Corey R. Hopkins, Ph.D.

H-index: 40
Professor
College of Pharmacy
Pharmacy Drug Discovery
Department of Pharmaceutical Sciences
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EDUCATION

1995-2001	Ph.D., University of Pittsburgh, Pittsburgh, PA Advisor: Professor Peter Wipf Thesis: Studies toward the total synthesis of naphthyridinomycin/ bioxalomycin antitumor antibiotics
1987-1992	B.S. Chemistry, Indiana University, Bloomington, IN

PROFESSIONAL EXPERIENCE

07/21 – present	**Professor (tenured)** University of Nebraska Medical Center, Omaha, NE College of Pharmacy, Department of Pharmaceutical Science Member, Cancer Genes and Molecular Regulation Program (CGMRP) – Fred & Pamela Buffet Cancer Center Member, Cancer Research Graduate Program, UNMC Interdisciplinary Graduate Program in Biomedical Sciences (IGPBS)
06/16 – 06/21	**Associate Professor (tenured)** University of Nebraska Medical Center, Omaha, NE College of Pharmacy, Department of Pharmaceutical Science Member, Cancer Genes and Molecular Regulation Program (CGMRP) – Fred & Pamela Buffet Cancer Center Member, Cancer Research Graduate Program, UNMC Interdisciplinary Graduate Program in Biomedical Sciences (IGPBS)
05/11 – 06/16	**Research Assistant Professor of Pharmacology and Chemistry** Vanderbilt University Medical Center, Nashville, TN Associate Director of Medicinal Chemistry, Vanderbilt Center for Neuroscience Drug Discovery Co-director, Vanderbilt Specialized Chemistry Center for Accelerated Probe Development
08/08 – 05/11	**Research Assistant Professor of Pharmacology**

Vanderbilt University Medical Center, Nashville, TN
Associate Director of Medicinal Chemistry, Vanderbilt Center for Neuroscience Drug Discovery
Co-director, Vanderbilt Specialized Chemistry Center for Accelerated Probe Development

07/06 – 08/08 **Senior Research Investigator/Project Team Leader**
Sanofi-Aventis Pharmaceuticals, Bridgewater, NJ CNS Medicinal Chemistry Department

05/05 – 07/06 **Scientist/Project Team Leader**
Procter & Gamble Pharmaceuticals, Cincinnati, OH
Skeletal & Inflammatory Diseases Medicinal Chemistry Department

10/01 – 05/05 **Senior Scientist/Project Team Leader**
Aventis Pharmaceuticals, Bridgewater, NJ Medicinal Chemistry Department

08/95 – 09/01 **Graduate Research Assistant**
University of Pittsburgh, Pittsburgh, PA Advisor: Prof. Peter Wipf

TEACHING EXPERIENCE

UNMC

PHSC 628/Medicinal Chemistry II
Pharmacy Students (P2)

PHSC 626/Medicinal Chemistry I
Pharmacy Students (P2)

PHSC 830/Advanced Medicinal Chemistry - Coordinator
Graduate Students

PHSC 692/Pharmaceutical Science Applications in Pharmacy
Pharmacy Students (P2/P3)

Conferences

Introduction to Allosteric Modulators
Short Course as part of the 14th Annual Discovery on Target, Boston, MA, September 2016

Allosteric Modulators of GPCRs (PAMs and NAMs)
Short Course as part of the 12th Annual Discovery on Target, Boston, MA, June 2015

Allosteric Modulators of GPCRs
Short Course as part of the 11th Annual Discovery on Target, Boston, MA, September 2013

Vanderbilt

Pharm 327/Modern Drug Discovery

IGPB 300B/Principles of Organic Chemistry and Small Molecule Design for Biologists

Pittsburgh

Graduate Teaching Assistant
Organic Chemistry I & II
Organic Chemistry Laboratory

UNMC SERVICE

Member	Faculty IP Innovation and Commercialization Award (FIPICA) Committee	2021 – present
Member	Faculty Senate Information Technology Committee	2021 – present
Chair	College of Pharmacy, Promotion and Tenure Committee	2020 – present
Member	College of Pharmacy, BSPS Oversight Committee	2021 – present
Member	College of Pharmacy, BSPS Committee 2020	2020
Member	UNMC Nebraska Drug Development Pipeline Executive Advisory Board	2019 – present
Member	College of Pharmacy, Associate Dean of Academic Affairs Search Committee	2019
Chair	Department of Pharmaceutical Sciences, Faculty Search Committee	2017 – 2018
Chair	College of Pharmacy Safety Committee	2016 – present
Member	UNMC Faculty Recruitment and Retention Committee	2018 – present
Member	College of Pharmacy, Educational Technology Committee	2016 – present
Member	College of Pharmacy Curriculum Committee	2017 – present
Member	Department of Pharmaceutical Sciences Graduate Program Committee	2017 – 2020
Member	Eppley Institute for Research in Cancer, Faculty Search Committee	2017 – 2018

AWARDS

2020	Graduate of the UNMC iLead Program
2019	UNMC Excellence in Mentoring, UNMC Postdoctoral Excellence in Research Awardee
2019	UNMC Most Promising Invention, UNMC Innovation Week, UneMed
2018	UNMC Distinguished Scientist

CONFERENCE ORGANIZATION

2020	260th ACS National Meeting, Spring 2020, Philadelphia, PA "Novel Mechanisms of Neurodegeneration in Alzheimer's Disease"
2019	6th Annual Biopharmaceutical Research & Development Symposium, Sept. 2019, Omaha, NE
2019	258th ACS National Meeting, Spring 2019, San Diego, CA "Emerging Targets for Drug Abuse Therapy"
2012	243rd ACS National Meeting, Spring 2012, San Diego, CA "Chemical Neuroscience"

FUNDING:

Active:

1R01NS127439-01 NINDS MPI 04/01/2022 – 03/31/2027
"Discovery and characterization of selective GIRK1/2 activators and their evaluation in preclinical models of pain"

1R01NS119266-01A1 NINDS PI 07/01/2021 – 06/30/2026
"Discovery and characterization of selective D4R antagonists and their evaluation in preclinical models of PD-LIDs"

1R01CA250383-01A1 NCI MPI 02/01/2021 – 01/31/2026
"Impact of CLDN1 inhibition on chemoresistance and metastasis of colon cancer"

1R33DA045303-03 NIDA PI (NCE) 09/15/2007 – 02/28/2023
"Optimization of MrgX1 allosteric agonists as potential therapies for chronic pain"

Pending:

1R01CA277497-01 NCI MPI 12/01/2022 – 11/30/2027
"Targeting MASTL for colon cancer therapy"

Completed:

Nebraska Research Collaboration MPI 09/01/2020 – 08/31/2022
"Structure based inhibitors design targeting RNA polymerase against flavivirus infection"

5R01DK103658-06 NIDDK PI 07/01/2015 – 12/31/2020
"Optimization of novel inhibitors of TRPC5 as anti-proteinuric therapeutics"

1R21AI128418 NIAID MPI 06/01/2017 – 05/31-2019
"Development of small molecule mosquitocides for controlling the primary vector of Zika virus, Aedes aegypti"

MJFF Therapeutic Pipeline Program – Supplemental PI 04/01/2017 – 03/31/2018
"Optimization of dopamine D4 antagonists for the treatment of L-DOPA-induced dyskinesias (LIDs)"

Sponsored Research, La Jolla Pharmaceuticals PI 04/01/2017 – 03/31/2018
"Optimization of potent and selective ALK2 inhibitors

MJFF Therapeutic Pipeline Program PI 02/01/2015 – 01/31/2016
"Optimization of dopamine D4 antagonists for the treatment of LDOPA-induced dyskinesias (LIDs)"

5R01MH107399 NIMH MPI 06/15/2015 – 02/28/2018
"Development of an *in vivo*, brain-penetrant GIRK1/2 potassium channel activator"

EDITORIAL/ADVISORY POSITIONS

2021 – present	Medicinal Chemistry Reviews, CNS Section, Co-Editor
2020 – present	Scientific Advisory Board Member, Chemical Probes
2020 – present	Editorial Advisory Member, *RSC Drug Discovery Series*
2017 – present	Editorial Board Member, *Expert Opinion on Therapeutic Patents*
2013 – 2014	Volume Editor, *Topics in Medicinal Chemistry, "Novel Therapeutic Approaches to the Treatment of Parkinson's Disease: An Overview and Update"*
2011 – 2014	Managing Editor, *ACS Chemical Neuroscience*, 2011–2014
2013	Invited Session Chair of "GPCR-Targeted Therapeutics: Progressing Drug Candidates" at the 11th Annual Discovery on Targets, Boston, MA
2013	International Advisory Board, *Drug Discovery and Therapy World Congress*, Boston, MA
2009 – 2011	Guest Editor, *Curr. Top. Med. Chem.*, issue on Recent Progress on Modulation of mGluRs
2010 – 2012	Member International Advisory Board, *International Conference on Drug Discovery & Therapy*, Dubai, UAE

CONSULTING POSITIONS

2021 – 2022	Fannin Innovations
2021	Mirsona Consulting
2020	Kamari Pharma, Isreal
2020	Bio-Gene Techology, Ltd., Melbourne, Australia
2016 – 2017	La Jolla Pharmaceuticals, La Jolla, CA
2012 – 2013	Givaudan S. A., Cincinnati, OH

NIH/NSF REVIEW POSITIONS

2022 – 2026	Standing Member, NIH Synthetic and Biological Chemistry A (SBCA)
2022	NIH Ad Hoc Member – Vector Biology Study Section (February)
2021	NIH Ad Hoc Member – 2021/10 ZDA1 SKM-D (03) S **(**K99/00)
	NIH Ad Hoc Member – Synthetic and Biological Chemistry B (SBCB)
	NSF SBIR Review (February)
	NSF SBIR Review (August)
	NIH HEAL Review, ZNS1 SRB G(37) Special Emphasis Panel (x 3)
2020	NSF SBIR Review
	Ad Hoc Member – ZDA1 SMK-D (06) R, Step Up for Substance Use Disorders (SUD): A Drug Target Initiative for Scientists Engaged in Fundamental Research (U18)
	Ad Hoc Member – ZDA1 TXT-D (06) R, Step Up for Substance Use Disorders (SUD): A Drug Target Initiative for Scientists Engaged in Fundamental Research (U18)
	Ad Hoc Member - ZRG1 IDM-N (02), "Topics in Drug Discovery and Clinical Field Studies" – DDR and CFRS Special Panel
2018 – 2020	Ad Hoc Member – NIH NCATS Heal Evaluation
2016 – 2020	Ad Hoc Member – ZRG1 BCMB-G, Drug Discovery & Development SBIR/STTR Review Panel

2018 – 2019	Ad Hoc Member – Synthetic and Biological Chemistry A (SBCA)
2018	Ad Hoc Member – Synthetic and Biological Chemistry B (SBCB)
2018	Ad Hoc Member – ZRG1 ETTN-G (50) R, Emerging Technologies and Training in Neuroscience, IRG

REVIEW POSITIONS

2013 – present	The W. Garfield Weston Foundation, Reviewer, Toronto, ON
2011 – present	The Alzheimer's Association, Reviewer
2009 – present	Michael J. Fox Foundation for Parkinson's Research, New York, NY

PROFESSIONAL ACTIVITIES

2020 – 2022	Academic Councilor (Alternate), ACS Medicinal Chemistry Division
2020 – 2022	Executive Committee Member, ACS Medicinal Chemistry Division
2017 – 2019	Long-Range Planning Committee Member, ACS Medicinal Chemistry Division

DRUG DISCOVERY HIGHLIGHTS

2020	M1 PAM Team Leader leading to the license with Acadia Pharmaceuticals (https://news.vanderbilt.edu/2020/06/16/vanderbilt-university-partners-with-acadiapharmaceuticals-to-develop-novel-treatments-for-central-nervous-system-disorders/)
2020	Presented "Development of Novel, Selective PDE4B Inhibitors" at the 2nd Annual MidWest Drug Development Conference, Sept. 30th, 2019. Covered here: https://www.ketv.com/article/midwest-drug-development-conference-inomaha-aims-tobring-investment-money-jobs/2933252
2019	Licensed novel inhibitors for CNS therapeutics to Fannin Innovations (UNMC Tech Transfer, UneMed)
2016	Development of VU0652957 for the treatment of Parkinson's disease, UH2NS099066 NIH Blueprint
2016	M_1 PAM Chemistry Team Leader of compound advancing into clinic (http://cen.acs.org/articles/94/i47/Vanderbilt-neuroscience-drug-advances-clinic.html)
2015	Two ALK inhibitors developed in the Hopkins lab given Orphan Drug Designation (http://www.raredr.com/publications/Rare-Disease-Report/2015/october-2015/orphandrugdesignation-fop)
2015	PI of ALK inhibitor project that entered into exclusive agreement with La Jolla Pharmaceuticals (http://www.businesswire.com/news/home/20150818005463/en/)
2012	Chemistry Team Leader/Project Leader of $mGlu_4$ project licensed to BMS (https://news.vanderbilt.edu/2012/09/21/vu-bristol-myers-to-collaborate-onparkinsonstherapies/)

PROFESSIONAL ORGANIZATIONS

American Chemical Society (ACS)	Medicinal Chemistry Division Organic Chemistry Division
Society for Neuroscience (SfN)	
American Association for Cancer Research	Member

Chemistry in Cancer Research Group	
American Society for Pharmacology and Experimental Therapeutics (ASPET)	Member

STUDENTS MENTORED – UNMC

Graduate Students (Former):

Dr. Swagat Sharma	Ph.D. (November 2021)

Graduate Students (Current):

Ms. Kirsten Antonio-Tolentino	Pharmaceutical Sciences	PI, Chair
Ms. Viktoriya Mashinson	Pharmaceutical Sciences	PI, Chair
Ms. Sumaiya Nahid	Pharmaceutical Sciences	PI, Chair
Mr. Thomas Webster	Pharmaceutical Sciences	PI, Chair

Former Post-Doctoral Associates:

Dr. Christopher Aretz	2018 – 2020
Dr. Anish K. Vadukoot	2016 – 2019
Dr. John Saathoff	2017

Rotation Students:

Marjina Kalpana	IGPBS Student – Fall 2021
Alexander Wallick	IGPBS Student – Fall 2019
Aaron Jensen	IGPBS Student – Fall 2019
Adrian Flores	IGPBS Student – Fall 2019
Connor Rose	IGPBS Student – Fall 2018
Kathleen Hecker	IGPBS Student – Fall 2018
Austin Sanford	IGBPS Student – Fall 2017
Jane Morwitzer	IGPBS Student – Fall 2017
Andrew Neville	IGPBS Student – Summer 2017

UNO Interns:

Mohamad Hazim	Summer/Fall – 2019
Jennifer Hinman	Summer 2019
Thomas Feulner	Spring 2019
Savanna Wallin	Spring 2019
Natalie Mostek	Summer/Fall – 2018

High School Alliance Students:

Annabelle Ziegerer, Omaha South	2021
Maddie Beninato, Millard West	2019 – 2020
Mackenzie Asche, Millard West	2019 – 2020
Esmeralda Rodriguez, Omaha Bryan	2018 – 2019
Madalene Portillo, Omaha South	2017 – 2018
Alicia Hogan, Omaha South	2017 – 2018
Abby Konz, Millard West	2016

INBRE Students

Lauren Lesiak, UNL	2019
Wacey Gallegos, Chadron State	2018

Thesis Committee – UNMC

Louise Dow	Pharmaceutical Sciences	Member, 2020 – present
Savanna Wallin	IGPBS	Member, 2020 – present
Angelica Carmona	Pharmaceutical Sciences	Member, 2020 – present
Md Shafikur Rahman	Pharmaceutical Sciences	Member, 2020 – present
Mahmudul Hasan	Pharmaceutical Sciences	Member, 2019 – present
Jingyi Ma	Pharmaceutical Sciences	Member, 2019 – present
Alireza Basiri	Pharmaceutical Sciences	Member, 2018 – present
Paul Lovell	Pharmaceutical Sciences	Member, 2018 – present

Former Thesis Committee:

Pravin Yeapuri	Pharmaceutical Sciences	Member, 2019 – 2021
Ao Yu	Pharmaceutical Sciences	Member, 2018 – 2021
Mohamed Saleem	Pharmaceutical Sciences	Member, 2018 – 2022
Insiya Mukadam, Ph.D.	Pharmaceutical Sciences	Member, 2018 – 2020
Bader Huwaimel, Ph.D.	Pharmaceutical Sciences	Member, 2019 – 2021
Ahmed Morsy, Ph.D.	Pharmaceutical Sciences	Member, 2019 – 2021
Austin Sanford, Ph.D.	IGPBS	Member, 2018 – 2021
Trey Neeley, M.S.	Pharmaceutical Sciences	Member, 2018 – 2019

Vanderbilt University

Rene Raphemot, Ph.D.	Pharmacology	2012 – 2015
Darwin Fu, Ph.D.	Chemistry	2015 – 2016
Krystian Kozak, Ph.D.	Pharmacology	2015 – 2018

PUBLICATIONS

Primary Literature – UNMC:

105. "From dopamine 4 to sigma 1: synthesis, SAR, and biological characterization of a piperidine scaffold of σ1 modulators", Tolentino, K. T.; Mashinson, V.; Hopkins, C. R.* *ChemRxiv* **2022**. DOI:

104. "Further exploration of the benzimidazole scaffold as TRPC5 inhibitors: identification of 1-alkyl-2-(pyrrolidin-1-yl)-1*H*-benzo[*d*]imidazoles as potent and selective inhibitors", Sharma, S.; Pablo, J. L.; Tolentino, K. T.; Gallegos, W.; Hinman, J.; Beninato, M.; Asche, M.; Greka, A.; Hopkins, C. R.* *ChemMedChem* **2022**, e202200151. DOI: 10.1002/cmdc.202200151.

103. "Synthesis and biological characterization of a series of 2-sulfonamidebenzamides as allosteric modulators of MrgX1", Sharma, S.; Peng, Q.; Vadukoot, A. K.; Aretz, C.; Jensen, A. A.; Wallick, A. I.; Dong, X.; Hopkins, C. R.* *ACS Med. Chem. Lett.* **2022**, *13*, 841-847. DOI: 10.1021/acsmedchemlett.2c00100.

102. "Discovery and characterization of benzyloxy piperidine based dopamine 4 receptor antagonists", Tolentino, K. T.; Mashinson, V.; Vadukoot, A.; Hopkins, C. R.* *Bioorg. Med. Chem. Lett.* **2022**, *61*, 128615. DOI: 10..1016/j.bmcl.2022.128615.

101. "Discovery and characterization of benzyloxy piperidine based dopamine 4 receptor antagonists", Tolentino, K. T.; Mashinson, V.; Vadukoot, A.; Hopkins, C. R.* *ChemRxiv* **2021**, DOI: 10.33774/chemrxiv-2021-c13nz.

100. "Characterization of VU0468554, a new selective inhibitor of cardiac GIRK channels", Anderson, A.; Vo, B. N.; Fernandez de Velasco, E. M.; Hopkins, C. R.; Weaver, C. D.; Wickman, K.* *Mol. Pharmacol.* **2021**, *100*, 540-547. DOI: 10.1124/molpharm.121.000311.

99. "Virtual screening and biological evaluation of PPARγ antagonists as potential anti-prostate cancer agents", Almahmoud, S.; Elix, C. C.; Jones, J. O.; Hopkins, C. R.; Vennerstrom, J. L.; Zhong, H. A.* *Bioorg. Med. Chem.* **2021**, *46*, 116368. DOI: 10.1016/j.bmc.2021.116368.

98. "TRPC5 channel inhibition protects podocytes in puromycin-aminonucleoside induced nephrosis models", Zhou, Y.; Kim, C.; Pablo, J. L.; Zhang, F.; Jung, J. Y.; Bazua, S.; Maheswarareddy, E.; Hopkins, C. R.; Weins, A.; Greka, A.* *Front. Med.* **2021**, *8*, 721865. DOI: 10.3389/fmed.2021.721865.

97. "Further synthesis and biological characterization of a series of 2-sulfonamidebenzamides as allosteric modulators of MrgX1", Sharma, S.; Peng, Q.; Vadukoot, A. K.; Aretz, C.; Jensen, A. A.; Wallick, A. I.; Dong, X.; Hopkins, C. R.* *ChemRxiv* **2021**, DOI: 10.3374/chemrxiv-2021-7cq5k.

96. "Discovery, synthesis and biological characterization of a series of *N*-(1-(1,1-dioxidotetrahydrothiophen-3-yl)-3-methyl-1*H*-pyrazol-5-yl)acetamide ethers as novel GIRK1/2 potassium channel activators", Sharma, S.; Lesiak, L.; Aretz, C. D.; Du, Y.; Kumar, S.; Gautam, N.; Alnouti, Y.; Dhuria, N. V.; Chhonker, Y. S.; Weaver, C. D.; Hopkins, C. R.* *RSC Med. Chem.* **2021**, *12*, 1366-1373. DOI: 10.1039/d1md00129a. RSC Special Issue on Chemical Probes.

95. "PIK3C3 Inhibition promotes sensitivity to colon cancer therapy by inhibiting cancer stem cells", Kumar, B.; Ahmad, R.; Sharma, S.; Gowrikumar, S.; Primeaux, M.; Rana, S.; Natarajan, A.; Oupicky, D.; Hopkins, C. R.; Dhawan, P.; Singh, A. B.* *Cancers* **2021**, *13*, 2168. Manuscript ID: DOI: 10.3390/cancers13092168.

94. "Blocking the Rac1-TRPC5 pathway protects human podocytes", Zhou, Y.; Kim, C.; Pablo, J. L. B.; Zhang, F.; Jung, J. Y.; Xiao, L.; Bazua, S.; Emani, M.; Hopkins, C.; Weins, A.; Greka, A.* *BioRxiv* **2021**, 10.1101/2020.08.28.272344.

93. "Bidirectional influence of limbic GIRK channels on approach-avoidance behavior", Vo, B. N.; Fernandez de Velasco, E. M.; Oberle, H.; Tipps, M. E.; McCall, N. M.; Luo, H. Rose, T. R.; Hopkins, C. R.; Wickman, K. *J. Neurosci.* **2021**, *41*, 5809-5821. DOI: 10.1523/JNEUROSCI.2787-20.2021.

92. "Further SAR on the (phenylsulfonyl)piperazine scaffold as inhibitors of the *Aedes aegypti* Kir1 (*Ae*Kir) channel and larvicides", Aretz, C. D.; Kharade, S. V.; Chronister, K.; Trigueros, R. R.; Rodriguez, E. J.; Piermarini, P. M.; Denton, J. S.; Hopkins, C. R.* *ChemMedChem*, **2021**, *16*, 319-327. DOI: 10.1002/cmdc.202000598.

91. "Synthesis and SAR studies of 1*H*-pyrrolo[2,3-*b*]pyridine-2-carboxamides as phosphodiesterase 4B (PDE4B) inhibitors", Vadukoot, A. K.; Sharma, S.; Aretz, C. D.; Kumar, S.; Gautam, N.; Alnouti, Y.; Aldrich, A. L.; Heim, C. E.; Kielian, T.; Hopkins, C. R.* *ACS Med. Chem. Lett.* **2020**, *11*, 1848-1854. DOI: 10.1021/acsmedchemlett.9b00369.

90. "Design, synthesis and characterization of a series of 7-aryl-imidazo[1,2-*a*]pyridin-3-ylquinolines as activin-like kinase (ALK) inhibitors", Engers, D. W.; Bollinger, S. R.; Felts, A. S.; Vadukoot, A. K.; Williams, C.; Blobaum, A. L.; Lindsley, C. W.; Hong, C. C.; Hopkins, C. R.* *Bioorg. Med. Chem. Lett.* **2020**, *30*, 127418. DOI: 10.1016/j.bmcl.2020.127418.

89. "KVA-D-88, a novel preferable phosphodiesterase 4B inhibitor, decreases cocaine-mediated reward properties *in vivo*", Burkovetskaya, M. E.; Liu, Q.; Vadukoot, A. K.; Gautam, N.; Alnouti, Y.; Kumar, S.; Miczek, K. A.; Buch, S.; Hopkins, C. R.*; Guo, M.-L.* *ACS Chem. Neurosci.* **2020**, *11*, 2231-2242. DOI: 10.1021/acschemneuro.0c00170.

88. "Discovery and characterization of 2-nitro-5-(4-(phenylsulfonyl)piperazin-1-yl)-*N*-(pyridine4ylmethyl)anilines as novel inhibitors of the *Aedes aegypti* (*Ae*Kir1) channel", Aretz, C. D.; Morwitzer, M. J.; Sanford, A. G.; Hogan, A. M.; Portillo, M. V.; Kharade, S. V.; Kramer, M.; McCarthey, J. B.; Trigueros, R. R.; Piermarini, P. M.; Denton, J. S.; Hopkins, C. R.* *ACS Infect. Dis.* **2019**, *5*, 917-931. DOI: 10.1021/acsinfecdis.8b00368.

87. "Discovery, synthesis and characterization of a series of (1-alkyl-3-methyl-1H-pyrazol-5-yl)-2(5aryl-2H-tetrazol-2-yl)acetamides as novel GIRK1/2 potassium channel activators", Sharma, S.; Kozek, K. A.; Abney, K. K.; Kumar, S.; Gautum, N.; Alnouti, Y.; Weaver, C. D.; Hopkins, C. R.* *Bioorg. Med. Chem. Lett.* **2019**, *29*, 791-796. DOI: 10.1016/j.bmcl.2019.01.027.

86. "LJ000328, a novel ALK3 kinase inhibitor, represses hepcidin and significantly improves the phenotype of IRIDA", Belot, A.; Gourbeyre, O.; Fay, A.; Palin, A.; Fournier, C. B.; Latour, C.; Hopkins, C. R.; Tidmarsh, G.; Choppin, H.; Roth, M.-P.; Ritter, M.; Hong, C.; Meynard, D. *Haematologica* **2019**, pii: haematol.2019.236133. DOI: 10.3324/haematol.2019.236133.

85. "Design, synthesis and characterization of novel *N*-heterocyclic-1-benzyl-1*H*benzo[*d*]imidazole-2-amines as selective TRPC5 inhibitors leading to the identification of the selective compound, AC1903", Sharma, S. H.; Pablo, J. L.; Montesinos, M. S.; Greka, A.; Hopkins, C. R.* *Bioorg. Med. Chem. Lett.* **2019**, *29*, 155-159. DOI: 10.1016/j.bmcl.2018.12.007.

84. "VU0810464, a non-urea GIRK channel activator, exhibits enhanced selectivity for neuronal GIRK channels and reduces stress-induced hyperthermia in mice", Vo, B. N.; Abney, K. K.; Anderson, A.; Fernandez de Velasco, E. M.; Benneyworth, M. A.; Daniels, J. S.; Morrison, R. D.; Hopkins, C. R.; Weaver, C. D.; Wickman, K.* *Br. J. Pharmacol.* **2019**, 1-12. DOI: 10.1111/bph.14671.

83. "Analgesic effects of the GIRK Activator, VU0466551, alone and in combination with morphine in acute and persistent pain models", Abney, K. K.; Bubser, M.; Bridges, T. M.; Lindsley, C. W.; Daniels, J. S.; Morrison, R. D.; Wickman, K.; Hopkins, C. R.; Jones, C. K.; Weaver, C. D. *ACS Chem. Neurosci.* **2019**, *10*, 1294-1299. DOI: 10.1021/acschemneuro.8b00370.

82. "The discovery of VU0652957 (VU2957, Valiglurax): SAR and DMPK challenges en route to an mGlu4 PAM development candidate", Panarese, J. D.; Engers, D. W.; Wu, Y.-J.; Guernon, J. M.; Chun, A.; Gregro, A. R.; Bender, A. M.; Capstick, R. A.; Wieting, J. M.; Bronson, J. J.; Macor, J. E.; Westphal, R.; Soars, M.; Engers, J. L.; Felts, A. S.; Emmitte, K. A.; Jones, C. K.; Blobaum, A. L.; Conn, P. J.; Niswender, C. M.; Hopkins, C. R.*; Lindsley, C. W. *Bioorg. Med. Chem. Lett.* **2019**, *29*, 3420346. DOI: 10.1016/j.bmcl.2018.10.050.

81. "Discovery of VU2957 (Valiglurax): an mGlu4 positive allosteric modulator evaluated as a preclinical candidate for the treatment of Parkinson's disease", Panarese, J. D.; Engers, D. W.; Wu, Y.-J.; Bronson, J. J.; Macor, J. E.; Chun, A.; Rodriguez, A. L.; Felts, A. S.; Engers, J. L.; Loch, M. T.; Emmitte, K. A.; Castelhano, A. L.; Kates, M. J.; Nader, M. A.; Jones, C. K.; Blobaum, A. L.; Conn, P. J.; Niswender, C. M.; Hopkins, C. R.*; Lindsley, C. W. *ACS Med. Chem. Lett.* **2019**, *10*, 255-260. DOI: 10.1021/acsmedchemlett.8b00426.

80. "The discovery, SAR and biological characterization of a novel series of 6-((1*H*pyrazolo[4,3*b*]pyridin-3-yl)amino)-benzo[*d*]isothiazole-3-carboxamides as positive allosteric modulators of the metabotropic glutamate receptor 4 ($mGlu_4$)", Bollinger, S. R.; Engers, D. W.; Panarese, J. D.; West, M.; Engers, J. L.; Loch, M. T.; Rodriguez, A. L.; Blobaum, A. L.; Jones, C. K.; Gray, A. T.; Conn, P. J.; Lindsley, C. W.; Niswender, C. M.; Hopkins, C. R.* *J. Med. Chem.* **2019**, *62*, 342-358. DOI: 10.1021/acs.jmedchem.8b00994.

79. "Discovery and Characterization of VU0529331, a Synthetic Small-Molecule Activator of Homomeric G Protein-gated, Inwardly-rectifying, Potassium (GIRK) Channels", Kozek, K.; Du, Y.; Sharma, S.; Spitznagel, B.; Kharade, S.; Denton, J. S.; Hopkins, C. R.; Weaver, C. D. *ACS Chem. Neurosci.* **2019**, *10*, 358-370. DOI: 10.1021/acschemneuro.8b00287.

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10. Conn, P. J.; Lindsley, C. W.; Hopkins, C. R.; Weaver, C. D.; Niswender, C. M.; Engers, D. W. *Substituted dioxopiperidines and dioxopyrrolidines as mGluR4 allosteric potentiators, compositions, and methods of treating neurological dysfunction*, US Pat. Appl. Publ. 2011/0124663, **2011**; 48 pp.

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5. Conn, P. J.; Lindsley, C. W.; Hopkins, C. R.; Weaver, C. D.; Niswender, C. M.; Cheung, Y.-Y. *Substituted benzimidazolesulfonamides and substituted indolesulfonamides as mGluR4 potentiators*. PCT Int. Appl. 2011/011722, **2011**; 131 pp.

4. Conn, P. J.; Lindsley, C. W.; Hopkins, C. R.; Weaver, C. D.; Niswender, C. M.; Gogliotti, R. D.; Engers, D. W. *Substituted 1,1,3,3-tetraoxidobenzo[d][1,3,2]dithiazoles as mGluR4 allosteric potentiators, compositions, and methods of treating neurological dysfunction*. PCT Int. Appl. WO2010/088406, **2010**; 162 pp.

3. Hong, C. C.; Hopkins, C. R.; Hatzopoulos, A. K.; Lindsley, C. W.; Hao, J. *Compounds and Methods Useful for Directing Stem Cell Differentiation*. US Pat. Appl. No. 12/537,037, **2009**; 65 pp.

2. Majid, T. N.; Hopkins, C. R.; Pedgrift, B. L.; Collar, N.; Wirtz-Brugger, F.; Merrill, J. *Pyrazoloisoquinoline derivatives as kinase inhibitors, and their preparation, pharmaceutical compositions, and use in the treatment of diseases involving increased NIK activity.* PCT Int. Appl. WO2005/012301, **2005**; 94 pp.

1. Hopkins, C. R. and Collar, N. *Synthetic Process of Making Substituted Azaindoles*, Serial No. 60/550,440; U. S. Patent Pending.

Invited Lectures

45. Creighton University, Translational Hearing Center Seminar Series, Omaha, NE, March 29th, 2022.

44. Targeting the Parasite Within the Vector: Exploring Novel Approaches to Prevent Transmission of Vector-Borne Diseases, NIAID, Session 2 speaker: Approaches to target the parasite within the vector, July 20-21, 2021 (virtual).

43. University of Michigan, Department of Chemistry, Ann Arbor, MI, January 28th, 2020.

42. University Duquesne College of Pharmacy, Department of Pharmaceutical Sciences, Pittsburgh, PA, October 3rd, 2019.

41. University of Pittsburgh, Department of Chemistry, Pittsburgh, PA, October 2nd, 2019.

40. University of Texas Medical Branch at Galveston, Galveston, TX, January 25th, 2019.

39. 5th Annual Symposium on Personalized Nano-Medicine. Talk given in the "Novel Approaches to Counteract the Current Opioid Epidemic" session, Miami, FL, November 1st, 2018.

38. 2018 CPDD 80th Annual Scientific Meeting. Talk given in the "Novel Targets for Drug Abuse Therapy" session, San Diego, CA, June 14th, 2018

37. Omaha Veterans Affairs Hospital, Omaha, NE, April 18th, 2018.

36. University of North Carolina Eschelman School of Pharmacy, Chapel Hill, NC, March 28th, 2018.

35. University of Illinois at Chicago, Chicago, IL, Department of Chemistry, May 9th, 2017

34. University of Nebraska – Omaha, Omaha, NE, Department of Chemistry, January 9th, 2017.

33. University of Nebraska – Lincoln, Lincoln, NE, Department of Chemistry, October 3rd, 2016.

32. *GPCR-Based Drug Discovery: Signaling and Pharmacological Complexities* session at the 14th Discovery on Target: Boston, MA, September 22nd, 2016.

31. Purdue University, Department of Medicinal Chemistry and Molecular Pharmacology, West Lafayette, IN, March 10th, 2016.

30. Indiana University-Purdue University Indianapolis, Department of Chemistry & Chemical Biology, Indianapolis, IN, January 27th, 2016.

29. University of Notre Dame, Department of Chemistry and Biochemistry and the Warren Center for Drug Discovery and Development, Notre Dame, IN, January 25th, 2016.

28. Southern Research Institute, Department of Drug Discovery, Birmingham, AL, January 15th, 2016.

27. University of Florida, College of Pharmacy, Gainesville, FL, January 11 – 12th, 2016.

26. 2nd Annual Glom-NExT Symposium, Center for Glomerular Kidney Disease and Novel Experimental Therapeutics, Harvard Medical School, Boston, MA, October 19th, 2015.

25. *Allosteric Modulators of GPCRs (PAMs, NAMs)* at the *12th Annual Mastering Medicinal Chemistry*, Boston, MA, June 9th, 2015.

24. Michigan State University, Department of Pharmacology and Toxicology, East Lansing, MI, April 7 – 8th, 2015

23. *GPCR Drug Discovery – Identification and Optimization of Positive Allosteric Modulators for Difficult Targets*, New York Academy of Sciences, New York, NY, March 24th, 2015.

22. Purdue University, Department of Medicinal Chemistry and Molecular Pharmacology, West Lafayette, IN, February 10 – 11th, 2015.

21. National Institutes of Health, National Institute of Neurological Disorders and Stroke, Bethesda, MD, January 28th, 2015.

20. University of Wisconsin-Madison, School of Pharmacy, Madison, WI, January 8 – 9th, 2015.

19. Michigan State University, Drug Discovery Lecture Series, East Lansing, MI, October 31st, 2014.

18. 248th National Meeting of the American Chemical Society: San Francisco, CA: Paper ID: 319. August 2014.

17. 248th National Meeting of the American Chemical Society: San Francisco, CA: Paper ID: 20. August 2014.

16. *GPCR-Targeted Therapeutics: Progressing Drug Candidates* session at the 11th Discovery on Target: Boston, MA, September 25th, 2013.

15. 246th National Meeting of the American Chemical Society: Indianapolis, IN: Paper ID: 219. September 2013.

14. *Mining the Metabotropic Glutamate Receptors Type 4 (mGluR4) and Their Ligands in Brain Disorders* session at the 25th European College of Neuropsychopharmacology: Vienna, Austria, October 16th, 2012, Session S.24.

13. Keynote Address at the Regenerative Medicine in Gluacoma Symposium: Nashville, TN, Sept. 20th, 2012.

12. Givaudan Flavors Corp., Cincinnati, OH. September 4th, 2012.

11. 2nd Annual Targeting Parkinson's Disease Symposium at the 11th Annual World Pharma Congress: Drug Discovery Summit: Philadelphia, PA, June 4th, 2012.

10. 243rd National Meeting of the American Chemical Society: San Diego, CA: Abstract 379, March 2012.

9. Targeting Parkinson's Disease Symposium at the 10th Annual World Pharma Congress: Drug Discovery Summit: Philadelphia, PA, June 9th, 2011.

8. Technology Enabled Organic Synthesis Symposium at the 42nd Meeting of the American Chemical Society Central Region: Indianapolis, IN, June 8th, 2011.

7. American Chemical Society Pharma Leaders Meeting: Abbott Laboratories, Abbott Park, IL, November 11–12, 2010.

6. 32nd National Medicinal Chemistry Symposium, Minneapolis, MN, June 2010.

5. Vanderbilt Institute of Chemical Biology, Nashville, TN, March 2010.

4. ACS Prospectives: Tactical Approaches to the Challenge of Drug Failure: Philadelphia, PA, October 2009.

3. Center for Chemical Genomics Symposium, Screening and Beyond: Assays, hits, probes, leads…drugs, University of Michigan, Ann Arbor, MI, May 2009.

2. 237th National Meeting of the American Chemical Society: Salt Lake City, UT: Abstract 139, March 2009.

1. Molecular Medicine Tri-Conference, Mastering Medicinal Chemistry, San Francisco, CA, February 2009.

Presentations

48. "Development of novel inhibitors against some or all of Flaviviruses", Mashinson, V.*; Wang, L.; Thompson, C.; Xiang, S.-H.; Hopkins, C. R. Poster Presentation at the 263rd American Chemical Society National Meeting, San Diego, CA. March 20th, 2022. Presentation: 3637089.

47. "Development of D4 antagonists and sigma-1 receptor modulators for the treatment of CNS disorders", Tolentino, K. T.*; Hopkins, C. R. Oral Presentation at the 263rd American Chemical Society National Meeting, San Diego, CA. March 21st, 2022. Presentation: 3644514.

46. "Discovery and characterization of benzyloxy piperidine based dopamine 4 receptor antagonists", Antonio-Tolentino, K. T.*; Vadukoot, A. K.; Mashinson, V.; Hopkins, C. R. Poster presentation at the 261st American Chemical Society Spring Meeting (Virtual), April 2021.

    - Poster selected for the Sci-Mix Poster Session. April 9th, 2021.

45. "Discovery and development of small molecule positive allosteric agonists of MrgX1 as a potentially novel, non-addictive therapy for chronic pain", Sharma, S.*; Aretz, C.; Vadukoot, A. K.; Peng, Q.; Dong, X.; Hopkins, C. R., Oral Presentation at the 261st American Chemical Society Spring Meeting, April 8th, 2021.

44. "Design, synthesis and characterization of novel *N*-heterocyclic-1-benzyl-1*H*benzo[*d*]imidazole-2-amines as selective TRPC5 ion channel inhibitors for suppression of progressive kidney disease", Sharma, S.*; Pablo, J. L.; Greka, A.; Hopkins, C. R.* Poster Presentation at the 2018 Midwest Regional Meeting of the American Chemical Society, Ames, IA. October 23rd, 2018. Poster ID: 3047283.

43. "Development of potent and selective Kir channel inhibitors as vector management strategy for controlling the primary vector of Zika virus, *Aedes aegypti*", Hopkins, C. R.*; Aretz, C. D.; Moritzer, M. J.; Sanford, A. G.; Hogan, A. M.; Portillo, M. V.; Kramer, M.; Denton, J. S.; Trigueros, R. R.; Piermarini, P. M. Poster Presentation at the 2018 Military Health System Research Symposium: Kissimmee, FL. August 20-23rd, 2018. Paper ID: MHSRS-18-0373, Poster #: 147.

42. "Discovery, synthesis and characterization of a series of (1-alkyl-3-methyl-1*H*-pyrazolo-5-yl)-2(5aryl-2*H*-tetrazol-2-yl)acetamides as novel GIRK1/2 potassium channel activators", Sharma, S.*; Kozek, K.; Abney, K. K.; Weaver, C. D.; Hopkins, C. R.* *Abstracts of Papers*, Poster Presentation at the 256th National Meeting of the American Chemical Society: Boston, MA: Paper ID: MEDI 143. August 19th, 2018.

    - Poster selected for the Sci-Mix Poster Session. August 20th, 2018.

41. "Discovery and synthesis of a novel metabotropic glutamate receptor subtype 4 positive allosteric modulator with anti-parkinsonian efficacy in rodent models", Bollinger, S. R.; Engers, D. W.; Panarese, J.; West, M.; Engers, J. L.; Loch, M. T.; Rodriguez, A. L.; Blobaum, A. L.; Jones, C. K.; Thompson, A. D.; Conn, P. J.; Lindsley, C. W.; Niswender, C. M.; Hopkins, C. R.* Poster Presentation at the 36th National Medicinal Chemistry Symposium: Nashville, TN: MEDI: 93. April 30th, 2018.

40. "Utilizing Basic Science to Inspire Drug Discovery Identification of Novel Dopamine Receptor 4 Antagonists", Jeffries, D. E.; Witt, J. O.; McCollum, A. L.; Temple, K. J.; Hurtado, M. A.; Huseman, E. D.; O'Reilly, M. C.; Plumley, H. C.; Blobaum, A. L.; Harp, J. M.; Lindsley, C. W.; Hopkins, C. R.* Poster Presentation at the 36th National Medicinal Chemistry Symposium: Nashville, TN: MEDI: 78. April 30th, 2018.

39. "Synthesis, structure-activity relationship studies and biological evaluation of novel and selective 1*H*-pyrrolo[2,3-*b*]pyridine-2-carboxamides as related phosphodiesterase 4B (PDE4B) inhibitors", Vadukoot, A. K.; Sharma, S.; Hopkins, C. R.* *Abstracts of Papers*, Poster Presentation at the 255th National Meeting of the American Chemical Society: New Orleans, LA: Paper ID: MEDI 151. March 18th, 2018.

38. "Novel MrgX1 allosteric agonists as non-habit forming anti-chronic pain therapeutics", Hopkins, C. R.*; Li, Z.; Tseng, P.-Y.; Tiwari, V.; Xu, Q.; He, S.-Q.; Wang, Y.; Zheng, Q.; Han, L.; Wu, Z.; Blobaum, A. L.; Cui, Y.; Tiwari, V.; Sun, S.; Cheng, Y.; Huang-Lionnet, J. H. Y.; Geng, Y.; Xiao, B.; Peng, J.; Raja, S. N.; Guan, Y.; Dong, X. Poster Presentation at the 2017 Military Health System Research Symposium: Kissimmee, FL. August 27-30th, 2017. Paper ID: MHSRS-17-1247, Poster #: 396.

37. "Discovery and characterization of 1*H*-pyrazol-5-yl-2-phenylacetamides as novel, non-urea containing GIRK1/2 potassium channel activators", Sharma, S.; Wieting, J. M.; Vadukoot, A. K.; Abney, K. K.; Bridges, T. M.; Vo, B.; Anderson, A.; Wickman, K. D.; Weaver, C. D.; Hopkins, C. R.* *Abstracts of Papers*, Poster Presentation at the 254th National Meeting of the American Chemical Society: Washington, DC: Paper ID: MEDI 75. August 20th, 2017.

    - Poster selected for the Sci-Mix Poster Session. August 21st, 2017.

36. "Differential effects of dopamine receptor antagonism on methamphetamine self-administration in female rats", Huynh, Y. W.; Larsen, C. E.; Thompson, B. M.; Callen, M. P.; Barrett, S. T.; Hopkins, C. R.*; Bevins, R. A.; Murray, J. E. Poster Presentation at the 65th Annual Nebraska Symposium on Motivation: Lincoln, NE. April 20-21st, 2017.

35. "ML418: The first selective, sub-micromolar pore blocker of K_{ir}7.1 potassium channels", Kurata, H.; Swale, D. R.; Kharade, S. V.; Sheehan, J.; Raphemot, R.; Voigtritter, K. R.; Figueroa, E. E.; Meiler, J.; Blobaum, A. L.; Lindsley, C. W.; Hopkins, C. R.*; Denton, J. S. *Abstracts of Papers*, Poster Presentation at the 253rd National Meeting of the American Chemical Society: San Francisco, CA: Paper ID: MEDI 245. April 5th, 2017.

    - Poster selected for the Sci-Mix Poster Session. April 3rd, 2017.

34. "Metabotropic glutamate receptor 7 as a therapeutic target for *MECP2*-related disorders", Niswender, C. M.*; Gogliotti, R. G.; Fisher, N. M.; Senter, R.; Gould, R. W.; Adams, J. J.; Stanley, B. J.; Walker, A. G.; Zamorano, R.; Blobaum, A. L.; Engers, D. W.; Hopkins, C. R.; Lindsley, C. W.; Jones, C. K.; Xiang, Z.; Conn, P. J. *Abstracts of Papers*, Poster presented at Society of Neuroscience 2016: San Diego, CA, November 2016.

33. "Metabotropic glutamate receptor 7 as a therapeutic target for *MECP2*-related disorders", Fisher, N. M.; Gogliotti, R. G.; Senter, R.; Gould, R. G.; Walker, A. G.; Zamorano, R.; Adams, J. J.; Blobaum, A. L.; Engers, D. W.; Hopkins, C. R.; Lindsley, C. W.; Xiang, Z.; Jones, C. K.; Conn, P. J.; Niswender, C. M. *Abstracts of Papers*, Poster presented at the Rett Syndrome Symposium 2016: Eaglewood Resort, IL, June 2016.

32. "Small molecule ALK inhibitors with improved selectivity and pharmacokinetics inhibit heterotopic ossification without toxicity in a mouse model of fibrodysplasia ossificans progressiva", Perrien, D. S.*; Hopkins, C. R.; Lindsley, C.; Frist, A.; Durai, H.; Fleming, N.; Booton, S. E.; Hong, C. C. *Abstracts of Papers*, Poster Presentation at the American Society for Bone and Mineral Research Annual Meeting: Atlanta, GA. September 2016.

31. "Kir4.1 (*KCNJ10*) inhibition with a newly developed antagonist induces diuresis in rats", Kharade, S. V.*; Kurata, H.; Hopkins, C. R.; Denton, J. S. *Abstracts of Papers*, Poster Presentation at Experimental Biology 2016: Abstract: 1272.3. San Diego, CA. April 2016.

30. "Discovery and characterization of the choline transporter inhibitor: *N*-((3-isopropylisoxazol5yl)methyl)-4-chloro-3-((1-methylpiperidin-4-yl)oxy)benazmide, VU6001221", Bertron, J.*; Tarr, C.; Hopkins, C. R.; Ennis, E.; Wright, J.; Locuson, C.; Blakely, R.; Lindsley, C. *Abstracts of Papers*, Poster Presentation at the 71st SWRM/67th SERMACS: Memphis, TN: Paper ID: 494. November 2015.

29. "$mGlu_7$ is critical for hippocampal plasticity and is a potential therapeutic target for the treatment of Rett Syndrome", Klar, R.*; Gogliotti, R. G.; Walker, A. G.; Zamorano, R.; Engers, D. W.; Ghose, D.; Grueter, B. A.; Hopkins, C. R.; Lindsley, C. W.; Xiang, Z.; Conn, P. J.; Niswender, C. M. *Abstracts of Papers*, Poster presented at Society of Neuroscience, 2015: Abstract ID: 120.14/A97. Chicago, IL, October 2015.

28. "Development of novel $mGlu_1$ PAMs: Chemical tools to improve functionality of mutant receptor isoforms found in a schizophrenic population", Garcia-Barrantes, P.*; Cho, H.; Brogan, J.; Niswender, C.; Hopkins, C.; Conn, J.; Lindsley, C. *Abstracts of Papers*, Poster Presentation at the 250th National Meeting of the American Chemical Society: Boston, MA: Paper ID: 78. August 2015.

27. "Development of novel and selective mGlu1 PAMs: chemical modulation to improve functionality of mutant receptor isoforms found in schizophrenics", Garcia-Barrantes, P. M.; Cho, H. P.; Brogan, J. T.; Hopkins, C. R.; Niswender, C. M.; Morrison, R. D.; Daniels, J. D.; Conn, P. J.; Lindsley, C. W. Poster presentation at the 66th Southeast Regional Meeting of the American Chemical Society: Nashville, TN. Abstract: SERMACS-51. October 2014.

26. "Development of novel mGlu1 PAMs as tools to improve functionality of mutant receptor isoforms found in a schizophrenic population", Garcia-Barrantes, P. M.; Cho, H. P.; Brogan, J. T.; Hopkins, C. R.; Niswender, C. M.; Morrison, R. D.; Daniels, J. S.; Conn, P. J.; Lindsley, C. W. Poster presentation at the 8th International Meeting on Metabotropic Glutamate Receptors, Sept. 28th – Oct. 3rd, 2014. Poster #18.

25. "Imaging the antiparkinsonian effects of the novel metabotropic glutamate receptor subtype 4 positive allosteric modulator ADX88178", Byun, N.; Huang, A.; Baheza, R. A.; Barry, R. L.; Lindsley, C. W.; Hopkins, C. R.; Niswender, C.; Jones, C. K.; Gore, J. C.; Conn, P. J. Poster presentation at the 8th International Meeting on Metabotropic Glutamate Receptors, Sept. 28th – Oct. 3rd, 2014. Poster #77.

24. "Development of non-isatin M1 positive allosteric modulators", Panarese, J. D.*; Rook, J. M.; Poslusney, M. S.; Melancon, B. J.; Bridges, T. M.; Cho, H. P.; Dickerson, J.; Hopkins, C.; Wood, M. R.; Xiang, Z.; Morrison, R.; Stauffer, S. R.; Daniels, J. S.; Niswender, C.; Jones, C. K.; Conn, P. J.; Lindsley, C. W. *Abstracts of Papers*, Poster Presentation at the 248th National Meeting of the American Chemical Society: San Francisco, CA: Paper ID: 130. August 2014.

23. "Discovery and structure-activity relationship of a novel choline transporter inhibitor (ML352)", Engers, D. W.*; Ennis, E. A.; Ruggiero, A. M.; Blakely, R. D.; Hopkins, C. R.*; Lindsley, C. W. *Abstracts of Papers*, Poster presented at the 246th National Meeting of the American Chemical Society: Indianapolis, IN: Paper ID: 284. September 2013 (*Selected for Sci-Mix)*.

22. "A screen with potential: high-throughput screening efforts to identify novel inhibitors and activators of the presynaptic choline transporter", Ennis, E. A.*; Ruggiero, A. M.; Wright, J.; Hopkins, C. R.; Lindsley, C. A.; Blakely, R. D. *Abstracts of Papers*, Poster presented at Biomedical Transporters 2013: St. Moritz, Switzerland. August 2013.

21. "High-throughput screen for novel inhibitors and activators of the presynaptic choline transporter", Ennis, E. A.*; Ruggiero, A. M.; Wright, J.; Hopkins, C. R.; Lindsley, C. W.; Blakely, R. D. *Abstracts of Papers*, Poster presented at Regulation of Neurotransmitters, Society of Neuroscience, 2012: New Orleans, LA: Abstract 740.15, October 2012.

20. "Effects of metabotropic glutamate receptor activation on neuroinflammation", Dickerson, J. W.*; Nedelcovych, M. T.; Stauffer, S. R.; Hopkins, C. R.; Niswender, C. M.; Lindsley, C. W.; Jones, C. K.; Conn, P. J. *Abstracts of Papers*, Poster presented at Metabotropic Glutamate Receptors I, Society of Neuroscience, 2012: New Orleans, LA: Abstract 740.15, October 2012.

19. "Characterization of novel positive allosteric modulators of Group III metabotropic glutamate receptors utilizing *in vitro* studies", Field, J. R.*; Melancon, B. J.; Zamorano, R.; Engers, D. W.; Salovich, J. M.; Cheung, Y. Y.; Days, E. L.; Lewis, L. M.; Xiang, Z.; Weaver, C. D.; Jones, C. K.; Wood, M. R.; Hopkins, C. R.; Lindsley, C. W.; Conn, P. J.; Niswender, C. M. *Abstracts of Papers*, Poster presented at G-Protein Coupled Receptors: Molecular Mechanisms and Novel Functional Insights", Keystone Symposium 2012: Banff, Alberta, February 2012.

18. "Discovery of an inward rectifying potassium channel inhibitor with preference for Kir2.2, Kir3.X and Kir7.1", Raphemot, R.*; Lonergan, D.; Nguyen, T. T.; Utley, T. J.; Rogliotti, R.; Hopkins, C. R.; Lewis, L. M.; Lindsley, C. W.; Weaver, C. D.; Denton, J. S. *Abstract of Papers*, Poster presented at Experimental Biology 2012: San Diego, CA.

17. "Co-administration of an $mGlu_4$ positive allosteric modulator and the A_{2A} antagonist preladenant improves efficacy in preclinical models of Parkinson's disease", Dickerson, J. W.*; Thompson, A. D.; Jones, C. K.; Niswender, C. M.; Hopkins, C. R.; Lindsley, C. W.; Conn, P. J. *Abstracts of Papers*, Poster presented at Nanosymposium: 638. Parkinson's Disease: Neural Mechanisms, Society of Neuroscience, 2011: Washington, D. C.: Abstract 638.09, November 2011.

16. "$mGlu_4$ receptor positive allosteric modulator development for the treatment of CNS disorders", Niswender, C. M.*; Jones, C. K.; Hopkins, C. R.; Thompson, A. D.; Bubser, M.; Engers, D.; Gogliotti, R. D.; Blobaum, A. E.; Salovich, J. M.; Cheung, Y. Y.; Morrison, R. D.; Dawson, E. S.; Zamorano, R.; Brewer, K. A.; Daniels, J. S.; Lindsley, C. W.; Conn, P. J., Oral presentation at the 7th International Meeting on Metabotropic Glutamate Receptors, Oct. 2nd – 7th, 2011.

15. "Discovery and SAR Development of a Novel Series of *N*-4-(2,5-dioxopyrrolidin-1yl)phenylpicolinamides, including ML182, as Positive Allosteric Modulators of Metabotropic Glutamate Receptor 4: A Novel Approach for the Treatment of Parkinson's Disease", Engers, D. W.; Le, U. M.; Zhou, Y.; Thompson, A. D.; Jadhav, S.; Gogliotti, R. D.; Lindsley, S. R.; Bolinger, J. L.; Menon, U. N.; Zamorano, R.; Daniels, J. S.; Blobaum, A. L.; Jones, C. K.; Weaver, C. D.; Conn, P. J.; Lindsley, C. W.; Niswender, C. M.; Hopkins, C. R.*, Poster presentation at the 7th International Meeting on Metabotropic Glutamate Receptors, Oct. 2nd – 7th, 2011.

14. "Drug Metabolism and Disposition of a Novel *N*-4-(2,5-dioxopyrrolidin-1-yl)phenylpicolinamide Series of Positive Allosteric Modulators of Metabotropic Glutamate Receptor 4: Identification of ML182 as an Orally Efficacious mGluR4-PAM", Blobaum, A. L.; Morrison, R.; Jadhav, S.; Engers, D. W.; Lindsley, S. R.; Zhou, Y.; Gogliotti, R. D.; Jones, C. K.; Niswender, C. M.; Conn, P. J.; Lindsley, C. W.; Hopkins, C. R.*; Daniels, J. S., Poster presentation at the 7th International Meeting on Metabotropic Glutamate Receptors, Oct. 2nd – 7th, 2011.

13. "Shape-based virtual screens to identify novel group I and III mGlu receptor allosteric modulator chemotypes", Dawson, E. S.*; Smith, J. A.; Niswender, C. M.; Hopkins, C. R.; Gogliotti, R.; Stauffer, S.; Lindsley, C. W.; Conn, P. J., Poster presentation at the 7th International Meeting on Metabotropic Glutamate Receptors, Oct. 2nd – 7th, 2011.

12. "The Discovery and Development of Positive Allosteric Modulators of $mGlu_4$ for the Treatment of Parkinson's Disease", Hopkins, C. R.*, Oral presentation at the 23rd International Congress on Heterocyclic Chemistry: Presentation O55, Glasgow, Scotland, July 31st – August 4th, 2011.

11. "mGluR4 Positive Allosteric Modulator Development for the Treatment of CNS Disorders", Niswender, C. M.*; Hopkins, C. R.; Jones, C. K.; Engers, D.; Thompson, A. D.; Field, J. R.; Gogliotti, R. D.; Blobaum, A. E.; Jadhav, S.; Salovich, J. M.; Cheung, Y.-Y.; Morrison, R. D.; Mulder, M. J.; Bolinger, J.; Dawson, E. S.; Zamorano, R.; Vinson, P. N.; Bubser, M.; Brewer, K. A.; Daniels, J. S.; Lindsley, C. W.; Conn, P. J. *Abstracts of Papers*, Poster presented at Metabotropic Glutamate Receptors: Disease and Aging, Society of Neuroscience, 2010: San Diego, CA: Abstract 642.9/E33, November 2010.

10. "VU0364770, a potent and systemically active positive allosteric modulator of mGluR4, produces robust efficacy in preclinical models of Parkinson's Disease", Thompson, A. D.*; Jones, C. K.; Bubser, M.; Niswender, C. M.; Hopkins, C. R.; Engers, D.; Jadhav, S.; Lindsley, C. W.; Conn, P. J. *Abstracts of Papers*, Poster presented at Metabotropic Glutamate Receptors: Disease and Aging, Society of Neuroscience, 2010: San Diego, CA: Abstract 642.10/E34, November 2010.

9. "Synthesis and SAR of piperazinyl and homopiperazinyl analogs as positive allosteric modulators of mGluR4", Cheung, Y. Y.*; Hopkins, C. R.; Niswender, C.; Lindsley, C. W.; Conn, P. J. *Abstracts of Papers*, Poster presented at: 240th American Chemical Society National Meeting: Boston, MA: Abstract 368, August 2010.

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