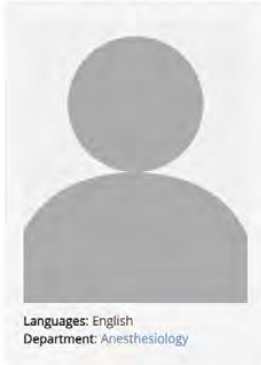


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Publications

- Hunter SK, Freedman R, Law AJ, Christians U, Holzman JBW, Johnson Z, Hoffman MC. Maternal corticosteroids and depression during gestation and decreased fetal heart rate variability. *Neuroreport*. 2021 Oct 6;32(14):1170-1174. PubMed PMID: 34284445
- Mayne G, De Bloois E, Dabelea D, Christians U. Development and validation of an LC-MS/MS assay for the quantification of allopregnanolone and its progesterone-derived isomers, precursors, and cortisol/cortisone in pregnancy. *Anal Bioanal Chem*. 2021 Sep;413(21):5427-5438. PubMed PMID: 34279681
- Hunter SK, Hoffman MC, McCarthy L, D'Alessandro A, Wyrwa A, Noonan K, Christians U, Nakimuli-Mpungu E, Zeisel SH, Law AJ, Freedman R. Targeting Treatments to Health Disparities. *Schizophr Bull*. 2021 Jul 8;47(4):886-887. PubMed PMID: 33940629
- Chavant A, Jourdil JF, Jouve T, Christians U, Fonrose X, Stanke-Labesque F. A simple and easy-to-perform liquid chromatography-mass spectrometry method for the quantification of tacrolimus and its metabolites in human whole blood. Application to the determination of metabolic ratios in kidney transplant patients. *J Chromatogr B Analyt Technol Biomed Life Sci*. 2021 Apr 8;1173:122698. [Epub ahead of print] PubMed PMID: 33878532
- Sempio C, Klawitter J, Jackson M, Freni F, Shillingburg R, Hutchison K, Bidwell LC, Christians U, Klawitter J. Analysis of 14 endocannabinoids and endocannabinoid congeners in human plasma using column switching high-performance atmospheric pressure chemical ionization liquid chromatography-mass spectrometry. *Anal Bioanal Chem*. 2021 May;412(12):3381-3392. PubMed PMID: 33817753
- Baliga MM, Klawitter J, Christians U, Hopp K, Chonchol M, Gitomer BY, Cadnapaphornchai MA, Klawitter J. Metabolic profiling in children and young adults with autosomal dominant polycystic kidney disease. *Sci Rep*. 2021 Mar 23;11(1):6629. PubMed PMID: 33756231
- Sempio C, Almaraz-Quinones N, Jackson M, Zhao W, Wang GS, Liu Y, Leehey M, Knupp K, Klawitter J, Christians U, Klawitter J. Simultaneous Quantification of 17 Cannabinoids by LC-MS-MS in Human Plasma. *J Anal Toxicol*. 2021 Mar 23. [Epub ahead of print] PubMed PMID: 33754154
- Sempio C, Bidwell LC, Hutchison K, Huestis MA, Klawitter J, Christians U, Henthorn TK. Using Population Pharmacokinetic Modeling to Estimate Exposure to 9-Tetrahydrocannabinol in an Observational Study of Cannabis Smokers in Colorado. *Ther Drug Monit*. 2021 Aug 1;43(4):536-545. PubMed PMID: 33656464
- Hunter SK, Hoffman MC, McCarthy L, D'Alessandro A, Wyrwa A, Noonan K, Christians U, Nakimuli-Mpungu E, Zeisel SH, Law AJ, Freedman R. Black American Maternal Prenatal Choline, Offspring Gestational Age at Birth, and Developmental Predisposition to Mental Illness. *Schizophr Bull*. 2021 Jul 8;47(4):896-905. PubMed PMID: 33184653
- Clavijo CF, Oliva AM, Dingmann C, Kaizer A, Christians U, Burger E, Patel V, Kleck CJ, Vogel SA, Scott BK, Janik DJ, Jameson LC, Ginde AA. Toxicology Screening Testing in Patients Undergoing Spine Surgery: A Prospective Observational Pilot Study. *Ther Drug Monit*. 2021 Feb 1;43(1):136-138. PubMed PMID: 33181620
- Freedman R, Hunter SK, Noonan K, Wyrwa A, Christians U, Law AJ, Hoffman MC. Maternal Prenatal Depression in Pregnancies With Female and Male Fetuses and Developmental Associations With C-reactive Protein and Cortisol. *Biol Psychiatry Cogn Neurosci Neuroimaging*. 2021 Mar;6(3):310-320. PubMed PMID: 33060035
- Ye H, Minhajuddin M, Krug A, Pei S, Chou CH, Culp-Hill R, Ponder J, De Bloois E, Schniedewind B, Amaya ML, Inguva A, Stevens BM, Pollyea DA, Christians U, Grimes HL, D'Alessandro A, Jordan CT. The Hepatic Microenvironment Uniquely Protects Leukemia Cells through Induction of Growth and Survival Pathways Mediated by LIPG. *Cancer Discov*. 2021 Feb;11(2):500-519. PubMed PMID: 33028621
- Sempio C, Wymore E, Palmer C, Bunik M, Henthorn TK, Christians U, Klawitter J. Detection of Cannabinoids by LC-MS-MS and ELISA in Breast Milk. *J Anal Toxicol*. 2021 Aug 14;45(7):686-692. PubMed PMID: 33002141
- Mizuno T, McPhail BT, Kamatkar S, Wexelblatt S, Ward L, Christians U, Akinbi HT, Vinks AA. Physiologic Indirect Response Modeling to Describe Buprenorphine Pharmacodynamics in Newborns Treated for Neonatal Opioid Withdrawal Syndrome. *Clin Pharmacokinet*. 2021 Feb;60(2):249-259. PubMed PMID: 32939690
- Van Hoogdale MW, Johnson TN, McPhail BT, Kamatkar S, Wexelblatt SL, Ward LP, Christians U, Akinbi HT, Vinks AA, Mizuno T. Physiologically-based pharmacokinetic modeling to investigate the effect of maturation on buprenorphine pharmacokinetics in newborns with neonatal opioid withdrawal syndrome. *Clin Pharmacol Ther*.
- Peters E, MacNair L, Mosesova I, Christians U, Sempio C, Klawitter J, Land MH, Ware MA, Turcotte C, Bonn-Miller MO. Pharmacokinetics of cannabichromene in a medical cannabis product also containing cannabidiol and 9-tetrahydrocannabinol: a pilot study. *Eur J Clin Pharmacol*.
- Cawthon CV, Cooper K, Huett C, Lloret A, Villar-Matamoros E, Stokes L, Christians U, Schuler M, Yazdani SK. Pre-Clinical Investigation of Liquid Paclitaxel for Local Drug Delivery: A Pilot Study. *Pharmaceuticals (Basel)*. 2020 Nov 28;13(12). PubMed PMID: 33260517
- Hunter SK, Hoffman MC, McCarthy L, D'Alessandro A, Wyrwa A, Noonan K, Christians U, Nakimuli-Mpungu E, Zeisel SH, Law AJ, Freedman R. Black American Maternal Prenatal Choline, Offspring Gestational Age at Birth, and Developmental Predisposition to Mental Illness. *Schizophr Bull*. 2020 Nov 13. [Epub ahead of print] PubMed PMID: 33184653
- Clavijo CF, Oliva AM, Dingmann C, Kaizer A, Christians U, Burger E, Patel V, Kleck CJ, Vogel SA, Scott BK, Janik DJ, Jameson LC, Ginde AA. Toxicology Screening Testing in Patients Undergoing Spine Surgery: A Prospective Observational Pilot Study. *Ther Drug Monit*. 2020 Nov 9. [Epub ahead of print] PubMed PMID: 33181620
- Freedman R, Hunter SK, Noonan K, Wyrwa A, Christians U, Law AJ, Hoffman MC. Maternal Prenatal Depression in Pregnancies With Female and Male Fetuses and Developmental Associations With C-reactive Protein and Cortisol. *Biol Psychiatry Cogn Neurosci Neuroimaging*. 2020 Aug 13. [Epub ahead of print] PubMed PMID: 33060035
- Ye H, Minhajuddin M, Krug A, Pei S, Chou CH, Culp-Hill R, Ponder J, De Bloois E, Schniedewind B, Amaya ML, Inguva A, Stevens BM, Pollyea DA, Christians U, Grimes HL, D'Alessandro A, Jordan CT. The hepatic microenvironment uniquely protects leukemia cells through induction of growth and survival pathways mediated by LIPG. *Cancer Discov*. 2020 Oct 7. [Epub ahead of print] PubMed PMID: 33028621
- Sempio C, Wymore E, Palmer C, Bunik M, Henthorn TK, Christians U, Klawitter J. Detection of Cannabinoids by LC-MS-MS and ELISA in Breast Milk. *J Anal Toxicol*. 2020 Oct 2. [Epub ahead of print] PubMed PMID: 33002141
- Mizuno T, McPhail BT, Kamatkar S, Wexelblatt S, Ward L, Christians U, Akinbi HT, Vinks AA. Physiologic Indirect Response Modeling to Describe Buprenorphine Pharmacodynamics in Newborns Treated for Neonatal Opioid Withdrawal Syndrome. *Clin Pharmacokinet*. 2020 Sep 17. [Epub ahead of print] PubMed PMID: 32939690
- Frymoyer A, Van Meurs KP, Drover DR, Klawitter J, Christians U, Chock VY. Theophylline dosing and pharmacokinetics for renal protection in neonates with hypoxic-ischemic encephalopathy undergoing therapeutic hypothermia. *Pediatr Res*. 2020 Dec;88(6):871-877. PubMed PMID: 32919393
- Christians U, Roger Jelliffe MD, FCP, FAAPS Obituary. *Ther Drug Monit*. 2020 Aug 10. [Epub ahead of print] PubMed PMID: 32796388
- Schniedewind B, Meyer EJ, Christians U. Long-Term Performance of Laboratory-Developed Liquid Chromatography-Tandem Mass Spectrometry Tests and a Food and Drug Administration-Approved Immunoassay for the Therapeutic Drug Monitoring of Everolimus. *Ther Drug Monit*. 2020 Jun;42(3):421-426. PubMed PMID: 32427781
- Jelliffe R, Christians U. The New Direct-Acting Oral Anticoagulants Need to be Monitored!. *Ther Drug Monit*. 2020 Jun;42(3):357-359. PubMed PMID: 32427780
- Christians U, Henthorn TK, Walson PD, Oellerich M, Eliasson E. In Memoriam: Professor Folke Sjöqvist. *Ther Drug Monit*. 2020 Apr 15. [Epub ahead of print] PubMed PMID: 32304489
- Goel E, Erwin M, Cawthon CV, Schaff C, Fedor N, Rayl T, Wilson O, Christians U, Register TC, Geary RL, Saul J, Yazdani SK. Pre-Clinical Investigation of Keratose as an Excipient of Drug Coated Balloons. *Molecules*. 2020 Mar 31;25(7). PubMed PMID: 32244375

- Wang GS, Bourne DWA, Klawitter J, Sempio C, Chapman K, Knupp K, Wempe MF, Borgelt L, Christians U, Leonard J, Heard K, Bajaj L. Disposition of Oral Cannabidiol-Rich Cannabis Extracts in Children with Epilepsy. *Clin Pharmacokinet*. 2020 Aug;59(8):1005-1012. PubMed PMID: 32048179
- Sempio C, Huestis MA, Mikulich-Gilbertson SK, Klawitter J, Christians U, Henthorn TK. Population pharmacokinetic modeling of plasma 79 tetrahydrocannabinol and an active and inactive metabolite following controlled smoked cannabis administration. *Br J Clin Pharmacol*. 2020 Mar;86(3):611-619. PubMed PMID: 31747464
- Shokati T, Hartmann M, Davari B, Klawitter J, Klawitter J, Christians U. Temsirolimus metabolic pathways revisited. *Xenobiotica*. 2020 Jun;50(6):640-653. PubMed PMID: 31596164
- Davari B, Kotecha N, Clavijo CF, Thomas JJ, Rzasal-Lynn R, Galinkin JL, Christians U, Sempio C. A Sensitive LC-MS/MS Assay for the Quantification of Methadone and its Metabolites in Dried Blood Spots: Comparison With Plasma. *Ther Drug Monit*. 2020 Feb;42(1):118-128. PubMed PMID: 31318842
- Wang GS, Bourne DWA, Klawitter J, Sempio C, Chapman K, Knupp K, Wempe MF, Borgelt L, Christians U, Heard K, Bajaj L. Disposition of oral delta-9 tetrahydrocannabinol (THC) in children receiving cannabis extracts for epilepsy. *Clin Toxicol (Phila)*. 2020 Feb;58(2):124-128. PubMed PMID: 31111749
- An approach to biomarker discovery of cannabis use utilizing proteomic, metabolomic, and lipidomic analyses. *Cann Cannab Res*. 2020
- Albeiroti S, Buggs V, Schniedewind B, Sobhani K, Christians U, Kelly KA. Therapeutic drug monitoring of immunosuppressants. In: *Toxicology Cases for the Clinical and Forensic Laboratory*. Ketha H, Garg U (eds) Elsevier Academic Press. San Diego (2020), pp. 317-332.
- Hinckley JD, Saba L, Raymond K, Bartels K, Klawitter J, Christians U, Hopfer C. An Approach to Biomarker Discovery of Cannabis Use Utilizing Proteomic, Metabolomic, and Lipidomic Analyses. *Cannabis Cannabinoid Res*. 2020 Jun 19. [Epub ahead of print] PubMed PMID: 33998853
- Cawthon CV, Cooper K, Huett C, Uoret A, Villar-Matamoros E, Stokes L, Christians U, Schuler M, Yazdani SK. Pre-Clinical Investigation of Liquid Paclitaxel for Local Drug Delivery: A Pilot Study. *Pharmaceuticals (Basel)*. 2020 Nov 28;13(12). PubMed PMID: 33260517
- Frymoyer A, Van Meurs KP, Drover DR, Klawitter J, Christians U, Chock VY. Theophylline dosing and pharmacokinetics for renal protection in neonates with hypoxic-ischemic encephalopathy undergoing therapeutic hypothermia. *Pediatr Res*. 2020 Dec;88(6):871-877. PubMed PMID: 32919393
- Schniedewind B, Meyer EJ, Christians U. Long-term Performance of Laboratory-developed LC-MS/MS Tests and an FDA-approved Immunoassay for the Therapeutic Drug Monitoring of Everolimus. *Ther Drug Monit*. 2019 Oct 7. [Epub ahead of print] PubMed PMID: 31596754
- Shokati T, Hartmann M, Davari B, Klawitter J, Klawitter J, Christians U. Temsirolimus Metabolic Pathways Revisited. *Xenobiotica*. 2019 Oct 9;1-30. [Epub ahead of print] PubMed PMID: 31596164
- Weinberg A, Huo Y, Kacanek D, Patel K, Watts DH, Wara D, Hoffman RM, Klawitter J, Christians U. Brief Report: Markers of Spontaneous Preterm Delivery in Women Living With HIV: Relationship With Protease Inhibitors and Vitamin D. *J Acquir Immune Defic Syndr*. 2019 Oct 1;82(2):181-187. PubMed PMID: 31513074
- Davari B, Kotecha N, Clavijo CF, Thomas JJ, Rzasal-Lynn R, Galinkin JL, Christians U, Sempio C. A SENSITIVE LC-MS/MS ASSAY FOR THE QUANTIFICATION OF METHADONE AND ITS METABOLITES IN DRIED BLOOD SPOTS: COMPARISON WITH PLASMA. *Ther Drug Monit*. 2019 Jul 15. [Epub ahead of print] PubMed PMID: 31318842
- Klawitter J, Klawitter J, Pennington A, Kirkpatrick B, Roda G, Kotecha NC, Thurman JM, Christians U. Cyclophilin D knockout protects the mouse kidney against cyclosporin A-induced oxidative stress. *Am J Physiol Renal Physiol*. 2019 Sep 1;317(3):F683-F694. PubMed PMID: 31188033
- Wang GS, Bourne DWA, Klawitter J, Sempio C, Chapman K, Knupp K, Wempe MF, Borgelt L, Christians U, Heard K, Bajaj L. Disposition of oral delta-9 tetrahydrocannabinol (THC) in children receiving cannabis extracts for epilepsy. *Clin Toxicol (Phila)*. 2019 May 21;1-5. [Epub ahead of print] PubMed PMID: 31111749
- Brunet M, van Gelder T, Åsberg A, Haufroid V, Hesselink DA, Langman L, Lemaître F, Marquet P, Seger C, Shipkova M, Vinks A, Wallenacq P, Wieland E, Woillard JB, Barten MJ, Budde K, Colom H, Dieterlen MT, Elens L, Johnson-Davis KL, Kunicki PK, MacPhee I, Masuda S, Mathew BS, Millán O, Mizuno T, Moes DAR, Monchaud C, Nocetti O, Pawinski T, Picard N, van Schaik R, Sommerer C, Vethe NT, de Winter B, Christians U, Bergan S. Therapeutic Drug Monitoring of Tacrolimus-Personalized Therapy: Second Consensus Report. *Ther Drug Monit*. 2019 Jun;41(3):261-307. PubMed PMID: 31045868
- Golomb BA, Koslik HJ, Christians U, Ritchie J, Wilson P, Elkins N, Klawitter J, Klawitter J, Smith D, Repine JE. Depressed prostaglandins and leukotrienes in veterans with Gulf War illness. *J Environ Sci Health B*. 2019;54(8):623-639. PubMed PMID: 31033394
- Keller AC, Klawitter J, Hildreth KL, Christians U, Putnam K, Kohrt WM, Reusch JEB, Moreau KL. Elevated plasma homocysteine and cysteine are associated with endothelial dysfunction across menopausal stages in healthy women. *J Appl Physiol (1985)*. 2019 Jun 1;126(6):1533-1540. PubMed PMID: 30896357
- Lichvar A, Tremblay S, Naik D, Lipscomb J, King E, Vinks AA, Christians U, Alloway RR. Evaluation of Clinical and Safety Outcomes Following Uncontrolled Tacrolimus Conversion in Adult Transplant Recipients. *Pharmacotherapy*. 2019 May;39(5):564-575. PubMed PMID: 30892704
- Shipkova M, Christians U. Improving Therapeutic Decisions: Pharmacodynamic Monitoring as an Integral Part of Therapeutic Drug Monitoring. *Ther Drug Monit*. 2019 Apr;41(2):111-114. PubMed PMID: 30883504
- Freedman R, Hunter SK, Law AJ, Wagner BD, D'Alessandro A, Christians U, Noonan K, Wyrwa A, Hoffman MC. Higher Gestational Choline Levels in Maternal Infection Are Protective for Infant Brain Development. *J Pediatr*. 2019 May;208:198-206.e2. PubMed PMID: 30879727
- Van Hove JLK, Freehauf CL, Ficioglu C, Pena LDM, Moreau KL, Henthorn TK, Christians U, Jiang H, Cowan TM, Young SP, Hite M, Friederich MW, Stabler SP, Spector EB, Kronquist KE, Thomas JA, Emmett P, Harrington MJ, Pyle L, Creadon-Swindell G, Wempe MF, MacLean KN. Biomarkers of oxidative stress, inflammation, and vascular dysfunction in inherited cystathionine β-synthase deficient homocystinuria and the impact of taurine treatment in a phase 1/2 human clinical trial. *J Inher Metab Dis*. 2019 May;42(3):424-437. PubMed PMID: 30873612
- Van Hove JLK, Freehauf CL, Ficioglu C, Pena LDM, Moreau KL, Henthorn TK, Christians U, Jiang H, Cowan TM, Young SP, Hite M, Friederich MW, Stabler SP, Spector EB, Kronquist KE, Thomas JA, Emmett P, Harrington MJ, Pyle L, Creadon-Swindell G, Wempe MF, MacLean KN. Biomarkers of oxidative stress, inflammation, and vascular dysfunction in inherited cystathionine β-synthase deficient homocystinuria and the impact of taurine treatment in a phase 1/2 human clinical trial. *J Inher Metab Dis*. 2019 May;42(3):424-437. PubMed PMID: 30873612
- Emoto C, Johnson TN, Hahn D, Christians U, Alloway RR, Vinks AA, Fukuda T. A Theoretical Physiologically-Based Pharmacokinetic Approach to Ascertain Covariates Explaining the Large Interpatient Variability in Tacrolimus Disposition. *CPT Pharmacometrics Syst Pharmacol*. 2019 May;8(5):273-284. PubMed PMID: 30843669
- Leino AD, King EC, Jiang W, Vinks AA, Klawitter J, Christians U, Woodle ES, Alloway RR, Rohan JM. Assessment of tacrolimus inpatient variability in stable adherent transplant recipients: Establishing baseline values. *Am J Transplant*. 2019 May;19(5):1410-1420. PubMed PMID: 30506623
- Sempio C, Lindley E, Klawitter J, Christians U, Bowler RP, Adgate JL, Allshouse W, Awdziejczyk L, Fischer S, Bainbridge J, Vandyke M, Netsanet R, Crume T, Kinney GL. Surface Detection of THC Attributable to Vaporizer Use in the Indoor Environment. *Sci Rep*. 2019 Dec 9;9(1):18587. PubMed PMID: 31819131
- Weinberg A, Huo Y, Kacanek D, Patel K, Watts DH, Wara D, Hoffman RM, Klawitter J, Christians U. Brief Report: Markers of Spontaneous Preterm Delivery in Women Living With HIV: Relationship With Protease Inhibitors and Vitamin D. *J Acquir Immune Defic Syndr*. 2019 Oct 1;82(2):181-187. PubMed PMID: 31513074
- Pedroso AP, Dornellas APS, de Souza AP, Pagotto JF, Oyama LM, Nascimento CMO, Klawitter J, Christians U, Tashima AK, Ribeiro EB. A proteomics-metabolomics approach indicates changes in hypothalamic glutamate-GABA metabolism of adult female rats submitted to intrauterine growth restriction. *Eur J Nutr*. 2018 Nov 7. [Epub ahead of print] PubMed PMID: 30406389
- Turner E, Erwin M, Atigh M, Christians U, Saul JM, Yazdani SK. In vitro and in vivo Assessment of Keratose as a Novel Excipient of Paclitaxel Coated Balloons. *Front Pharmacol*. 2018;9:808. PubMed PMID: 30104972
- Jalal D, Renner B, Laskowski J, Sites E, Cooper J, Valente K, You Z, Perrenoud L, Le Quintrec M, Mohamed I, Christians U, Klawitter J, Lindorfer MA, Taylor RP, Holers VM, Thurman JM. Endothelial Microparticles and Systemic Complement Activation in Patients With Chronic Kidney Disease. *J Am Heart Assoc*. 2018 Jul 13;7(14). PubMed PMID: 30006493
- Heischmann S, Gano LB, Quinn K, Liang LP, Klepacki J, Christians U, Reisdorph N, Patel M. Regulation of kynurenic acid metabolism by a ketogenic diet. *J Lipid Res*. 2018 Jun;59(6):958-966. PubMed PMID: 29605816
- Goot BH, Kaufman J, Pan Z, Bourne DWA, Hickey F, Twite M, Galinkin J, Christians U, Zuk J, da Cruz EM. Morphine Pharmacokinetics in Children With Down Syndrome Following Cardiac Surgery. *Pediatr Crit Care Med*. 2018 May;19(5):459-467. PubMed PMID: 29547456
- Bittersohl H, Schniedewind B, Christians U, Luppa PB. A simple and highly sensitive on-line column extraction liquid

- chromatography-tandem mass spectrometry method for the determination of protein-unbound tacrolimus in human plasma samples. *J Chromatogr A*. 2018 Apr 27;1547:45-52. PubMed PMID: 29544893
- Turner EA, Atigh MK, Erwin MM, Christians U, Yazdani SK. Coating and Pharmacokinetic Evaluation of Air Spray Coated Drug Coated Balloons. *Cardiovasc Eng Technol*. 2018 Jun;9(2):240-250. PubMed PMID: 29497966
 - Goetz L, Laskowski J, Renner B, Pickering MC, Kulik L, Klawitter J, Stites E, Christians U, van der Vlag J, Ravichandran K, Holers VM, Thurman JM. Complement factor H protects mice from ischemic acute kidney injury but is not critical for controlling complement activation by glomerular IgM. *Eur J Immunol*. 2018 May;48(5):791-802. PubMed PMID: 29389016
 - McLay JS, Engelhardt T, Mohammed BS, Cameron G, Cohen MN, Galinkin JL, Christians U, Avram MJ, Henthorn TK, Tsida RM, Anderson BJ. The pharmacokinetics of intravenous ketorolac in children aged 2 months to 16 years: A population analysis. *Paediatr Anaesth*. 2018 Feb;28(2):80-86. PubMed PMID: 29266539
 - Schroeder T, Piantadosi CA, Natoli MJ, Autmizguine J, Cohen-Wolkowicz M, Hamilton KL, Bell C, Klawitter J, Christians U, Irwin DC, Noveck RJ. Safety and Ergogenic Properties of Combined Aminophylline and Ambrisentan in Hypoxia. *Clin Pharmacol Ther*. 2018 May;103(5):888-898. PubMed PMID: 28857147
 - Kem WR, Olincy A, Johnson L, Harris J, Wagner BD, Buchanan RW, Christians U, Freedman R. Pharmacokinetic Limitations on Effects of an Alpha7-Nicotinic Receptor Agonist in Schizophrenia: Randomized Trial with an Extended-Release Formulation. *Neuropsychopharmacology*. 2018 Feb;43(3):583-589. PubMed PMID: 28825423
 - Heischmann S, Christians U. Validation of the cell line LS180 as a model for study of the gastrointestinal toxicity of mycophenolic acid. *Xenobiotica*. 2018 May;48(5):433-441. PubMed PMID: 28489504
 - Davidson JA, Pfeifer Z, Frank B, Tong S, Urban TT, Wischmeyer PA, Mourani P, Landeck B, Christians U, Klawitter J. Metabolomic Fingerprinting of Infants Undergoing Cardiopulmonary Bypass: Changes in Metabolic Pathways and Association With Mortality and Cardiac Intensive Care Unit Length of Stay. *J Am Heart Assoc*. 2018 Dec 18;7(24):e010711. PubMed PMID: 30561257
 - Pedroso AP, Dornellas APS, de Souza AP, Pagotto JF, Oyama LM, Nascimento CMO, Klawitter J, Christians U, Tashima AK, Ribeiro EB. A proteomics-metabolomics approach indicates changes in hypothalamic glutamate-GABA metabolism of adult female rats submitted to intrauterine growth restriction. *Eur J Nutr*. 2018 Nov 7. [Epub ahead of print] PubMed PMID: 30406389
 - Klawitter J, Hildreth KL, Christians U, Kohrt WM, Moreau KL. A relative L-arginine deficiency contributes to endothelial dysfunction across the stages of the menopausal transition. *Physiol Rep*. 2017 Sep;5(17). PubMed PMID: 28904082
 - Klawitter J, Pennington A, Klawitter J, Thurman JM, Christians U. Mitochondrial cyclophilin D ablation is associated with the activation of Akt/p70S6K pathway in the mouse kidney. *Sci Rep*. 2017 Sep 5;7(1):10540. PubMed PMID: 28874678
 - Schroeder T, Piantadosi CA, Natoli MJ, Autmizguine J, Cohen-Wolkowicz M, Hamilton KL, Bell C, Klawitter J, Christians U, Irwin DC, Noveck RJ. Safety and Ergogenic Properties of Combined Aminophylline and Ambrisentan in Hypoxia. *Clin Pharmacol Ther*. 2017 Aug 31. [Epub ahead of print] PubMed PMID: 28857147
 - Kem WR, Olincy A, Johnson L, Harris J, Wagner BD, Buchanan RW, Christians U, Freedman R. Pharmacokinetic Limitations on Effects of an Alpha7-Nicotinic Receptor Agonist in Schizophrenia: Randomized Trial with an Extended-Release Formulation. *Neuropsychopharmacology*. 2017 Aug 21. [Epub ahead of print] PubMed PMID: 28825423
 - Klepacki J, Davari B, Boulet M, Lizarraga R, Christians U. A High-throughput HPLC-MS/MS Assay for the Detection, Quantification and Simultaneous Structural Confirmation of 136 Drugs and Metabolites in Human Urine. *Ther Drug Monit*. 2017 Oct;39(5):565-574. PubMed PMID: 28650900
 - Klawitter J, Sempio C, Morlein S, De Bloois E, Klepacki J, Henthorn T, Leehey MA, Hoffenberg EJ, Krupp K, Wang GS, Hopfer C, Kinney G, Bowler R, Foreman N, Galinkin J, Christians U, Klawitter J. An Atmospheric Pressure Chemical Ionization MS/MS Assay Using Online Extraction for the Analysis of 11 Cannabinoids and Metabolites in Human Plasma and Urine. *Ther Drug Monit*. 2017 Oct;39(5):556-564. PubMed PMID: 28640062
 - Heischmann S, Christians U. Validation of the cell line LS180 as a model for study of the gastrointestinal toxicity of mycophenolic acid. *Xenobiotica*. 2017 May 30;1-9. [Epub ahead of print] PubMed PMID: 28489504
 - Strand TE, Khabiani HZ, Boico A, Radloff D, Zhao Y, Hamilton KL, Christians U, Klawitter J, Noveck RJ, Piantadosi CA, Bell C, Irwin D, Schroeder T. The novel combination of theophylline and bambuterol as a potential treatment of hypoxemia in humans. *Can J Physiol Pharmacol*. 2017 Sep;95(9):1009-1018. PubMed PMID: 28467859
 - Atigh MK, Turner E, Christians U, Yazdani SK. The use of an occlusion perfusion catheter to deliver paclitaxel to the arterial wall. *Cardiovasc Ther*. 2017 Aug;35(4). PubMed PMID: 28445625
 - Diwan TS, Lichvar AB, Leino AD, Vinks AA, Christians U, Shields AR, Cardi MA, Fukuda T, Mizuno T, Kaiser T, Woodle ES, Alloway RR. Pharmacokinetic and pharmacogenetic analysis of immunosuppressive agents after laparoscopic sleeve gastrectomy. *Clin Transplant*. 2017 Jun;31(6). PubMed PMID: 28342282
 - Heischmann S, Dzieciatkowska M, Hansen K, Leibfritz D, Christians U. The Immunosuppressant Mycophenolic Acid Alters Nucleotide and Lipid Metabolism in an Intestinal Cell Model. *Sci Rep*. 2017 Mar 22;7:45088. PubMed PMID: 28327659
 - Pedroso AP, Souza AP, Dornellas AP, Oyama LM, Nascimento CM, Santos GM, Rosa JC, Bertolla RP, Klawitter J, Christians U, Tashima AK, Ribeiro EB. Intrauterine Growth Restriction Programs the Hypothalamus of Adult Male Rats: Integrated Analysis of Proteomic and Metabolomic Data. *J Proteome Res*. 2017 Apr 7;16(4):1515-1525. PubMed PMID: 28314371
 - Klawitter J, Seres T, Pennington A, Beatty JT, Klawitter J, Christians U. Ablation of Cyclophilin D Results in an Activation of FAK, Akt, and ERK Pathways in the Mouse Heart. *J Cell Biochem*. 2017 Sep;118(9):2933-2940. PubMed PMID: 28230282
 - Mishra N, Wang P, Goldsmith D, Zhao X, Xue Y, Christians U, Minassian BA. Everolimus does not prevent Lafora body formation in murine Lafora disease. *Neurol Genet*. 2017 Feb;3(1):e127. PubMed PMID: 28097224
 - Mizuno T, Fukuda T, Christians U, Perentesis JP, Fouladi M, Vinks AA. Population pharmacokinetics of temsirolimus and sirolimus in children with recurrent solid tumours: a report from the Children's Oncology Group. *Br J Clin Pharmacol*. 2017 May;83(5):1097-1107. PubMed PMID: 28000286
 - Alloway RR, Vinks AA, Fukuda T, Mizuno T, King EC, Zou Y, Jiang W, Woodle ES, Tremblay S, Klawitter J, Klawitter J, Christians U. Bioequivalence between innovator and generic tacrolimus in liver and kidney transplant recipients: A randomized, crossover clinical trial. *PLoS Med*. 2017 Nov;14(11):e1002428. PubMed PMID: 29135993
 - Emoto C, Fukuda T, Mizuno T, Schniedewind B, Christians U, Adams DM, Vinks AA. Characterizing the Developmental Trajectory of Sirolimus Clearance in Neonates and Infants. *CPT Pharmacometrics Syst Pharmacol*. 2016 Aug;5(8):411-7. PubMed PMID: 27501453
 - Klepacki J, Klawitter J, Klawitter J, Karimpour-Fard A, Thurman J, Ingle G, Patel D, Christians U. Amino acids in a targeted versus a non-targeted metabolomics LC-MS/MS assay. Are the results consistent?. *Clin Biochem*. 2016 Sep;49(13-14):955-61. PubMed PMID: 27288551
 - O'Connor S, Zhang YL, Christians U, Morrison JE Jr, Friesen RH. Remifentanyl and propofol undergo separation and layering when mixed in the same syringe for total intravenous anesthesia. *Paediatr Anaesth*. 2016 Jul;26(7):703-9. PubMed PMID: 27146802
 - Seger C, Shipkova M, Christians U, Billaud EM, Wang P, Holt DW, Brunet M, Kunicki PK, Pawinski T, Langman UJ, Marquet P, Oellerich M, Wieland E, Wallemacq P. Assuring the Proper Analytical Performance of Measurement Procedures for Immunosuppressive Drug Concentrations in Clinical Practice: Recommendations of the International Association of Therapeutic Drug Monitoring and Clinical Toxicology Immunosuppressive Drug Scientific Committee. *Ther Drug Monit*. 2016 Apr;38(2):170-89. PubMed PMID: 26982493
 - Brunet M, Shipkova M, van Gelder T, Wieland E, Sommerer C, Budde K, Haufroid V, Christians U, López-Hoyos M, Barten MJ, Bergan S, Picard N, Millán López O, Marquet P, Hesselink DA, Noceti O, Pawinski T, Wallemacq P, Oellerich M, Barcelona Consensus on Biomarker-Based Immunosuppressive Drugs Management in Solid Organ Transplantation. *Ther Drug Monit*. 2016 Apr;38 Suppl 1:S1-20. PubMed PMID: 26977997
 - Repine JE, Wilson P, Elkins N, Klawitter J, Christians U, Peters B, Smith DM. Inhalation of two putative Gulf War toxins by mice. *J Environ Sci Health B*. 2016;51(6):366-73. PubMed PMID: 26950528
 - Fæste CK, Moen A, Schniedewind B, Haug Anonsen J, Klawitter J, Christians U. Development of liquid chromatography-tandem mass spectrometry methods for the quantitation of Anisakis simplex proteins in fish. *J Chromatogr A*. 2016 Feb 5;1432:58-72. PubMed PMID: 26787163
 - Shipkova M, López OM, Picard N, Noceti O, Sommerer C, Christians U, Wieland E. Analytical Aspects of the Implementation of Biomarkers in Clinical Transplantation. *Ther Drug Monit*. 2016 Apr;38 Suppl 1:S80-92. PubMed PMID: 26418704
 - Christians U, Klawitter J, Klawitter J. Biomarkers in Transplantation-Proteomics and Metabolomics. *Ther Drug Monit*. 2016 Apr;38 Suppl 1:S70-4. PubMed PMID: 26418702
 - Hadamitzky M, Bosche K, Wirth T, Buck B, Beetz O, Christians U, Schniedewind B, Lückemann L, Güntürkün O, Engler H, Schedlowski M. Memory-updating abrogates extinction of learned immunosuppression. *Brain Behav Immun*. 2016 Feb;52:40-8. PubMed PMID: 26386321
 - Shokati T, Bodenberger N, Gadpaille H, Schniedewind B, Vinks AA, Jiang W, Alloway RR, Christians U. Quantification of the Immunosuppressant Tacrolimus on Dried Blood Spots Using LC-MS/MS. *J Vis Exp*. 2015 Nov 8;(105). PubMed PMID: 26575262

- Shipkova M, López OM, Picard N, Noceti O, Sommerer C, Christians U, Wieland E. ANALYTICAL ASPECTS OF THE IMPLEMENTATION OF BIOMARKERS IN CLINICAL TRANSPLANTATION. *Ther Drug Monit.* 2015 Jul 30. [Epub ahead of print] PubMed PMID: 26418704
- U C, Klawitter J, Klawitter J. Biomarkers in Transplantation- Proteomics and Metabolomics. *Ther Drug Monit.* 2015 Aug 28. [Epub ahead of print] PubMed PMID: 26418702
- Hadamitzky M, Bösche K, Wirth T, Buck B, Beetz O, Christians U, Schniedewind B, Lückemann L, Güntürkün O, Engler H, Schedlowski M. Memory-updating abrogates extinction of learned immunosuppression. *Brain Behav Immun.* 2015 Sep 18. [Epub ahead of print] PubMed PMID: 26386321
- Christians U, Vinks AA, Langman LJ, Clarke W, Wallemacq P, van Gelder T, Renjen V, Marquet P, Meyer EJ. Impact of Laboratory Practices on Interlaboratory Variability in Therapeutic Drug Monitoring of Immunosuppressive Drugs. *Ther Drug Monit.* 2015 Dec;37(6):718-24. PubMed PMID: 26291980
- Klawitter J, McFann K, Pennington AT, Wang W, Klawitter J, Christians U, Schrier RW, Gitomer B, Cadnapaphornchai MA. Pravastatin Therapy and Biomarker Changes in Children and Young Adults with Autosomal Dominant Polycystic Kidney Disease. *Clin J Am Soc Nephrol.* 2015 Sep 4;10(9):1534-41. PubMed PMID: 26224879
- Schniedewind B, Niederlechner S, Galinkin JL, Johnson-Davis KL, Christians U, Meyer EJ. Long-term cross-validation of everolimus therapeutic drug monitoring assays: the Zortracker study. *Ther Drug Monit.* 2015 Jun;37(3):296-303. PubMed PMID: 25970506
- Klawitter J, Nashan B, Christians U. Everolimus and sirolimus in transplantation-related but different. *Expert Opin Drug Saf.* 2015 Jul;14(7):1055-70. PubMed PMID: 25912929
- Klepacki J, Klawitter J, Klawitter J, Thurman JM, Christians U. A high-performance liquid chromatography-tandem mass spectrometry-based targeted metabolomics kidney dysfunction marker panel in human urine. *Clin Chim Acta.* 2015 Jun 15;446:43-53. PubMed PMID: 25871999
- Bösche K, Weissenborn K, Christians U, Witzke O, Engler H, Schedlowski M, Hadamitzky M. Neurobehavioral consequences of small molecule-drug immunosuppression. *Neuropharmacology.* 2015 Sep;96(Pt A):83-93. PubMed PMID: 25529273
- Emoto C, Fukuda T, Mizuno T, Cox S, Schniedewind B, Christians U, Widemann BC, Fisher MJ, Weiss B, Perentesis J, Vinks AA. Age-dependent changes in sirolimus metabolite formation in patients with neurofibromatosis type 1. *Ther Drug Monit.* 2015 Jun;37(3):395-9. PubMed PMID: 25162215
- Shokati T, Bodenberger N, Gadpaille H, Schniedewind B, Vinks AA, Jiang W, Alloway RR, Christians U. Quantification of the Immunosuppressant Tacrolimus on Dried Blood Spots Using LC-MS/MS. *J Vis Exp.* 2015 Nov 8;105:e2424. PubMed PMID: 26575262
- Klawitter J, Klawitter J, Schmitz V, Shokati T, Epshtein E, Thurman JM, Christians U. Mycophenolate mofetil enhances the negative effects of sirolimus and tacrolimus on rat kidney cell metabolism. *PLoS One.* 2014;9(1):e86202. PubMed PMID: 24497939
- Tak E, Ridyard D, Kim JH, Zimmerman M, Werner T, Wang XX, Shabeka U, Seo SW, Christians U, Klawitter J, Moldovan R, Garcia G, Levi M, Haase V, Ravid K, Eltzschig HK, Grenz A. CD73-dependent generation of adenosine and endothelial Adora2b signaling attenuate diabetic nephropathy. *J Am Soc Nephrol.* 2014 Mar;25(3):547-63. PubMed PMID: 24262796
- Bösche K, Weissenborn K, Christians U, Witzke O, Engler H, Schedlowski M, Hadamitzky M. Neurobehavioral consequences of small molecule-drug immunosuppression. *Neuropharmacology.* 2014 Dec 19. [Epub ahead of print] PubMed PMID: 25529273
- Klawitter J, Reed-Gitomer BY, McFann K, Pennington A, Klawitter J, Abebe KZ, Klepacki J, Cadnapaphornchai MA, Brosnahan G, Chonchol M, Christians U, Schrier RW. Endothelial dysfunction and oxidative stress in polycystic kidney disease. *Am J Physiol Renal Physiol.* 2014 Dec 1;307(11):F1198-206. PubMed PMID: 25234311
- Emoto C, Fukuda T, Mizuno T, Cox S, Schniedewind B, Christians U, Widemann BC, Fisher MJ, Weiss B, Perentesis J, Vinks AA. Age dependent changes in sirolimus metabolite formation in patients with neurofibromatosis type 1. *Ther Drug Monit.* 2014 Aug 26. [Epub ahead of print] PubMed PMID: 25162215
- Klawitter J, Bek S, Zakaria M, Zeng C, Hornberger A, Gilbert R, Shokati T, Klawitter J, Christians U, Boersen KO. Fatty acid desaturation index in human plasma: comparison of different analytical methodologies for the evaluation of diet effects. *Anal Bioanal Chem.* 2014 Oct;406(25):6399-408. PubMed PMID: 25116600
- Gardner LA, Klawitter J, Gregory MA, Zaberezhnyy V, Baturin D, Pollyea DA, Takebe N, Christians U, Gore L, DeGregori J, Porter CC. Inhibition of calcineurin combined with dasatinib has direct and indirect anti-leukemia effects against BCR-ABL(1) leukemia. *Am J Hematol.* 2014 Sep;89(9):896-903. PubMed PMID: 24891015
- Shihab F, Christians U, Smith L, Wellen JR, Kaplan B. Focus on mTOR inhibitors and tacrolimus in renal transplantation: pharmacokinetics, exposure-response relationships, and clinical outcomes. *Transpl Immunol.* 2014 Jun;31(1):22-32. PubMed PMID: 24861504
- Fernandez-Bustamante A, Klawitter J, Repine JE, Agazio A, Janocha AJ, Shah C, Moss M, Douglas IS, Tran ZV, Erzurum SC, Christians U, Seres T. Early effect of tidal volume on lung injury biomarkers in surgical patients with healthy lungs. *Anesthesiology.* 2014 Sep;121(3):469-81. PubMed PMID: 24809976
- Klawitter J, Klawitter J, Schmitz V, Shokati T, Epshtein E, Thurman JM, Christians U. Mycophenolate mofetil enhances the negative effects of sirolimus and tacrolimus on rat kidney cell metabolism. *PLoS One.* 2014;9(1):e86202. PubMed PMID: 24497939
- Klawitter J, Klawitter J, McFann K, Pennington AT, Abebe KZ, Brosnahan G, Cadnapaphornchai MA, Chonchol M, Gitomer B, Christians U, Schrier RW. Bioactive lipid mediators in polycystic kidney disease. *J Lipid Res.* 2013 Dec 16. [Epub ahead of print] PubMed PMID: 24343898
- Renner B, Klawitter J, Goldberg R, McCullough JW, Ferreira VP, Cooper JE, Christians U, Thurman JM. Cyclosporine induces endothelial cell release of complement-activating microparticles. *J Am Soc Nephrol.* 2013 Nov;24(11):1849-62. PubMed PMID: 24092930
- Frassetto L, Floren L, Barin B, Browne M, Wolfe A, Roland M, Stock P, Carlson L, Christians U, Benet L. Changes in clearance, volume and bioavailability of immunosuppressants when given with HAART in HIV-1 infected liver and kidney transplant recipients. *Biopharm Drug Dispos.* 2013 Nov;34(8):442-51. PubMed PMID: 24030928
- Pian P, Labovitz E, Hoffman K, Clavijo CF, Rzasa Lynn R, Galinkin JL, Vinks AA, Malik P, Christians U. Quantification of the 5-lipoxygenase inhibitor zileuton in human plasma using high performance liquid chromatography-tandem mass spectrometry. *J Chromatogr B Anal Technol Biomed Life Sci.* 2013 Oct 15;937:79-83. PubMed PMID: 24029553
- Klawitter J, Zafar I, Klawitter J, Pennington AT, Klepacki J, Gitomer BY, Schrier RW, Christians U, Edelstein CL. Effects of lovastatin treatment on the metabolic distributions in the Han:SPRD Rat model of polycystic kidney disease. *BMC Nephrol.* 2013 Jul 31;14(1):165. [Epub ahead of print] PubMed PMID: 23902712
- Emoto C, Fukuda T, Cox S, Christians U, Vinks AA. Development of a Physiologically-Based Pharmacokinetic Model for Sirolimus: Predicting Bioavailability Based on Intestinal CYP3A Content. *CPT Pharmacometrics Syst Pharmacol.* 2013 Jul 24;2:e59. PubMed PMID: 23884207
- Lemos PA, Farooq V, Takimura CK, Gutierrez PS, Virmani R, Kologdie F, Christians U, Kharlamov A, Doshi M, Sojitra P, van Beusekom HM, Serruys PW. Emerging technologies: polymer-free phospholipid encapsulated sirolimus nanocarriers for the controlled release of drug from a stent-plus-balloon or a stand-alone balloon catheter. *Eurointervention.* 2013 May 20;9(1):148-56. PubMed PMID: 23685303
- Taylor RR, Hoffman KL, Schniedewind B, Clavijo C, Galinkin JL, Christians U. Comparison of the quantification of acetaminophen in plasma, cerebrospinal fluid and dried blood spots using high-performance liquid chromatography-tandem mass spectrometry. *J Pharm Biomed Anal.* 2013 Sep;83:1-9. PubMed PMID: 23670126
- Ogasawara K, Chitnis SD, Gohh RY, Christians U, Akhlaghi F. Multidrug resistance-associated protein 2 (MRP2/ABCC2) haplotypes significantly affect the pharmacokinetics of tacrolimus in kidney transplant recipients. *Clin Pharmacokinet.* 2013 Sep;52(9):751-62. PubMed PMID: 23633119
- Fernandez-Bustamante A, Klawitter J, Wilson P, Elkins ND, Agazio A, Shibata T, Uchida K, Christians U, Repine JE. Early increase in alveolar macrophage prostaglandin 15d-PGJ2 precedes neutrophil recruitment into lungs of cytokine-inflamed rats. *Inflammation.* 2013 Oct;36(5):1030-40. PubMed PMID: 23616184
- Razzaghi H, Tempczyk-Russell A, Haubold K, Santorico SA, Shokati T, Christians U, Churchill ME. Genetic and structure-function studies of missense mutations in human endothelial lipase. *PLoS One.* 2013;8(3):e55716. PubMed PMID: 23536757
- Klepacki J, Brunner N, Schmitz V, Klawitter J, Christians U, Klawitter J. Development and validation of an LC-MS/MS assay for the quantification of the trans-methylation pathway intermediates S-adenosylmethionine and S-adenosylhomocysteine in human plasma. *Clin Chim Acta.* 2013 Jun 5;421:91-7. PubMed PMID: 23499573
- Bohra R, Klepacki J, Klawitter J, Klawitter J, Thurman JM, Christians U. Proteomics and metabolomics in renal transplantation- quo vadis?. *Transpl Int.* 2013 Mar;26(3):225-41. PubMed PMID: 23350848
- Chitnis SD, Ogasawara K, Schniedewind B, Gohh RY, Christians U, Akhlaghi F. Concentration of tacrolimus and major metabolites in kidney transplant recipients as a function of diabetes mellitus and cytochrome P450 3A gene polymorphism. *Xenobiotica.* 2013 Jul;43(7):641-9. PubMed PMID: 23278282

- Macy ME, Duncan T, Whitlock J, Hunger SP, Boklan J, Narendren A, Herzog C, Arceci RJ, Bagatell R, Trippett T, Christians U, Rolla K, Ivy SP, Gore L. Pediatric Oncology Experimental Therapeutics Investigators' Consortium (POETIC). A multi-center phase Ib study of oxaliplatin (NSC#266046) in combination with fluorouracil and leucovorin in pediatric patients with advanced solid tumors. *Pediatr Blood Cancer*. 2013 Feb;60(2):230-6. PubMed PMID: 23024067
- Klawitter J, Klawitter J, Agardi E, Corby K, Leibfritz D, Lowes BD, Christians U, Seres T. Association of DJ-1/PTEN/AKT- and ASK1/p38-mediated cell signalling with ischaemic cardiomyopathy. *Cardiovasc Res*. 2013 Jan 1;97(1):66-76. PubMed PMID: 23015639
- Pacheco-López G, Doenten R, Krügel U, Arnold M, Wirth T, Riether C, Engler A, Niemi MB, Christians U, Engler H, Schedlowski M. Neurobehavioural activation during peripheral immunosuppression. *Int J Neuropsychopharmacol*. 2013 Feb;16(1):137-49. PubMed PMID: 22217400

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