysaccharide. *Drug Met. Disp.* 30: 1214-1220, 2002

40. Kim IW, Chung SJ and Shim CK; Altered metabolism of orally administered loxoprofen in human subjects after an oral administration of loxoprofen for three consecutive days followed by a seven-day washout. *J. Pharm. Sci.* 91: 973-979, 2002

41. Lee AK, Kang KW, Kim YG, Cho MK, Lee MG, Shim CK, Chung SJ and Kim SG; Identification of genes enhanced by protein-calorie malnutrition by differential display polymerase chain reaction (expression of fibrinogen B beta chain, B cell translocation gene 1 and thyroid hormone responsive protein genes). *Mol. Cell. Biochem.* 231: 163-171, 2002

42. Lee HT, Lee YJ, Chung SJ and Shim CK; Effect of prokinetic agents, cisapride and metoclopramide, on the bioavailability in humans and intestinal permeability in rats of ranitidine, and intestinal charcoal transit in rats. *Res. Commun. Mol. Pathol. Pharmacol.* 108: 311-323, 2002

43. Song KH, An HM, Kim HJ, Ahn SH, Chung SJ and Shim CK; Simple liquid chromatography-electrospray ionization mass spectrometry method for the routine determination of salmon calcitonin in serum. *J. Chromatogr. B* 775: 247-55, 2002

44. Song KH, Chung SJ and Shim CK; Preparation and evaluation of proliposomes containing salmon calcitonin. *J Control Release*. 84: 27-37, 2002
45. Li H, Chung SJ and Shim CK; Characterization of the transport of uracil across Caco-2 and LLC-PK1 cell monolayers. *Pharm. Res.* 19: 1495-1501, 2002
46. Maeng HJ, Yoo HJ, Kim IW, Song IS, Chung SJ and Shim CK; P-glycoprotein-mediated transport of berberine across Caco-2 cell monolayers. *J. Pharm. Sci.* 91: 2614-2621, 2002
47. Bae SK, Kim EJ, Chung SJ, Kim SG and Lee MG; Pharmacokinetic interaction between oltipraz and dimethyl-4,4'-dimethoxy-5,6,5',6'-dimethylene dioxybiphenyl-2,2'-dicarboxylate (DDB) after single intravenous and oral administration to rats. *J. Pharm. Pharmacol.* 55: 1241-1249, 2003
48. Ahn SH, Jeon SH, Tsuruo T, Shim CK and Chung SJ. Pharmacokinetic characterization of dehydroevodiamine in the rat brain. *J. Pharm. Sci.* 93: 283-292, 2004
49. Bae SK, Lee DY, Lee AK, Kwon JW, Lee I, Chung SJ, Kim SG, Shim CK and Lee MG; Effects of cysteine on the pharmacokinetics of intravenous torasemide in rats with protein-calorie malnutrition. *J. Pharm. Sci.* 93: 2388-2398, 2004
50. Lee J, Son J, Chung SJ, Lee ES and Kim DH; In vitro and in vivo metabolism of pyronaridine characterized by low-energy collision-induced dissociation mass spectrometry with electrospray ionization. *J. Mass Spectrom.* 39: 1036-1043, 2004
51. Sung JH, Yu KH, Park JS, Tsuruo T, Kim DD, Shim CK and Chung SJ; Saturable distribution of tacrine into the striatal extracellular fluid of the rat: evidence of involvement of multiple organic cation transporters in the transport. *Drug Met. Dispos.* 33: 440-448, 2005
52. Choi MK, Song IS, Park SR, Hong SS, Kim DD, Chung SJ and Shim CK; Mechanism of the stationary canalicular excretion of tributylmethyl ammonium in rats with a CCl₄-induced acute hepatic injury. *J Pharm Sci.* 94: 317-326, 2005
53. Lee YJ, Chung SJ and Shim CK. Limited role of P-glycoprotein in the intestinal absorption of cyclosporin A. *Biol. Pharm. Bull.* 28:760-763, 2005
54. Zhao H, Lee CH, Chung SJ, Shim CK and Kim DD; In vitro and in vivo evaluation of a novel nonscrotal matrix-type transdermal delivery system of testosterone. *Drug Dev. Ind. Pharm.* 31: 257-261, 2005
55. Song KH, Chung SJ and Shim CK; Enhanced intestinal absorption of salmon calcitonin (sCT) from proliposomes containing bile salts. *J Cont. Rel.* 106: 298-308, 2005

56. Lin H, Yoo JW, Roh HJ, Lee MK, Chung SJ, Shim CK and Kim DD; Transport of anti-allergic drugs across the passage cultured human nasal epithelial cell monolayer. *Eur. J. Pharm. Sci.* 26: 203-210, 2005
57. Doo MH, Li H, Jang HI, Song IS, Chung SJ and Shim CK; Effect of nonylphenol ethoxylates (NPEs) on barrier functions of epithelial cell membranes: opening of tight junctions and competitive inhibition of P-gp-mediated efflux. *Int. J. Pharm.* 302: 145-153, 2005
58. Koo TS, Kim DH, Ahn SH, Kim KP, Kim IW, Seo SY, Suh YG, Kim DD, Shim CK and Chung SJ; Comparison of pharmacokinetics of loxoprofen and its active metabolites after an intravenous, intramuscular, and oral administration of loxoprofen in rats: evidence for extrahepatic metabolism. *J. Pharm. Sci.* 94: 2187-2197, 2005
59. Lee HT, Seo EK, Chung SJ and Shim CK; Prokinetic activity of an aqueous extract from dried immature fruit of *Poncirus trifoliata* (L.) Raf. *J. Ethnopharmacol.* 102: 131-136, 2005
60. Lee HT, Seo EK, Chung SJ and Shim CK; Effect of an aqueous extract of dried immature fruit of *Poncirus trifoliata* (L.) Raf. on intestinal transit in rodents with experimental gastrointestinal motility dysfunctions. *J. Ethnopharmacol.* 102: 302-306, 2005
61. Kim MK, Han L, Choi MK, Han YH, Kim DD, Chung SJ and Shim CK; Dose dependency in the oral bioavailability of an organic cation model, tributylmethyl ammonium (TBuMA), in rats: association with the saturation of efflux by the P-gp system on the apical membrane of the intestinal epithelium. *J. Pharm. Sci.* 94: 2644-2655, 2005
62. Yang SG, Kim DD, Chung SJ and Shim CK; Stable bioavailability of cyclosporin A, regardless of food intake, from soft gelatin capsules containing a new self-nanoemulsifying formulation. *Int. J. Clin. Pharmacol. Ther.* 44: 233-239, 2006
63. Kim KP, Ahn SH, Sung JH, Koo TS, Byun MJ, Kim DD, Shim CK and Chung SJ. Application of a sample pooling method for the accelerated assessment of the rate of uptake of drugs by the brain in rats. *J. Pharm. Pharmacol.* 58: 837-846, 2006
64. Ahn SH, Maeng HJ, Koo TS, Kim DD, Shim CK and Chung SJ; Quantification of clotiazepam in human plasma by gas chromatography-mass spectrometry. *J. Chromatogr. B* 834: 128-133, 2006
65. Choi JS, Lee SH, Chung SJ, Yoo KH, Sung KW and Koo HH; Assessment of converting from intravenous to oral administration of cyclosporin A in pediatric allogeneic hematopoietic stem cell transplant recipients. *Bone Marrow Transplant.* 38: 29-35, 2006
66. Sung JH, Hong SS, Ahn SH, Li H, Seo SY, Park CH, Park BS and Chung SJ; Mechanism for increased bioavailability of tacrine in fasted rats. *J. Pharm. Pharmacol.* 58:

67. Koo TS, Kim MH, Kim DD, Shim CK and Chung SJ; Quantification of levosulpiride in human plasma by high performance liquid chromatography. *Anal. Lett.*, 39: 2809-2822, 2006
68. Lin H, Gebhardt M, Bian S, Kwon KA, Shim CK, Chung SJ, Kim DD; Enhancing effect of surfactants on fexofenadine.HCl transport across the human nasal epithelial cell monolayer. *Int. J. Pharm.*, 330: 23-31, 2007.
69. Lin H, Li H, Cho HJ, Bian S, Roh HJ, Lee MK, Kim JS, Chung SJ, Shim CK, Kim DD; Air-liquid interface (ALI) culture of human bronchial epithelial cell monolayers as an in vitro model for airway drug transport studies. *J. Pharm. Sci.*, 96: 341-350, 2007.
70. Yang T, Cui FD, Choi MK, Cho JW, Chung SJ, Shim CK, Kim DD; Enhanced solubility and stability of PEGylated liposomal paclitaxel: in vitro and in vivo evaluation. *Int. J. Pharm.*, 338: 317-326, 2007.
71. Yang T, Choi MK, Cui FD, Kim JS, Chung SJ, Shim CK, Kim DD; Preparation and evaluation of paclitaxel-loaded PEGylated immunoliposome. *J. Cont. Rel.*, 120: 169-177, 2007.
72. Yang T, Cui FD, Choi MK, Lin H, Chung SJ, Shim CK, Kim DD; Liposome formulation of paclitaxel with enhanced solubility and stability. *Drug Deliv.*, 14: 301-308, 2007.
73. Maeng HJ, Kim MH, Jin HE, Shin SM, Tsuruo T, Kim SG, Kim DD, Shim CK, Chung SJ; Functional induction of P-glycoprotein in the blood-brain barrier of streptozotocin-induced diabetic rats: evidence for the involvement of NF- κ B, a nitrosative stress-sensitive transcription factor, in the regulation. *Drug Met. Dispos.*, 35: 1996-2005, 2007.
74. Choi MK, Song IS, Kim DD, Chung SJ, Shim CK; Decreased biliary excretion of tributylmethyl ammonium in cholestyramine pretreated rats due to reduced formation of ion-pair complexes with hepatic bile salts. *Biopharm. Drug Dispos.*, 28: 485-490, 2007.
75. Choi MK, Arote R, Kim SY, Chung SJ, Shim CK, Cho CS, Kim DD; Transfection of primary human nasal epithelial cells using a biodegradable poly (ester amine) based on polycaprolactone and polyethylenimine as a gene carrier. *J. Drug Target.*, 15: 684-690, 2007.
76. Choi MK, Song IS, Kim DD, Chung SJ, Shim CK; Altered pharmacokinetics of daunorubicin in rats with CCl4-induced hepatic injury. *J. Pharm. Pharm. Sci.*, 10: 443-454, 2007.

77. Heo SK, Cho J, Cheon JW, Choi MK, Im DS, Kim JJ, Choi YG, Jeon do Y, Chung SJ, Shim CK, Kim DD; Pharmacokinetics and pharmacodynamics of ketoprofen plasters. *Biopharm. Drug Dispos.*, 29: 37-44, 2008.
78. Hwang SM, Kim DD, Chung SJ, Shim CK; Delivery of ofloxacin to the lung and alveolar macrophages via hyaluronan microspheres for the treatment of tuberculosis. *J. Cont. Rel.*, 129: 100-106, 2008.
79. Shim WS, Park JH, Ahn SJ, Han L, Jin QR, Li H, Choi MK, Kim DD, Chung SJ, Shim CK; Testosterone-independent down-regulation of Oct2 in the kidney medulla from a uranyl nitrate-induced rat model of acute renal failure: Effects on distribution of a model organic cation, tetraethylammonium. *J. Pharm. Sci.*, 98: 739-747, 2008.
80. Li H, Jin HE, Kim W, Han YH, Kim DD, Chung SJ, Shim CK; Involvement of P-glycoprotein, Multidrug Resistance Protein 2 and Breast Cancer Resistance Protein in the transport of belotecan and topotecan in Caco-2 and MDCKII cells. *Pharm. Res.*, 25: 2601-2612, 2008.
81. Yang R, Yang SG, Shim WS, Cui F, Cheng G, Kim IW, Kim DD, Chung SJ, Shim CK; Lung-specific delivery of paclitaxel by chitosan-modified PLGA nanoparticles via transient formation of microaggregates. *J. Pharm. Sci.*, 98: 970-984, 2009.
82. Jin HE, Hong SS, Choi MK, Maeng HJ, Kim DD, Chung SJ, Shim CK; Reduced antidiabetic effect of metformin and down-regulation of hepatic OCT1 in rats with ethynodiol-induced cholestasis. *Pharm. Res.*, 26: 549-559, 2009.
83. Kang JY, Chung CW, Sung JH, Park BS, Choi JY, Lee SJ, Choi BC, Shim CK, Chung SJ, Kim DD; Novel porous matrix of hyaluronic acid for the three-dimensional culture of chondrocytes. *Int. J. Pharmaceut.*, 369: 114-120, 2009.
84. Yang R, Shim WS, Cui FD, Cheng G, Han X, Jin QR, Kim DD, Chung SJ, Shim CK; Enhanced electrostatic interaction between chitosan-modified PLGA nanoparticles and tumor. *Int. J. Pharmaceut.*, 371: 142-147, 2009.
85. Kim MH, Maeng HJ, Yu KH, Lee KR, Tsuruo T, Kim DD, Shim CK, Chung SJ; Evidence of carrier-mediated transport in the penetration of donepezil into the rat brain. *J. Pharm. Sci.*, 99: 1548-1566, 2009.
86. Yu KH, Lee YR, Ahn SH, Kim DD, Shim CK, Chung SJ; Contribution of a significant first-pass effect of dimethyl-4,4'-dimethoxy-5,6,5',6'-dimethylene dioxybiphenyl-2,2'-dicarboxylate in the liver to its poor bioavailability in rats. *J. Pharm. Pharmacol.*, 61: 1197-1203, 2009.
87. Lee SH, Oh T, Jeon BY, Kwak EY, Shim WS, Cho SN, Kim DD, Chung SJ, Shim CK; Tissue-specific changes in mRNA expression of Abc and Slc transporters in murine pulmonary tuberculosis. *Xenobiotica*, 39: 738-748, 2009.

88. Lee JH, Woo YA, Hwang IC, Kim CY, Kim DD, Shim CK, Chung SJ; Quantification of CKD-501, lobeglitazone, in rat plasma using a liquid-chromatography/tandem mass spectrometry method and its applications to pharmacokinetic studies. *J. Pharm. Biomed. Anal.*, 50: 827-877, 2009.
89. Lee KR, Maeng HJ, Chae JB, Chong S, Kim DD, Shim CK, Chung SJ; Lack of a primary physicochemical determinants in the direct transport of drugs to the brain after nasal administration in rats: Potential involvement of transporters in the pathway. *Drug Met. Pharmacokin.*, 25: 430-431, 2010.
90. Piao HM, Balakrishnan P, Cho HJ, Kim H, Kim YS, Chung SJ, Shim CK, Kim DD; Preparation and evaluation of fexofenadine microemulsions for intranasal delivery. *Int. J. Pharm.*, 395: 309-316, 2010.
91. Cho HJ, Balakrishnan P, Shim WS, Chung SJ, Shim CK, Kim DD; Characterization and in vitro evaluation of freeze-dried microparticles composed of granisetron-cyclodextrin complex and carboxymethylcellulose for intranasal delivery. *Int. J. Pharm.*, 400: 59-65, 2010.
92. Chung SJ; Challenges for kinetic identification of variability associated with genetic polymorphisms of transporters. *Drug Met. Pharmacokin.*, 25: 409-410, 2010.
93. Cho HJ, Balakrishnan P, Park EK, Song KW, Hong SS, Jang TY, Kim KS, Chung SJ, Shim CK, Kim DD; Poloxamer/cyclodextrin/chitosan-based thermoreversible gel for intranasal delivery of fexofenadine hydrochloride. *J. Pharm. Sci.*, 100: 681-691, 2011.
94. Jin HE, Lee KR, Kang IH, Chung SJ, Shim CK; Determination of zebrafloxacin in rat plasma by liquid chromatography with mass spectrometry and its application to pharmacokinetic study. *J. Pharm. Biomed. Anal.*, 54: 873-877, 2011.
95. Yoon IS, Choi MK, Kim JS, Shim CK, Chung SJ, Kim DD; Pharmacokinetics and first-pass elimination of metoprolol in rats: contribution of intestinal first-pass extraction to low bioavailability of metoprolol. *Xenobiotica*, 41: 243-251, 2011.
96. Cho HJ, Choi MK, Lin H, Kim JS, Chung SJ, Shim CK, Kim DD; Expression and functional activity of P-glycoprotein in passaged primary human nasal epithelial cell monolayers cultured by the air-liquid interface method for nasal drug transport study. *J. Pharm. Pharmacol.*, 63: 385-391, 2011.
97. Song CK, Balakrishnan P, Shim CK, Chung SJ, Kim DD; Enhanced in vitro cellular uptake of P-gp substrate by poloxamer-modified liposomes (PMLs) in MDR cancer cells. *J. Microencapsul.*, 28: 575-581, 2011.

98. Lee KR, Chae YJ, Cho SE, Chung SJ; A strategy for reducing particulate contamination on opening glass ampoules and development of evaluation methods for its application. *Drug Dev. Ind. Pharm.*, 37: 1394-1401, 2011.
99. Cho HJ, Balakrishnan P, Chung SJ, Shim CK, Kim DD; Evaluation of protein stability and in vitro permeation of lyophilized polysaccharides-based microparticles for intranasal protein delivery. *Int. J. Phram.*, 416: pp.77-84, 2011.
100. Lee KR, Chae YJ, Maeng HJ, Lee J, Kim DD, Chong S, Shim CK, Chung SJ; Physiologically based pharmacokinetic modeling of SNU-0039, an anti-Alzheimer's agent, in rats. *J. Pharmacokin. Pharmacodyn.*, 38: 637-651, 2011.
101. Chae YJ, Lee KR, Noh CK, Chong S, Kim DD, Shim CK, Chung, SJ; Functional Consequences of Genetic Variations in the Human Organic Anion Transporting Polypeptide 1B3 (OATP1B3) in the Korean Population. *J. Pharm. Sci.*, 101: 1302-1313, 2011.
102. Lee KR, Chae YJ, Lee JH, Kim DD, Chong S, Shim CK, Chung SJ; Quantification of cilnidipine in human plasma by liquid chromatography-mass spectrometry. *J. Liquid Chrom. Rel. Tech.*, 35: 308-320, 2012.
103. Koo TS, Kwon HJ, Kim MH, Kim DD, Shim CK, Chung SJ and Chong S; Functional impairment of Rat Taurine Transporter by Activation of Nitrogen Oxide through Superoxide. *Drug Metab. Pharmacokinet.*, 27: 286-293, 2012.
104. Chang JE, Shim WS, Yang SG, Kwak EY, Chong S, Kim DD, Chung SJ, Shim CK; Liver Cancer Targeting of Doxorubicin with Reduced Distribution to the Heart Using Hematoporphyrin-Modified Albumin Nanoparticles in Rats. *Pharm. Res.*, 29: 795-805, 2012.
105. Cho HJ, Chong S, Chung SJ, Shim CK, Kim DD; Poly-L-arginine and Dextran Sulfate-Based Nanocomplex for Epidermal Growth Factor Receptor (EGFR) siRNA Delivery: Its Application for Head and Neck Cancer Treatment. *Pharm. Res.*, 29: 1007-1019, 2012.
106. Kwak EY, Shim WS, Chang JE, Chong S, Kim DD, Chung SJ, Shim CK; Enhanced intracellular accumulation of a non-nucleoside anti-cancer agent via increased uptake of its valine ester prodrug through amino acid transporters. *Xenobiotica*, 42: 603-613, 2012.
107. Maeng HJ, Shim WS, Ahn SJ, Yu SS, Kim DD, Shim CK, Chung SJ; Differential changes in functional activity of organic cation transporters in rats with uranyl nitrate-induced acute renal failure. *Arch. Pharm. Res.*, 35: 1441-1448, 2012.
108. Song CK, Lee JH, Alexander Jahn, Choi MJ, Namgoong SK, Hong SS, Chong S, Chung SJ, Shim CK, Kim DD; In vitro and in vivo evaluation of N,N,N-

- trimethylphytosphingosine-iodide (TMP) in liposomes for the treatment of angiogenesis and metastasis. *Int. J. Pharm.*, 435: 191-198, 2012.
109. Choi YH, Kang HE, Cho HJ, Kim JS, Shim CK, Chung SJ, Chong S, Kim DD; Saturable sinusoidal uptake is rate-determining process in hepatic elimination of docetaxel in rats. *Xenobiotica*, 42: 1110-1119, 2012.
110. Jin YJ, Ubonvan Termsarasab, Ko SH, Shim JS, Chong S, Chung SJ , Shim CK, Cho HJ, Kim DD; Hyaluronic Acid Derivative-Based Self-Assembled Nanoparticles for the Treatment of Melanoma. *Pharm. Res.*, 29: 3443-3454, 2012.
111. Park JH, Jin HE, Kim DD, Chung SJ, Shim WS, Shim CK; Chitosan microspheres as an alveolar macrophage delivery system of ofloxacin via pulmonary inhalation. *Int. J. Pharm.*, 441: 562-569, 2013.
112. Ubonvan T, Cho HJ, Chong S, Chung SJ, Shim CK, Moon HT, Kim DD; Chitosan oligosaccharide–arachidic acid-based nanoparticles for anti-cancer drug delivery. *Int. J. Pharm.*, 441: 373-380, 2013.
113. Jin HE, Boran Song , Kim SB, Shim WS, Kim DD, Chong S, Chung SJ, Shim CK; Transport of gemifloxacin, a 4th generation quinolone antibiotic, in the Caco-2 and engineered MDCKII cells, and potential involvement of efflux transporters in the intestinal absorption of the drug. *Xenobiotica*, 43: 355-367, 2013.
114. Son YJ, Yoon IS, Sung JH, Cho HJ, Chung SJ, Shim CK, Kim DD; Porous hyaluronic acid/sodium alginate composite scaffolds for human adipose-derived stem cells delivery. *Int. J. Biol. Macromol.*, 61: 175-181, 2013.
115. Jung E, Kang YP, Yoon IS, Kim JS, Kwon SW, Chung SJ, Shim CK, Kim DD; Effect of permeation enhancers on transdermal delivery of fluoxetine: in vitro and in vivo evaluation. *Int. J. Pharm.*, 456: 362-369, 2013
116. Kim SB, Yoon IS, Kim KS, Cho SJ, Kim YS, Cho HJ, Chung SJ, Chong S, Kim DD; In vitro and in vivo evaluation of the effect of puerarin on hepatic cytochrome p450-mediated drug metabolism. *Planta Med.*, 80: 561-567, 2014.
117. Han YT, Kim K, Choi GI, An H, Son D, Kim H, Ha HJ, Son JH, Chung SJ, Park HJ, Lee J, Suh YG; Pyrazole-5-carboxamides, novel inhibitors of receptor for advanced glycation end products (RAGE). *Eur. J. Med. Chem.*, 79: 128-142, 2014.
118. Jahn A, Song CK, Balakrishnan P, Hong SS, Lee JH, Chung SJ, Kim DD; AAPE proliposomes for topical atopic dermatitis treatment. *J. Microencapsul.*, 31: 768-773, 2014.
119. Lee JH, Noh CK, Yim CS, Jeong YS, Ahn SH, Lee W, Kim DD, Chung SJ; Kinetics of the Absorption, Distribution, Metabolism, and Excretion of Lobeglitazone, a Novel

120. Song KH, Kim SB, Shim CK, Chung SJ, Kim DD, Rhee SK, Choi GJ, Kim CH, Kim K; Paracellular permeation-enhancing effect of AT1002 C-terminal amidation in nasal delivery. *Drug Res. Devel. Ther.*, 8: 1815-1823, 2015.
121. Lee JH, Son JH, Chae YJ, Ahn SH, Lee W, Kim DD, Chung SJ; Gender differences in the hepatic elimination and pharmacokinetics of lobeglitazone in rats. *Biopharm. Drug Dispos.*, 2015
123. Lee JY, Chung SJ, Cho HJ, Kim DD; Bile acid-conjugated chondroitin sulfate A-based nanoparticles for tumor-targeted anticancer drug delivery. *Eur. J. Pharm. Biopharm.*, 94: 532-541, 2015.
124. Lee JH, Ahn SH, Maeng HJ, Lee W, Kim DD, Chung SJ; The identification of lobeglitazone metabolites in rat liver microsomes and the kinetics of the in vivo formation of the major metabolite M1 in rats. *J. Pharm. Biomed. Anal.*, 115: 375-382, 2015
125. Kim SB, Kang HE, Cho HJ, Kim YS, Chung SJ, Yoon IS, Kim DD; Metabolic interactions of magnolol with cytochrome P450 enzymes: uncompetitive inhibition of CYP1A and competitive inhibition of CYP2C. *Drug Dev. Ind. Pharm.*, 42: 263-269, 2016.
126. Lee JY, Kim SB, Chung J, Song KH, Kim YS, Chung SJ, Cho HJ, Yoon IS, Kim DD; High body clearance and low oral bioavailability of alantolactone, isolated from Inula helenium, in rats: extensive hepatic metabolism and low stability in gastrointestinal fluids. *Biopharm. Drug Dispos.*, 37: 156-167, 2016
127. Lee JY, Chung SJ, Cho HJ, Kim DD; Iodinated hyaluronic acid oligomer-based nanoassemblies for tumor-targeted drug delivery and cancer imaging. *Biomaterials*, 85: 218-231, 2016.
128. Chae YJ, Lee KR, Lee JH, Lee W, Kim DD, Chung SJ, Maeng HJ; Feasibility of the functional expression of the human organic anion transporting polypeptide 1B1 (OATP1B1) and its genetic variant 521 T/C in the mouse liver. *Eur. J. Pharm. Sci.*, 96: 28-36, 2017.
129. Ryu HM, Jeong YS, Yim CS, Lee J-H, Chung SJ; Quantification of EC-18, a synthetic monoacetyl diglyceride (1-palmitoyl-2-linoleoyl-3-acetyl-rac-glycerol), in rat and mouse plasma by liquid-chromatography/tandem mass spectrometry. *J. Pharm. Biomed. Anal.*, 137: 155-162, 2017.

130. Yim CS, Jeong YS, Lee SY, Pyeon W, Ryu HM, Lee JH, Lee KR, Maeng HJ, Chung SJ; Specific Inhibition of the Distribution of Lobeglitazone to the Liver by Atorvastatin in Rats: Evidence for a Rat Organic Anion Transporting Polypeptide 1B2-Mediated Interaction in Hepatic Transport. *Drug. Met. Disp.*, 45: 246-259, 2017.
131. Jeong YS, Yim CS, Ryu HM, Noh CK, Song YK, Chung SJ; Estimation of the minimum permeability coefficient in rats for perfusion-limited tissue distribution in whole-body physiologically-based pharmacokinetics. *Eur. J. Pharm. Biopharm.*, 2017.
132. Noh CK, Lee JH, Kim MS, Maeng HJ, Chung SJ; Simultaneous quantification of volitinib and gefitinib in rat plasma by HPLC-MS/MS for application to a pharmacokinetic study in rats. *J. Sep. Sci.*, 40: 3782-3791 (2017).
133. Hyung S, Pyeon W, Park JE, Song YK, Chung SJ; The conditional stimulation of rat organic cation transporter 2, but not its human ortholog, by mesoridazine: the possibility of the involvement of the high-affinity binding site of the transporter in the stimulation. *J. Pharm. Pharmacol.*, 69: 1513-1523 (2017).
134. Lee M, Kim D, Shin J, Lee HY, Park S, Lee HS, Kang JH, Chung SJ; Quantification of IDP-73152, a novel antibiotic, in plasma from mice, rats and humans using an ultra-high performance liquid chromatography/tandem mass spectrometry method for use in pharmacokinetic studies. *J. Pharm. Biomed. Anal.*, 145: 362-371 (2017).
135. Hyung S, Jeong YS, Yeo J, Song YK, Kim MS, Im YJ, Maeng HJ, Chung SJ; Identification of the primary determining factor(s) governing the oral absorption of edaravone in rats. *Eur. J. Pharm. Sci.*, 123:312-320 (2018).
136. Son JH, Jeong YS, Lee JH, Kim MS, Lee KR, Shim CK, Kim YH, Chung SJ; Identification of metabolites of MDR-1339, an inhibitor of β -amyloid protein aggregation, and kinetic characterization of the major metabolites in rats. *J. Pharm. Biomed. Anal.*, 151:61-70 (2018).
137. Oh Y, Jeong YS, Kim MS, Min JS, Ryoo G, Park JE, Jun Y, Song YK, Chun SE, Han S, Bae SK, Chung SJ, Lee W. Inhibition of organic anion transporting polypeptide 1B1 and 1B3 by betulinic acid: Effects of preincubation and albumin in the media. *J. Pharm. Sci.*, 107:1713-1723. (2018).
138. Song YK, Park JE, Oh Y, Hyung S, Jeong YS, Kim MS, Lee W, Chung SJ; Suppression of canine ATP binding cassette ABCB1 in Madin-Darby Canine Kidney Type II cells unmasks human ABCG2-mediated efflux of Olaparib. *J. Pharmacol. Exp. Ther.*, 368:79-87 (2019).
139. Jeong YS, Balla A, Chun KH, Chung SJ, Maeng HJ; Physiologically-based pharmacokinetic modeling for drug-drug interactions of procainamide and N-acetylprocainamide with cimetidine, an inhibitor of rOCT2 and rMATE1, in rats. *Pharmaceutics*, 11: 108-134, 2019.

140. Song YK, Yoon JH, Woo JK, Kang JH, Lee KR, Oh SH, Chung SJ, Maeng HJ; Quercetin is a flavonoid breast cancer resistance protein inhibitor with an impact on the oral pharmacokinetics of sulfasalazine in rats. *Pharmaceutics* 12:397-410 (2020).
141. Kim J, Park KE, Jeong YS, Kim Y, Park H, Nam JH, Jung K, Son WS, Jung HS, Lee JH, Jeong SH, Kim NA, Ha JD, Cho SY, Choi YL, Chung SJ, Choi JY, Hong S, Shin Y K; Therapeutic efficacy of ABN401, a highly potent and selective MET inhibitor, based on diagnostic biomarker test in MET-addicted cancer. *Cancers* 12: 1575-1598 (2020).
142. Jun Y, Xu J, Kim H, Park JE, Jeong YS, Min JS, Yoon N, Choi JY, Yoo J, Bae SK, Chung SJ, Yeo Y, Lee W; Carfilzomib delivery by quinic acid-conjugated nanoparticles: Discrepancy between tumoral drug accumulation and anticancer efficacy in a murine 4T1 orthotopic breast cancer model. *J. Pharm. Sci.*, 109: 1615-1622 (2020)
143. Jeong YS, Baek M, Lee S, Kim MS, Maeng HJ, Lee JH, Suh YG, Chung SJ; Development and validation of analytical method for SH-1242 in the rat and mouse plasma by liquid chromatography/tandem mass spectrometry. *Molecules* 25: 531-543 (2020).
144. Chae YJ, Kim MS, Chung SJ, Lee MK, Lee KR, Maeng HJ; Pharmacokinetic estimation models-based approach to predict clinical implications for CYP induction by calcitriol in human cryopreserved hepatocytes and HepaRG cells. *Pharmaceutics*, 13: 181-199 (2021)
145. Jeong YS, Kim MS, Lee N, Lee A, Chae YJ, Chung SJ, Lee KR; Development of physiologically based pharmacokinetic model for orally administered fexuprazan in humans. *Pharmaceutics*, 13: 813-827 (2021)
146. Lee MJ, Jeong YS, Kim MS, Chung SJ; Prediction of pharmacokinetics of IDP-73152 in humans using physiologically based pharmacokinetics. *Pharmaceutics*, 14: 1577 (2022)
147. Song YK, Kim MJ, Kim MS, Lee JH, Chung SJ, Song JS, Chae YJ, Lee KR; Role of the efflux transporters Abcb1 and Abcg2 in the brain distribution of Olaparib in mice. *Eur. J. Pharm. Sci.*, 177: 106176 (2022)
148. Kim MS, Lee N, Lee A, Chae YJ, Chung SJ, Lee KR; Model-based prediction of acid-suppression and proposal of a new dosing regimen for fexuprazan in humans. *Pharmaceutics*, 15: 701 (2022)
149. Jeong YS, Kim MS, Chung SJ; Determination of the number of tissue groups of kinetically distinct transit time in whole-body physiologically based pharmacokinetic (PBPK) models I: Theoretical consideration of bottom-up approach of lumping tissues in whole-body PBPK. *AAPSJ*, 24: 90 (2022)
150. Jeong YS, Kim MS, Chung SJ; Determination of the number of tissue groups of kinetically distinct transit time in whole-body physiologically based pharmacokinetic

(PBPK) models II: Practical application of tissue lumping theories for pharmacokinetics of various compounds. *AAPSJ*, 24: 91 (2022)

151. Lee M, Jang E, Lee J, Choi SK, Lee WS, Baek NS, Lee S, Park YW, Lee JH, Chung SJ; Quantification of venadaparib, a novel PARP inhibitor, in the rat and dog plasma using liquid chromatography/tandem mass spectrometry. *J. Anal. Sci. Technol.*, 14: 8 (2023)

152. Nam JH, Kim MS, Song YJ, Kim CH, Kim WS, Yu CH, Joe HE, Hur GH, Seo MR, Kim Y, Park KE, Choi JY, Chung SJ, Shin YK; Pretreatment of rhesus monkeys with transdermal patches containing physostigmine and procyclidine: implications of the delivery system for the potential application against nerve agent intoxication in humans. *Arch. Toxicol.*, 97: 697 (2023)

153. Bae C, Chung G, Chung SJ; Prediction of the time to reach equilibrium for improved estimation of the unbound fraction of compounds in equilibrium dialysis using kinetic modeling. *J. Pharm. Sci.*, 112: 2901 (2023)