J. Scott Daniels, Ph.D.

9664 Brunswick Dr
Brentwood, TN 37027

Phone: 508.847.1346
email: john.scott.daniels@gmail.com

CURRENT SUMMARY

Equipped with the tools, approaches and experience gained from a 15-year career in drug disposition and spanning discovery to clinical development, succesfully leveraged foundational, yet contemporary, drug metabolism and pharmacokinetic principles towards the creation of a Clinical Decision Support Tool aimed at optimizing medications and reducing drug-interactions (and ADRs) in the polypharmacy, comorbid patient. Governed by the tenets of a regulatory environment (GLP, GCLP, FDA & CMS), lead the build-out of a CAP-CLIA accredited laboratory, subsequently introducing into the clinical market place a serum-based comprehensive diagnostic platformed technology (LC/MS/MS-based) capable of comprehensively measuring many prescription medications and across medication class from a single blood draw. While primarily clinical in mission, our R&D group continued to innovate in the diagnostics space, subsequently validating and implementing multiple comprehensive point-of-care micro sampling assays as a means to efficiently deliver empirical data to the healthcare team. Our approach and company is the first of its kind towards improving drug adherence and drug effectiveness while minimizing adverse drug reactions and treatment-limiting drug-drug interactions.

PROFESSIONAL EXPERIENCE

Precera Bioscience, Inc. (Biotechnology Start-Up), Franklin, TN 2015-Present

Chief Scientific Officer (2016-2018)

- Leveraging existing platformed technology, rich collaborations with KOLs/Academic Centers and present resident expertise (DMPK & pharmacology), continue development of novel product pipeline across multiple therapeutic areas, including oncology, metabolic syndrome, cardiovascular disease, psychiatry and anatomical/idiopathic pain.
- Orchestrating the continuing operation of an R&D and clinical laboratory; operating in concert these entities support the ongoing sponsor initiated clinical studies (academic medical centers and integrated healthcare centers) and clinical development of innovative Laboratory Developed Tests for implementation into patient care.
- Maintaining a Quality Assurance Program and staffing to ensure organizational excellence within the nonregulated and regulated biomedical arenas of the operation and across the Discovery-Through-the-Clinical Development continuum.
- Establishing and maintaining key partnerships with biomedical and biopharmaceutical companies through the implementation of present platformed technology and innovative testing within the drug discovery and clinical development of NCEs.

Vice President, R&D (2015-2016)

- Designed an R&D laboratory and accompanying regulatory operation in clinical pharmacology and within the newly developed arena of personalized medicine.
- Implemented a Laboratory Accreditation Program with the College of American Pathologists for the regulatory oversight of clinical laboratory developed tests and products (CLIA and FDA regulations) utilized in the care of patients (CAP Accreditation, April 2016; Reaccreditation, April 2018). Successfully prepared and maintain individual regulatory licenses in multiple States (TN, MD, FL, CA, PA).
- Successfully validated a clinical pharmacology tool for the execution of both sponsor- and investigator initiated clinical studies in the departments of medicine and emergency room medicine at The Cleveland Clinic and Vanderbilt University Medical Center.

***Adjunct Associate Professor (2010-present)**, Dept of Pharmacology, Vanderbilt University School of Medicine, Nashville, TN*
email: scott.daniels@vanderbilt.edu. 8th year teaching drug metabolism and pharmacokinetics (DMPK) to graduate students and medical fellows (M.D.s, Ph.D. students) in the annual Targets, Receptors and Drug Action Course (Department of Pharmacology, Interdisciplinary Graduate Program, VUMC). Active consultant to multiple drug discovery programs at Vanderbilt University Medical Center (Oncology, Inflammatory Disease, and Psychiatry/Neurological Disease) and the clinical Departments of Medicine and Clinical Pharmacology.
***Affiliate Faculty**, Department of Pharm Sci, Lipscomb College of Pharmacy, Nashville, TN*

Vanderbilt Center for Neuroscience Drug Discovery, Department of Pharmacology, Vanderbilt University Medical Center, Nashville, TN

Director, Drug Metabolism & Pharmacokinetics, Assistant Professor of Pharmacology *2010-2015*

- Designed and implemented the build-out of a metabolism and disposition group within the Vanderbilt Program in Drug Discovery, Department of Pharmacology (now *Vanderbilt Center for Neuroscience Drug Discovery*).
- Interdisciplinary team of scientists was assembled and mentored in state-of-the-art DMPK laboratory techniques and approaches, including linear ion trap and triple quadrupole mass spectrometry, robotic-platformed *in vitro* assay methodology, nonclinical *in vivo* disposition, and PK simulation and modeling.

  - Support the early drug discovery-through candidate-seeking, and subsequent early preclinical drug development programs originating from joint ventures with Janssen Pharmaceuticals, Astra Zeneca, Bristol Myers Squibb, and Seaside Therapeutics, as well as sponsored drug discovery research, including but not limited to, the NIH MLPCN Network, National Institutes of Mental Health, National Institute on Drug Abuse, and the Michael J. Fox Foundation.
  - Incorporated *in vitro* and *in vivo* disposition screening methodology into project teams in order to efficiently identify preclinical candidates, as well as identify development-limiting risks *early* in the drug discovery continuum (e.g., DDI liabilities, poor CNS penetration/efflux substrates).
  - Introduced contemporary approaches towards the identification of drug clearance mechanisms, prediction of human pharmacokinetics, and projection of clinically relevant doses for novel small molecule allosteric modulators of metabotropic glutamate receptors (mGluRs) and muscarinic receptors (mAChRs).
  - Directed basic science research in the arenas of P450/nonP450 drug metabolism and disposition, and mechanisms of drug-bioactivation and drug-induced organ toxicity.
  - Introduced a DMPK emphasis to the graduate and post-doctoral research and training offered within the VUMC Department of Pharmacology/Clinical Pharmacology; both didactic course offerings and laboratory science in DMPK. Serving as the primary advisor to a Masters of Laboratory Investigation student (MLI Awarded 2014), PharmD-PhD student (PhD Awarded 2017) in the inaugural VUMC-Lipscomb College of Pharmacy joint degree program, and as Committee Member for PhD students (Vanderbilt University).

Additional Range of Experience

Supported discovery, non clinical and clinical development (Phase I-IV) of drug candidates in varied therapeutic franchises (CNS, Oncology, Cardiovascular and Inflammation). Extensive experience with metabolite profiling, isolation and metabolite structural characterization. Elucidated the various mechanisms of biotransformation of novel pharmacophores and chemotypes. Experience and resources were employed in concert with investigative toxicology in the prediction and/or management of drug safety and disposition issues.

Pfizer Global R&D, St. Louis PDM Laboratories. 2006-2010

Associate Research Fellow. 2009-2010

- Biotransformation Group Lead at St. Louis Laboratories managing the scientific efforts of a team of scientists committed to elucidating the pathways of metabolism contributing to a compound's in vivo disposition.
- Employing state of the art LC/MS/MS, *in vitro*, *in vivo* and *ex vivo* techniques, the PreLD timing of our studies enabled the successful installation of features within a chemical scaffold which yielded optimized attributes of DMPK, pharmacology and drug safety.
- Participated in the global PDM biotransformation group leader network, the monthly interaction of which ensuring communication of drug discovery/development experiences and peer review of IND-enabling biotransformation data.

Senior Principal Scientist. 2006-2009

- PDM representative of multiple discovery project teams (Inflammation TA) with primary objective to design and orchestrate the execution of *in vitro* and *in vivo* studies aimed at understanding the drug metabolism and pharmacokinetics (DMPK) of molecules proceeding through lead optimization, drug candidate selection and IND-enabling preclinical studies.
- Authored the nonclinical pharmacokinetic sections on four INDs (3 FIH and 1 POC) as well as supporting report documentation.

Millennium Pharmaceuticals, Inc., DMPK, Cambridge, MA. 2002-2006
Senior Scientist II.

- Lead a drug metabolism group charged with elucidating mechanisms of biotransformation for small molecule drug candidates. Working with discovery and preclinical drug safety teams, our subgroup was also responsible for predicting/demonstrating reactive metabolite formation/drug-induced organ toxicity.
- Executed the IND-enabling work associated with preclinical candidates in the inflammation and oncology TAs, as well as traditional ^{14}C-ADME studies.
- Successfully completed Phase III, NDA and Phase IV post marketing investigations of the proteasome inhibitor, Bortezomib (multiple myeloma therapeutic).

Pfizer Global Research and Development, PDM, Ann Arbor, MI 2002
Principal Scientist.

- Support of discovery, preclinical and clinical drug development in the *oncology and inflammation therapeutic areas*. Responsible for the development of a LC-MS/MS assay for the investigation of reactive metabolites (*in vitro*).

***Legacy* DuPont Pharmaceuticals Company (BMS), DMPK, Newark, DE** 2000-2002
Senior Research Scientist.

- Support of discovery, preclinical and clinical drug development in the *cardiovascular and HIV therapeutic areas*. Responsible for the metabolism/biotransformation studies leading to discovery candidate nominations and IND filings in both therapeutic franchises.

ACADEMIC TRAINING

Postdoctoral Research Fellow, Center in Molecular Toxicology, Department of Biochemistry, Vanderbilt University, Nashville, Tennessee (Professor Lawrence J. Marnett) 1998-2000

Investigated DNA-adduct formation by reactive electrophiles, such as malondialdehyde (MDA). The predominant adduct formed from the reaction of DNA with MDA is the guanine adduct, pyrimido[1,2-α]purin-10(3*H*)-one (M_1G). Research efforts focused on 1) elucidation of the mechanism of nucleophilic addition of amines and

hydroxylamines to M_1G, 2) detection and structural characterization of DNA crosslinks induced by MDA (ESI-MS), and 3) development of new analytical methods for the determination of potential sequence dependence to M_1G-formation in DNA (MALDI-TOF MS).

Ph.D. in Chemistry, University of Missouri, Columbia, Missouri (Professor Kent S. Gates) 1992-1998

Research was focused on the various mechanisms of DNA-cleavage by pharmaceutically important synthetic and naturally-occurring heterocyclic *N*-oxides. I successfully elucidated a bioreductively-activated mechanism of DNA cleavage by the antitumor agent tirapazamine (SR4233). In addition to the bioreductive mechanism, I investigated mechanisms of photochemical DNA damage by SR4233, and other pharmaceutically important heterocyclic *N*-oxides.

B.Sc. in Chemistry and Biology, Southwest Baptist University, Bolivar, Missouri 1988-1992

SPECIAL RECOGNITION

Department of Pharmacology Teacher of the Year (2013/14 academic year), Vanderbilt University Medical Center
People Exemplifying Excellence in Research, (2006) Pfizer PDM St. Louis Laboratories.
Donald K. Anderson Graduate Student Teaching Award (1994), University of Missouri-Columbia
Dow Fellowship (Summer 1994), Department of Chemistry, University of Missouri-Columbia
Stevens Fellowship (Summer 1993), Department of Chemistry, University of Missouri-Columbia
1992 Clark Senior Biology Award, Department of Biology, Southwest Baptist University

SOCIETY PRESENTATIONS

- Gordon Research Conference in Drug Metabolism (presenter and symposium chair)
- Applied Pharmaceutical Analysis (past Biotransformation program chair, invited lecture/Sept.2016)
- American Chemical Society (TOXI poster presentations, symposium chair/MEDI)
- International Society for the Study of Xenobiotics/ISSX (poster presentations)
- Society of Toxicology/SOT (symposium chair, invited lecture)

EDITORIAL BOARD AND REVIEWING

Drug Metabolism Letters (Editorial Board Member)

Drug Metabolism and Disposition (ASPET, Reviewer)

Journal of Pharmacology and Experimental Therapeutics (ASPET, Reviewer)

Chemical Research in Toxicology (ACS, Reviewer)

Bioorganic Medicinal Chemistry Letters (Elsevier, Reviewer)

ACS Chemical Neuroscience (ACS, Reviewer)

REFERENCES

Lawrence Marnett, Ph.D.
Dean of Basic Sciences
Vanderbilt University School of Medicine
larry.marnett@vanderbilt.edu
(615) 322-0907

Timothy Heath, Ph.D.
Executive Director
PKDM: Bioanalytical Science
Amgen - Thousand Oaks
theath@amgen.com
(805) 447-4035

Deepak Dalvie, Ph.D.
Senior Director
Drug Metabolism and Pharmacokinetics
Celgene
ddalvie@celgene.com
(858) 795-4998

Daniel Liebler, Ph.D.
President
Protypia, LLC
(http://protypia.com)
daniel.liebler@protypia.com
(615) 715-4312

Matthew Hutzler, Ph.D.
Site Director, ADME Services
Bioanalytical & ADME Labs
Matt.Hutzler@q2labsolutions.com
(317) 857-3054

SELECT PUBLICATIONS

Assessment of Patient Medication Adherence, Medical Record Accuracy, And Medication Blood Concentrations for Prescription and Over-The-Counter Medications. Jeffrey J. Sutherland, Ryan D. Morrison, Candace D. McNaughton, Thomas M. Daly, Stephen B. Milne, J. Scott Daniels, and Timothy P. Ryan. JAMA Network Open, 2018 (i*n press*).

Medication Exposure in Highly Adherent Psychiatry Patients. Sutherland JJ, Daly TM, Jacobs K, Khawam EA, Pozuelo L, Morrison RD, Milne SB, **Daniels JS**, Ryan TP. *ACS Chem Neurosci.* **2018**, *9(3)*, 555-562.

Medication Adherence, Medical Record Accuracy, and Medication Exposure in Real-World Patients Using Comprehensive Medication Monitoring. Ryan TP, Morrison RD, Sutherland JJ, Milne SB, Ryan KA, **Daniels JS**, Misra-Hebert A, Hicks JK, Vogan E, Teng K, Daly TM. *PLoS One.* **2017**, *12(9)*:e0185471.

Managing Psychotropic Medications in Complex, Real-World Patients Using Comprehensive Therapeutic Drug Monitoring. Sutherland JJ, Morrison RD, **Daniels JS**, Milne SB, Ryan TP. *ACS Chem Neurosci.* **2017**, *8(8)*, 1641-1644.

Metabolism and Distribution of Clozapine-N-oxide: Implications for Nonhuman Primate Chemogenetics. Raper J, Morrison RD, **Daniels JS**, Howell L, Bachevalier J, Wichmann T, Galvan A. *ACS Chem Neurosci.* **2017**, *8(7)*, 1570-1576.

A Novel In Vitro Allometric Scaling Methodology for Aldehyde Oxidase Substrates to Enable Selection of Appropriate Species for Traditional Allometry. Crouch RD, Hutzler JM, **Daniels JS.** *Xenobiotica*, **2017**, *48(3)*, 219-231.

Evaluating the Disposition of a Mixed Aldehyde Oxidase/Cytochrome P450 Substrate in Rats with Attenuated P450 Activity. Crouch RD, Morrison RD, Byers FW, Lindsley CW, Emmitte KA, **Daniels JS**. *Drug Metab Dispos.* **2016**, *44(8)*, 1296-1303.

A Screen of Approved Drugs Identifies the Androgen Receptor Antagonist, Flutamide, and its Pharmacologically Active Metabolite, 2-Hydroxy-Flutamide, as Heterotropic Activators of CYP 3A In vitro and In vivo. Anna L. Blobaum1, Frank W. Byers, Thomas M. Bridges, Charles W. Locuson, P. Jeffrey Conn, Craig W. Lindsley, and **J. Scott Daniels**. *Drug Metab Dispos.* **2015**, *43*, 1718-26.

Use of a novel rapid and resource-efficient cassette dosing approach to determine the pharmacokinetics and CNS distribution of small molecule 7-transmembrane receptor allosteric modulators in rat. Thomas. M. Bridges, Ryan D. Morrison, Frank W. Byers, Shuanghui Luo, **J. Scott Daniels**. *Pharmacol Res Perspect* **2014**, *2(6)*:1-9.

Heterotropic Activation of the Midazolam Hydroxylase Activity of P450 3A by a Positive Allosteric Modulator of Metabotropic Glutamate Receptor 5: In Vitro to In Vivo Translation and Potential Impact on Clinically Relevant Drug-Drug Interactions. Anna L. Blobaum, Thomas M. Bridges, Frank W. Byers, Mark. L. Turlington, Margrith E. Mattmann, Ryan D. Morrison, Claire Mackie, Hilde Lavreysen, José M. Bartolomé, Gregor J. MacDonald, Thomas Steckler, Carrie K. Jones, Colleen M. Niswender, P. Jeffrey Conn, Craig W. Lindsley, Shaun R. Stauffer and **J. Scott Daniels**. *Drug Metab Dispos.* **2013**, *41*, 2066-75.

Inhibition of Hepatobiliary Transporters by A Novel Kinase Inhibitor Contributes to Hepatotoxicity in Beagle Dogs. **J. Scott Daniels**, Yurong Lai, Sarah South, Po-Chang Chiang, Daniel Walker, Bo Feng, Rouchelle Mireles, Laurence O. Whiteley, Jeremy W. Mckenzie, Jeffrey Stevens, Robert Mourey, David Anderson And John W. Davis II. *Drug Metab Lett.* **2013***, 7(1)*, 15-22.

Biotransformation of a Novel Positive Allosteric Modulator of Metabotropic Glutamate Receptor Subtype 5 Contributes to Seizure-Like Adverse Events in Rats Involving a Receptor Agonism-Dependent Mechanism. Thomas M. Bridges, Jerri M. Rook, Meredith J. Noetzel, Ryan D. Morrison, Ya Zhou, Rocco D. Gogliotti, Paige N. Vinson, Carrie K. Jones, Colleen M. Niswender, Craig W. Lindsley, Shaun R. Stauffer, P. Jeffrey Conn, **J. Scott Daniels**. *Drug Metab Dispos.* **2013**, *41(9)*, 1703-1714.

PEER REVIEWED PUBLICATIONS

Discovery of 4-alkoxy-6-methylpicolinamide negative allosteric modulators of metabotropic glutamate receptor subtype 5. Andrew S. Felts, Katrina A. Bollinger, Christopher J. Brassard, Alice L. Rodriguez, Ryan D. Morrison, **J. Scott Daniels**, Anna L. Blobaum, Colleen M. Niswender, Carrie K. Jones, P. Jeffrey Conn, Kyle A. Emmitte and Craig W. Lindsley. *Bioorg. Med. Chem. Lett.* (*submitted for review*).

The effect of the EP3 antagonist DG-041 on male mice with diet-induced obesity. Ryan P. Ceddia, Jason D. Downey, Ryan D. Morrison, Maria P. Kraemer, Sarah E Davis, Jing Wu, Craig W. Lindsley, Huiyong Yin, **J. Scott Daniels**, Richard M. Breyer. *Cellular Physiology and Biochemistry*. (*Under Review*).

Discovery of 6-(pyrimidin-5-ylmethyl)quinoline-8-carboxamide negative allosteric modulators of metabotropic glutamate receptor subtype 5. Felts AS, Rodriguez AL, Morrison RD, Blobaum AL, Byers FW, **Daniels JS**, Niswender CM, Conn PJ, Lindsley CW, Emmitte KA. *Bioorg Med Chem Lett.* **2018**, *28(10)*, 1679-1685.

Discovery of imidazo[1,2-a]-, [1,2,4]triazolo[4,3-a]-, and [1,2,4]triazolo[1,5-a]pyridine-8-carboxamide negative allosteric modulators of metabotropic glutamate receptor subtype 5. Felts AS, Rodriguez AL, Morrison RD, Bollinger KA, Venable DF, Blobaum AL, Byers FW, Thompson Gray A, **Daniels JS**, Niswender CM, Jones CK, Conn PJ, Lindsley CW, Emmitte KA. *Bioorg Med Chem Lett.* **2017**, *27(21)*, 4858-4866.

mGlu7 Potentiation Rescues Cognitive, Social, and Respiratory Phenotypes in a Mouse Model of Rett Syndrome. Gogliotti RG, Senter RK, Fisher NM, Adams J, Zamorano R, Walker AG, Blobaum AL, Engers DW, Hopkins CR, **Daniels JS**, Jones CK, Lindsley CW, Xiang Z, Conn PJ, Niswender CM. *Sci. Transl. Med.* **2017**, *9(403)*: eaai7459.

Discovery and Characterization of 1H-Pyrazol-5-yl-2-phenylacetamides as Novel, Non-Urea-Containing GIRK1/2 Potassium Channel Activators. Wieting JM, Vadukoot AK, Sharma S, Abney KK, Bridges TM, **Daniels JS**, Morrison RD, Wickman K, Weaver CD, Hopkins CR. ACS Chem Neurosci. **2017**, *8(9)*,1873-1879.

Discovery of N-(5-Fluoropyridin-2-yl)-6-methyl-4-(pyrimidin-5-yloxy)picolinamide (VU0424238): A Novel Negative Allosteric Modulator of Metabotropic Glutamate Receptor Subtype 5 Selected for Clinical Evaluation. Felts AS, Rodriguez AL, Blobaum AL, Morrison RD, Bates BS, Thompson Gray A, Rook JM, Tantawy MN, Byers FW, Chang S, Venable DF, Luscombe VB, Tamagnan GD, Niswender CM, **Daniels JS**, Jones CK, Conn PJ, Lindsley CW, Emmitte KA. *J Med Chem.* **2017**, *60(12)*, 5072-5085.

Disease-Modifying Effects of M1 Muscarinic Acetylcholine Receptor Activation in an Alzheimer's Disease Mouse Model. Lebois EP, Schroeder JP, Esparza TJ, Bridges TM, Lindsley CW, Conn PJ, Brody DL, **Daniels JS**, Levey AI. *ACS Chem Neurosci.* **2017**, *8(6)*, 1177-1187.

Development and Antiparkinsonian Activity of VU0418506, a Selective Positive Allosteric Modulator of Metabotropic Glutamate Receptor 4 Homomers without Activity at mGlu2/4 Heteromers. Niswender CM, Jones CK, Lin X, Bubser M, Thompson Gray A, Blobaum AL, Engers DW, Rodriguez AL, Loch MT, **Daniels JS**, Lindsley CW, Hopkins CR, Javitch JA, Conn PJ. ACS Chem Neurosci. **2016**, *7(9)*,1201-1211.

Discovery and Characterization of a Novel Series of N-Phenylsulfonyl-1H-Pyrrole Picolinamides as Positive Allosteric Modulators of the Metabotropic Glutamate Receptor 4 (Mglu4). Gogliotti RD, Blobaum AL, Morrison RM, **Daniels JS**, Salovich JM, Cheung YY, Rodriguez AL, Loch MT, Conn PJ, Lindsley CW, Niswender CM, Hopkins CR. *Bioorg Med Chem Lett.* **2016**, *26(13)*, 2984-2987.

Discovery of 3-Aminopicolinamides as Metabotropic Glutamate Receptor Subtype 4 (Mglu4) Positive Allosteric Modulator Warheads Engendering CNS Exposure and In Vivo Efficacy. Gogliotti RD, Engers DW, Garcia-Barrantes PM, Panarese JD, Gentry PR, Blobaum AL, Morrison RD, **Daniels JS**, Thompson AD, Jones CK, Conn PJ, Niswender CM, Lindsley CW, Hopkins CR. *Bioorg Med Chem Lett.* **2016**, *26(12)*, 2915-2919.

Discovery, Synthesis, and Preclinical Characterization of N-(3-Chloro-4-fluorophenyl)-1H-pyrazolo[4,3-b]pyridin-3-amine (VU0418506), a Novel Positive Allosteric Modulator of the Metabotropic Glutamate Receptor 4 (mGlu4). Engers DW, Blobaum AL, Gogliotti RD, Cheung YY, Salovich JM, Garcia-Barrantes PM, **Daniels JS**, Morrison R, Jones CK, Soars MG, Zhuo X, Hurley J, Macor JE, Bronson JJ, Conn PJ, Lindsley CW, Niswender CM, Hopkins CR. *ACS Chem Neurosci.* **2016**, *7(9),* 1192-2000.

N-Alkylpyrido[1',2':1,5]pyrazolo-[4,3-d]pyrimidin-4-amines: A new series of negative allosteric modulators of mGlu1/5 with CNS exposure in rodents. Felts AS, Rodriguez AL, Morrison RD, Venable DF, Blobaum AL, Byers FW, **Daniels JS**, Niswender CM, Jones CK, Conn PJ, Lindsley CW, Emmitte KA. *Bioorg Med Chem Lett.* **2016**, *26(8)*, 1894-1900.

mGlu5 Positive Allosteric Modulation Normalizes Synaptic Plasticity Defects and Motor Phenotypes in a Mouse Model of Rett Syndrome. Gogliotti RG, Senter RK, Rook JM, Ghoshal A, Zamorano R, Malosh C, Stauffer SR, Bridges TM, Bartolome JM, **Daniels JS**, Jones CK, Lindsley CW, Conn PJ, Niswender CM. *Hum Mol Genet.* **2016**, *25(10)*, 1990-2004.

Discovery and characterization of a small molecule that restores E-cadherin expression in cancer cell lines via a new mechanism. Stoops SL, Waterson AG, An H, Deane N, **Daniels JS**, Morrison R, Engers JL, Beauchamp D, Lindsley CW. Probe Reports from the NIH Molecular Libraries Program [Internet]. Bethesda (MD): *National Center for Biotechnology Information (US)*; 2010-.2012.

Lack of Antiparkinsonian Effects of Systemic Injections of the Specific T-Type Calcium Channel Blocker ML218 in MPTP-Treated Monkeys. Galvan A, Devergnas A, Pittard D, Masilamoni G, Vuong J, **Daniels JS**, Morrison RD, Lindsley CW, Wichmann T. *ACS Chem Neurosci.* **2016**, *7(11)*, 1543-1551.

Preliminary investigation of 6,7-dihydropyrazolo[1,5-a]pyrazin-4-one derivatives as a novel series of mGlu5 receptor positive allosteric modulators with efficacy in preclinical models of schizophrenia. Conde-Ceide S, Alcázar J, Alonso de Diego SA, López S, Martín-Martín ML, Martínez-Viturro CM, Pena MA, Tong HM, Lavreysen H, Mackie C, Bridges TM, **Daniels JS**, Niswender CM, Jones CK, Macdonald GJ, Steckler T, Conn PJ, Stauffer SR, Lindsley CW, Bartolomé-Nebreda JM. *Bioorg Med Chem Lett.* **2016**, *26(2)*, 429-434.

State-dependent alterations in sleep/wake architecture elicited by the M4 PAM VU0467154 - Relation to antipsychotic-like drug effects. Gould RW, Nedelcovych MT, Gong X, Tsai E, Bubser M, Bridges TM, Wood MR, Duggan ME, Brandon NJ, Dunlop J, Wood MW, Ivarsson M, Noetzel MJ, **Daniels JS**, Niswender CM, Lindsley CW, Conn PJ, Jones CK. *Neuropharmacology*. **2016**, *102*, 244-53.

Design of 4-Oxo-1-aryl-1,4-dihydroquinoline-3-carboxamides as Selective Negative Allosteric Modulators of Metabotropic Glutamate Receptor Subtype 2. Felts AS, Rodriguez AL, Smith KA, Engers JL, Morrison RD, Byers FW, Blobaum AL, Locuson CW, Chang S, Venable DF, Niswender CM, **Daniels JS**, Conn PJ, Lindsley CW, Emmitte KA. *J Med Chem.* **2015**, *58(22)*, 9027-40.

Allosteric Activation of M4 Muscarinic Receptors Improve Behavioral and Physiological Alterations in Early Symptomatic YAC128 Mice. Pancani T, Foster DJ, Moehle MS, Bichell TJ, Bradley E, Bridges TM, Klar

R, Poslusney M, Rook JM, **Daniels JS**, Niswender CM, Jones CK, Wood MR, Bowman AB, Lindsley CW, Xiang Z, Conn PJ. *Proc Natl Acad Sci U S A.* **2015**, *112(45)*, 14078-83.

VU0477573: Partial Negative Allosteric Modulator of the Subtype 5 Metabotropic Glutamate Receptor with In Vivo Efficacy. Nickols HH, Yuh JP, Gregory KJ, Morrison RD, Bates BS, Stauffer SR, Emmitte KA, Bubser M, Peng W, Nedelcovych MT, Thompson A, Lv X, Xiang Z, **Daniels JS**, Niswender CM, Lindsley CW, Jones CK, Conn PJ. *J Pharmacol Exp Ther.* **2016**, *356(1)*, 123-36.

Acyl dihydropyrazolo[1,5-a]pyrimidinones as metabotropic glutamate receptor 5 positive allosteric modulators. Malosh C, Turlington M, Bridges TM, Rook JM, Noetzel MJ, Vinson PN, Steckler T, Lavreysen H, Mackie C, Bartolomé-Nebreda JM, Conde-Ceide S, Martínez-Viturro CM, Piedrafita M, Sánchez-Casado MR, Macdonald GJ, **Daniels JS**, Jones CK, Niswender CM, Conn PJ, Lindsley CW, Stauffer SR. *Bioorg Med Chem Lett.* **2015** Nov 15;25(*22*):5115-20.

Discovery of a Selective and CNS Penetrant Negative Allosteric Modulator of Metabotropic Glutamate Receptor Subtype 3 with Antidepressant and Anxiolytic Activity in Rodents. Engers JL, Rodriguez AL, Konkol LC, Morrison RD, Thompson AD, Byers FW, Blobaum AL, Chang S, Venable DF, Loch MT, Niswender CM, **Daniels JS**, Jones CK, Conn PJ, Lindsley CW, Emmitte KA. *J Med Chem.* **2015** Sep 24;*58(18)*:7485-500.

Optimization of a small molecule probe that restores e-cadherin expression. Brogan JT, Stoops SL, Brady S, An H, Weaver C, **Daniels JS**, Beauchamp RD, Lindsley CW, Waterson AG. *Bioorg Med Chem Lett.* **2015** Oct 1;*25(19)*:4260-4.

Further optimization of the mGlu5 PAM clinical candidate VU0409551/JNJ-46778212: Progress and challenges towards a back-up compound. Zhou Y, Malosh C, Conde-Ceide S, Martínez-Viturro CM, Alcázar J, Lavreysen H, Mackie C, Bridges TM, **Daniels JS**, Niswender CM, Jones CK, Macdonald GJ, Steckler T, Conn PJ, Stauffer SR, Bartolomé-Nebreda JM, Lindsley CW. *Bioorg Med Chem Lett.* **2015** Sep 1;*25(17)*:3515-9.

Discovery of VU0409551/JNJ-46778212: An mGlu5 Positive Allosteric Modulator Clinical Candidate Targeting Schizophrenia. Conde-Ceide S, Martínez-Viturro CM, Alcázar J, Garcia-Barrantes PM, Lavreysen H, Mackie C, Vinson PN, Rook JM, Bridges TM, **Daniels JS**, Megens A, Langlois X, Drinkenburg WH, Ahnaou A, Niswender CM, Jones CK, Macdonald GJ, Steckler T, Conn PJ, Stauffer SR, Bartolomé-Nebreda JM, Lindsley CW. *ACS Med Chem Lett.* **2015** May 20;*6(6)*:716-20.

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