Kasper B. Hansen

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Education

2005: Ph.D. in Molecular Pharmacology at the Drug Research Academy, Faculty of Pharmaceutical Sciences, University of Copenhagen, Denmark. Graduated March 2006.
Title of thesis: "*Studies on the Molecular Pharmacology of Recombinant NMDA Receptors*".
Advisor: Professor Hans Bräuner-Osborne, Department of Medicinal Chemistry, Faculty of Pharmaceutical Sciences, University of Copenhagen, Denmark.

2002: M.Sc. in Molecular Biology, Aarhus University, Denmark.
Title of thesis: "*Direct Interaction between Distinct Neurotransmitter Systems*".
Advisor: Associate Professor Jan Egebjerg, Department of Molecular Biology, Aarhus University, Denmark.

1998: B.Sc. in Chemistry, Aarhus University, Denmark.

Research Training and Positions

2022-present: Director, Center for Structural and Functional Neuroscience, University of Montana, Missoula, MT.

2021-present: Director, Neuroscience Graduate Program, University of Montana, Missoula, MT.

2019-present: Associate Professor, Center for Structural and Functional Neuroscience, Center for Biomolecular and Structural Dynamics, Division of Biological Sciences, University of Montana, Missoula, MT.

2013-2019: Assistant Professor, Center for Structural and Functional Neuroscience, Center for Biomolecular and Structural Dynamics, Department of Biomedical & Pharmaceutical Sciences, University of Montana, Missoula, MT.

2006-2013: Postdoctoral Fellow with Professor Stephen F. Traynelis, Department of Pharmacology, Emory University School of Medicine, Atlanta, GA.

2006: Postdoctoral Fellow, Department of Molecular Biology, H. Lundbeck A/S, Denmark.

Awards and Honors

2017: "Teacher of the Month" by the Rho Chi Society (Academic Honor Society in Pharmacy) (November 2017)

2016: "Teacher of the Month" by the Rho Chi Society (Academic Honor Society in Pharmacy) (November 2016)

2013: Travel Stipend, Lundbeck Foundation, Denmark.

2012: Winter Conference on Brain Research Travel Fellowship

2008: IUPHAR Young Investigator Poster Award (1st prize)

2007-2008: Travel Grant, Danish Council for Independent Research - Medical Sciences, Denmark.

2002-2005: Ph.D. Studentship at Drug Research Academy, University of Copenhagen, Denmark.

Grants and Fellowships

2021-2026: NIH-NINDS R01 NS116055

2019: Artificial Intelligence Molecular Screen (AIMS) Awards (Project IDs: A19-339 and A19-195)

2018-2021: Research contract, Janssen Research & Development.

2017-2018: CBSD-CoBRE Pilot Project Award

2016-2026: NIH-NINDS R01 NS097536

2016-2017: University of Montana Small Grant

2015-2016: Research contract, Mnemosyne Pharmaceuticals, Inc.
2014-2017: CBSD-CoBRE Junior Investigator Award
2013-2016: CBSD-CoBRE-Supported Startup Funding
2008: Research Grant, Foundation of 17-12-1981, Denmark.
2007-2009: Postdoctoral Fellowship Grant, Lundbeck Foundation, Denmark.
2007-2008: Postdoctoral Fellowship Grant, Villum Kann Rasmussen Foundation, Denmark.
2006-2007: Alfred Benzon Research Fellowship Grant, Alfred Benzon Foundation, Denmark.
2002-2005: Ph.D. Studentship at Drug Research Academy, University of Copenhagen, Denmark.

Professional Societies

- American Society for Pharmacology and Experimental Therapeutics (2017-present)
- Society for Neuroscience (2006-present)
- Biophysical Society (2009-present)
- Danish Society of Pharmacology and Toxicology (2002-2009)

Grant Reviewing and Editorial Boards

- NIH, NINDS R35 ZNS1 SRB-H (26) Study Section, *ad hoc* grant review (November 2022)
- Reviewer of 33 travel award applications to attend the annual meeting of the Biophysical Society (October-November 2022)
- Israel Science Foundation, *ad hoc* grant review (January 2022)
- Reviewer of 25 travel award applications to attend the annual meeting of the Biophysical Society (October-November 2021)
- NIH, Neurotransporters, Receptors, and Calcium Signaling (NTRC) Study Section, *ad hoc* grant review (June 2021)
- Alzheimer's Research UK, *ad hoc* grant review (March 2021)
- Reviewer of 12 travel award applications to attend the annual meeting of the Biophysical Society (October-November 2020)
- Reviewer of 33 travel award applications to attend the annual meeting of the Biophysical Society (October-November 2019)
- UK Research and Innovation, Medical Research Council, Neurosciences and Mental Health, *ad hoc* grant review (March 2019)
- Multiple Sclerosis Society, *ad hoc* grant review (June 2018)
- American Heart Association, Fellowship Cardiac Electro Basic Science Study Group, *ad hoc* grant review (August 2018)
- Editorial Advisory Board of Molecular Pharmacology (2016-present)

Occasional Journal Reviews (# of reviews, excluding revisions)

ACS Medicinal Chemistry Letters (1), eLife (1), Biological Chemistry (1), Biological Psychiatry (1), Biophysical Journal (3), British Journal of Pharmacology (2), Brain Research (2), Cell Reports (1), Cellular and Molecular Life Sciences (1), Communications Biology (1), Current Opinion in Pharmacology (1), EMBO Journal (1), European Journal of Pharmacology (3), Expert Opinion On Therapeutic Patents (1), Journal of Medicinal Chemistry (4), Journal of Neurophysiology (3), Journal of Neuroscience (9), Journal of Pharmacology and Experimental Therapeutics (4), Journal of Physiology (4), Molecular Neurobiology (1), Molecular Pharmacology (25), Nature (4), Nature Communications (4), Nature Neuroscience (2), Nature Structural and Molecular Biology (2), Neurochemistry International (3), Neuron (5), Neuropharmacology (6), PLOS ONE (2), Science (1), Science Advances (1), Scientific Reports (3), Translational Psychiatry (1).

Journal Publications

Google Scholar h-index 35, see https://scholar.google.com/citations?user=X-dyvcEAAAAJ&hl=en
Pubmed, see https://www.ncbi.nlm.nih.gov/myncbi/kasper.hansen.3/bibliography/public/

74. ***In vitro* ADME characterization of a very potent 3-acylamino-2-aminopropionic acid-derived GluN2C-NMDA receptor agonist and its ester prodrugs.**
Bechthold E, Grey L, Diamant E, Schmidt J, Steigerwald R, Zhao F, Hansen KB, Bunch L, Clausen RP, and Wünsch B.
Biol Chem (2022). DOI: 10.1515/hsz-2022-0229. Epub ahead of print.

73. **Discovery of (*R*)-2-amino-3-triazolpropanoic acid derivatives as NMDA receptor glycine site agonists with GluN2 subunit-specific activity.**
Zhao F, Mazis G, Yi F, Lotti JS, Layeux MS, Schultz EP, Bunch L, Hansen KB, and Clausen RP.
Front Chem (2022). 10:1008233.

72. **Synaptic dysfunction by mutations in GRIN2B: Influence of triheteromeric NMDA receptors on gain-of-function and loss-of-function mutant classification.**
Elmasri M, Lotti JS, Aziz W, Steele OG, Karachaliou E, Sakimura K, Hansen KB, and Penn AC.
Brain Sci (2022). 12(6):789.

71. **Derivatives of (R)-3-(5-furanyl)carboxamido-2-aminopropanoic acid as potent NMDA receptor glycine site agonists with GluN2 subunit-specific activity.**
Zhao F, Atxabal U, Mariottini S, Yi F, Lotti JS, Rouzbeh N, Liu N, Bunch L, Hansen KB, and Clausen RP.
J Med Chem (2022). 65(1):734-746.

70. **Structure, function, and pharmacology of glutamate receptor ion channels.**
Hansen KB, Wollmuth LP, Bowie D, Furukawa H, Menniti FS, Sobolevsky AI, Swanson GT, Swanger SA, Greger IH, Nakagawa T, McBain CJ, Jayaraman V, Low CM, Dell'Acqua ML, Diamond JS, Camp CR, Perszyk RE, Yuan H, and Traynelis SF.
Pharmacol Rev (2021). 73(4):298-487.

69. **Stereoselective synthesis of novel 2'-(S)-CCG-IV analogues as potent NMDA receptor agonists.**
Maolanon A, Papangelis A, Kawiecki D, Mou T-C, Syrenne JT, Yi F, Hansen KB, Clausen RP.
Eur J Med Chem (2021). 212:113099.

68. **Distinct GluN1 and GluN2 Structural Determinants for Subunit-Selective Positive Allosteric Modulation of N-Methyl-d-aspartate Receptors.**
Strong KL, Epplin MP, Ogden KK, Burger PB, Kaiser TM, Wilding TJ, Kusumoto H, Camp CR, Shaulsky G, Bhattacharya S, Perszyk RE, Menaldino DS, McDaniel MJ, Zhang J, Le P, Banke TG, Hansen KB, Huettner JE, Liotta DC, Traynelis SF.
ACS Chem Neurosci (2021). 12(1):79-98.

67. **Negative allosteric modulation of GluN1/GluN3 NMDA receptors.**
Zhu Z, Yi F, Epplin MP, Liu D, Summer SL, Mizu R, Shaulsky G, XiangWei W, Tang W, Burger PB, Menaldino DS, Myers SJ, Liotta DC, Hansen KB, Yuan H, Traynelis SF.
Neuropharmacology (2020) 176:108117.

66. **Stereoselective synthesis of new (2S,3R)-3-carboxyphenyl)pyrrolidine-2-carboxylic acid analogues utilizing a C(sp3)-H activation strategy and structure-activity relationship studies at the ionotropic glutamate receptors.**
Kayser S, Hansen JC, Staudt M, Moroz A, Larsen Y, Temperini P, Yi F, Syrenne JT, Krogsgaard-Larsen N, Iliadis S, Nielsen B, Hansen KB, Pickering DS, and Bunch L.
ACS Chem Neurosci (2020). 11(5):674-701.

65. **PTC-174, a positive allosteric modulator of NMDA receptors containing GluN2C or GluN2D subunits.**
Yi F, Rouzbeh N, Hansen KB, Xu Y, Fanger CM, Gordon E, Paschetto K, Menniti FS, and Volkmann RA.
Neuropharmacology (2020). 173:107971.

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64. **Functional and pharmacological properties of triheteromeric GluN1/2B/2D NMDA receptors.**
Yi F, Bhattacharya S, Thompson CM, Traynelis SF, and Hansen KB.
J Physiol (2019). 597(22):5495-5514.

63. **Design and synthesis of 2,3-trans-proline analogues as ligands for ionotropic glutamate receptors and excitatory amino acid transporters.**
Poulie CBM, Alcaide A, Krell-Jørgensen M, Larsen Y, Astier E, Bjørn-Yoshimoto WE, Yi F, Syrenne JT, Storgaard M, Nielsen B, Frydenvang KA, Jensen AA, Hansen KB, Pickering DS, and Bunch L.
ACS Chem Neurosci (2019). 10(6):2989-3007.

62. **Use of the 4-hydroxytriazole moiety as a bioisosteric tool in the development of ionotropic glutamate receptor ligands.**
Sainas S, Temperini P, Farnsworth JC, Yi F, Møllerud S, Jensen AA, Nielsen B, Passoni A, Kastrup JS, Hansen KB, Boschi D, Pickering DS, Clausen RP, and Lolli ML.

J Med Chem (2019). 62(9):4467-4482.

61. **Functional assessment of triheteromeric NMDA receptors containing a human variant associated with epilepsy.**
Marwick KFM, Hansen KB, Skehel P, Hardingham G, and Wyllie DJA.
J Physiol (2019). 597(6):1691-1704.

60. **Triheteromeric GluN1/GluN2A/GluN2C NMDA receptors with unique single channel properties are the dominant receptor population in cerebellar granule cells.**
Bhattacharya S, Khatri A, Swanger SA, DiRaddo JO, Yi F, Hansen KB, Yuan H, and Traynelis SF.
Neuron (2018). 99(2):315-328.e5.

59. **Structure, function, and allosteric modulation of NMDA receptors.**
Hansen KB, Yi F, Perszyk RE, Furukawa H, Wollmuth LP, Gibb AJ, and Traynelis SF.
J Gen Physiol (2018). 150(8):1081-1105.

58. **Properties of triheteromeric N-Methyl-d-aspartate receptors containing two distinct GluN1 isoforms.**
Yi F, Zachariassen LG, Dorsett KN, and Hansen KB.
Mol Pharmacol (2018). 93(5):453-467.

57. **Augmentation of anti-cancer drug efficacy in murine hepatocellular carcinoma cells by a peripherally acting competitive N-methyl-D-aspartate (NMDA) receptor antagonist.**
Gynther M, Silvestri IP, Hansen JC, Hansen KB, Malm T, Ishchenko Y, Larsen Y, Han L, Kayser S, Auriola S, Petsalo A, Nielsen B, Pickering DS, and Bunch L.
J Med Chem (2017). 60(23):9885-9904.

56. **NMDA receptors in the central nervous system.**
Hansen KB, Yi F, Perzyk R, Menniti FS, and Traynelis SF.
Methods Mol Biol (2017). 1677:1-80.

55. **Selective cell-surface expression of triheteromeric NMDA receptors.**
Yi F, Traynelis SF, and Hansen KB.
Methods Mol Biol (2017). 1677:145-162.

54. **Structural basis of subunit-selectivity for competitive NMDA receptor antagonists with preference for GluN2A over GluN2B subunits.**
Lind GE, Mou T-C, Tamborini L, Pomper MG, De Micheli C, Conti P, Pinto A, and Hansen KB.
Proc Natl Acad Sci U S A (2017). 114(33):E6942-E6951.

53. **Subtype-specific agonists for NMDA receptor glycine binding sites.**
Maolanon AR, Risgaard R, Wang S-Y, Snoep Y, Papangelis A, Yi F, Holley D, Barslund AF, Svenstrup N, Hansen KB, and Clausen RP.
ACS Chem Neurosci (2017). 8(8):1681-1687.

52. **Identification of AICP as a GluN2C-selective NMDA receptor superagonist at the GluN1 glycine site.**
Jessen M, Frederiksen K*, Yi F, Clausen RP, Hansen KB*, Bräuner-Osborne H, Kilburn P, and Damholt A.
Mol Pharmacol (2017). 92(2):151-161.
* Co-corresponding authors.

51. **Allosteric interactions between NMDA receptor subunits shape the developmental shift in channel properties.**
Sun W, Hansen KB, and Jahr CE.
Neuron (2017). 94(1):58-64.e3.

50. **Development of Radiolabeled Ligands Targeting the Glutamate Binding Site of the N-Methyl-d-aspartate Receptor as Potential Imaging Agents for Brain.**
Tamborini L, Chen Y, Foss CA, Pinto A, Horti AG, Traynelis SF, De Micheli C, Mease RC, Hansen KB, Conti P, and Pomper MG.
J Med Chem (2016). 59(24):11110-11119.

49. **Structural basis for negative allosteric modulation of GluN2A-containing NMDA receptors.**
Yi F*, Mou T-C*, Dorsett KN, Volkmann RA, Menniti FS, Sprang SR, and Hansen KB.
* Authors contributed equally to the work.
Neuron (2016). 91(6):1316-29.

48. **Pharmacology of triheteromeric N-methyl-D-aspartate receptors.**
Cheriyan J, Balsara RD, Hansen KB, and Castellino FJ.
Neurosci Lett (2016). 617:240-246.

47. **Pharmacology and structural analysis of ligand binding to the orthosteric site of glutamate-like GluD2 receptors.**
Kristensen AS, Hansen KB, Naur P, Olsen L, Levasseur NL, Dravid SM, Kvist T, Pøhlsgaard J, Clausen RP, Gajhede M, Kastrup JK, and Traynelis SF.
Mol Pharm (2016). 89(2):253-62.

46. **Binding of ArgTx-636 in the NMDA receptor ion channel.**
Poulsen MH, Andersen J, Christensen R, Hansen KB, Traynelis SF, Strømgaard K, and Kristensen AS.
J Mol Biol (2015). 427(1):176-89.

45. **Structural determinants and mechanism of action of a GluN2C-selective NMDA receptor potentiator.**
Khatri A, Swanger SA, Hansen KB, Burger P, Karakas E, Zimmerman SS, Liotta DC, Furukawa H, and Traynelis SF.
Mol Pharm (2014). 86(5):548-60.

44. **Glutamate receptors: Mechanist twists and turns (News & Views).**
Hansen KB and Traynelis SF.
Nat Chem Biol (2014). 10(9):698-9.

43. **Design, synthesis, and structure-activity relationship of a novel series of GluN2C-selective potentiators.**
Zimmerman SS, Khatri A, Garnier-Amblard EC, Mullasseril P, Kurtkaya NL, Gyoneva S, Hansen KB, Traynelis SF, and Liotta DC.
J Med Chem (2014). 57(6):2334-56.

42. **Distinct functional and pharmacological properties of triheteromeric GluN1/GluN2A/GluN2B NMDA receptors.**
Hansen KB, Ogden KK, Yuan H, and Traynelis SF.
Neuron (2014). 81(5):1084-96.

41. **Functional analysis of a *de novo* GRIN2A missense mutation associated with early-onset epileptic encephalopathy.**
Yuan H, Hansen KB, Zhang J, Pierson TM, Markello T, Fuentes-Fajardo KV, Holloman CM, Adams DR, Tifft CJ, Boerkoel CF, Gahl WA, and Traynelis SF.
Nat Commun (2014). 5:3251.

40. **Crystal structure and pharmacological characterization of a novel N-methyl-D-aspartate (NMDA) receptor antagonist at the GluN1 glycine binding site.**
Kvist T, Steffensen TB, Greenwood JR, Tabrizi FM, Hansen KB, Gajhede M, Pickering DS, Traynelis SF, Kastrup JS, and Bräuner-Osborne H.
J Biol Chem (2013). 288(46):33124-35.

39. **Structure-based discovery of antagonists for GluN3-containing *N*-methyl-D-aspartate receptors.**
Kvist T, Greenwood JR, Hansen KB, Traynelis SF, and Bräuner-Osborne H.
Neuropharmacology (2013). 75C:324-36.

38. **Development of 2'-substituted (2*S*,1'*R*,2'*S*)-2-(carboxycyclopropyl)glycine analogues as potent *N*-methyl-D-aspartic acid receptor ligands.**
Risgaard R, Nielsen SD, Hansen KB, Jensen CM, Nielsen B, Traynelis SF, Clausen RP.
J Med Chem (2013). 56(10):4071-81.

37. **Structural determinants of agonist efficacy at the glutamate binding site of *N*-methyl-D-aspartate receptors.**
Hansen KB, Tajima N, Risgaard R, Perszyk R, Jørgensen L, Vance KM, Ogden KK, Clausen RP, Furukawa H, and Traynelis SF.
Mol Pharmacol (2013). 84(1):114-27.

36. **Modal gating of GluN1/GluN2D NMDA receptors.**
Vance KM, Hansen KB, and Traynelis SF.
Neuropharmacology (2013). 71:184-90.

35. **GluN1 splice variant control of GluN1/GluN2D NMDA receptors.**
Vance KM, Hansen KB, and Traynelis SF.
J Physiol (2012). 590(Pt 16):3857-75.

34. **Molecular pharmacology of human NMDA receptors.**
Hedegaard M, Hansen KB, Andersen KT, Bräuner-Osborne H, and Traynelis SF.
Neurochem Int (2012). 61(4):601-9.

33. **Subunit-selective allosteric inhibition of glycine binding to NMDA receptors.**
Hansen KB*, Ogden KK*, and Traynelis SF.
* Authors contributed equally to the work.
J Neurosci (2012). 32(18):6197-208.

32. **Mechanism for non-competitive inhibition by novel GluN2C/D NMDA receptor subunit-selective modulators.**
Acker TM, Yuan H, Hansen KB, Vance KM, Ogden KK, Jensen HS, Burger PB, Snyder JP, Liotta DC, and Traynelis SF.
Mol Pharm (2011). 80(5): 782-95.

31. **How glutamate receptor subunits mix and match: details uncovered (Previews).**
Hansen KB and Traynelis SF.
Neuron (2011). 71(2):198-200.

30. **Structural and mechanistic determinants of a novel site for non-competitive inhibition of GluN2D-containing NMDA receptors.**
Hansen KB and Traynelis SF.
J Neurosci (2011). 31(10):3650-61.

29. **The use of *Xenopus* oocytes in drug screening.**
Kvist T, Hansen KB, and Bräuner-Osborne H.
Expert Opin Drug Discov (2011). 6(2):141-53.

28. **Partial agonists and subunit-selectivity at NMDA receptors.**
Risgaard R, Hansen KB, and Clausen RP.
Chemistry (2010). 16(47):13910-8.

27. **A subunit-selective potentiator of NR2C- and NR2D-containing NMDA receptors.**
Mullasseril P, Hansen KB, Vance KM, Ogden KK, Yuan H, Kurtkaya NL, Santangelo R, Orr AG1, Le P, Vellano KM, Liotta D, and Traynelis SF.
Nat Commun (2010). 1:90.

26. **Glutamate receptor ion channels: structure, regulation, and function.**
Traynelis SF, Wollmuth LP, McBain CJ, Menniti FS, Vance KM, Ogden KK, Hansen KB, Yuan H, Myers SJ, and Dingledine RJ.
Pharmacol Rev (2010). 62(3):405-96.

25. **Quinazolin-4-one derivatives: a novel class of noncompetitive NR2C/D subunit-selective NMDA receptor antagonists.**
Mosley CA, Acker TM, Hansen KB, Mullasseril P, Andersen KT, Le P, Vellano KM, Bräuner-Osborne H, Liotta D, and Traynelis SF.
J Med Chem (2010). 53(15):5476-90.

24. **Novel 3-carboxy and 3-phosphono pyrazoline amino acids acting as potent and selective NMDA antagonists: Design, synthesis and pharmacological characterization.**
Conti P, Pinto A, Tamborini L, Madsen U, Nielsen B, Bräuner-Osborne H, Hansen KB, Landucci E, Pellegrini Giampietro DE, De Sarro G, Di Paola ED, and De Micheli C.
ChemMedChem (2010). 5(9):1465-75.

23. **Control of assembly and function of glutamate receptors by the amino-terminal domain.**
Hansen KB, Furukawa H, and Traynelis SF.
Mol Pharmacol (2010). 78(4):535-49.

22. **4-Hydroxy-1,2,5-oxadiazol-3-yl Moiety as Bioisoster of the Carboxy Function. Synthesis, Ionization Constants, and Molecular Pharmacological Characterization at Ionotropic Glutamate Receptors of Compounds Related to Glutamate and Its Homologues.**
Lolli ML, Giordano C, Pickering DS, Rolando B, Hansen KB, Foti A, Contreras-Sanz A, Amir A, Fruttero R, Gasco A, Nielsen B, and Johansen T.
J Med Chem (2010). 53(10):4110-8.

21. **Implementation of a cell-based screening assay identifies H3 histamine receptor antagonists clobenpropit and iodophenpropit as subunit-selective NMDA receptor antagonists.**
Hansen KB, Mullasseril P, Dawit S, Kurtkaya NL, Yuan H, Vance KM, Orr AG, Kvist T, Le P, Vellano KM, Lewis I, Kurtkaya S, Du Y, Qui M, Snyder JP, Bräuner-Osborne H, and Traynelis SF.
J Pharmacol Exp Ther (2010). 333(3):650-62.

20. **Mutational Mapping and Modeling of the Binding Site for (S)-Citalopram in the Human Serotonin Transporter.**
Andersen J, Olsen L, Hansen KB, Taboureau O, Jørgensen FS, Jørgensen AM, Bang-Andersen B, Egebjerg J, Strømgaard K, and Kristensen AS.
J Biol Chem (2010). 285(3):2051-63.

19. **Control of NMDA receptor function by the NR2 subunit amino-terminal domain.**
Yuan H, Hansen KB, Vance KM, Odgen KK, and Traynelis SF.
J Neurosci (2009). 29(39):12045-58.

18. **An allosteric binding site at the human serotonin transporter mediates the inhibition of escitalopram by R-citalopram: kinetic binding studies with the ALI/VFL-SI/TT mutant.**
Zhong H, Hansen KB, Boyle NJ, Han K, Muske G, Huang X, Egebjerg J, and Morillo CS.
Neurosci Lett (2009). 462(3):207-12.

17. ***Xenopus* oocyte electrophysiology in GPCR drug discovery.**
Hansen KB and Bräuner-Osborne H.
Methods Mol Biol (2009). 552:343-57.

16. **FLIPR® assays of intracellular calcium in GPCR drug discovery.**
Hansen KB and Bräuner-Osborne H.
Methods Mol Biol (2009). 552:269-78.

15. **Location of the Antidepressant Binding Site in the Serotonin Transporter: Importance of ser-438 in recognition of citalopram and tricyclic antidepressants.**
Andersen J, Taboureau O, Hansen KB, Olsen L, Egebjerg J, Strømgaard K, and Kristensen AS.
J Biol Chem (2009). 284(15):10276-84.

14. **Modulation of the dimer interface at ionotropic glutamate-like receptor δ2 by D-serine and extracellular calcium.**
Hansen KB, Naur P, Kurtkaya NL, Kristensen AS, Gajhede M, Kastrup JS, and Traynelis SF.
J Neurosci (2009). 29(4):907-17.

13. **Stereocontrolled Synthesis and Pharmacological Evaluation of Azetidine-2,3-Dicarboxylic Acids at NMDA Receptors.**
Sivaprakasama M, Hansen KB, David O, Nielsen B, Traynelis SF, Clausen RP, Couty F, and Bunch L.
ChemMedChem (2009). 4(1):110-7.

12. ***N*-Hydroxypyrazol glycine derivatives as selective N-methyl-D-aspartic acid receptor ligands.**
Clausen RP, Christensen C, Hansen KB, Greenwood J, Jørgensen L, Micale N, Nielsen B, Egebjerg J, Bräuner-Osborne H, Traynelis SF, and Kristensen JL.
J Med Chem (2008). 51(14):4179-87.

11. **Pharmacological characterization of ligands at recombinant NMDA receptor subtypes by electrophysiological recordings and intracellular calcium measurements.**
Hansen KB, Bräuner-Osborne H, and Egebjerg J.
Comb Chem High Throughput Screen (2008). 11(4):304-15.

10. **Ionotropic glutamate-like receptor delta2 binds D-serine and glycine.**
Naur P, Hansen KB, Kristensen AS, Dravid SM, Pickering DS, Olsen L, Vestergaard B, Egebjerg J, Gajhede M, Traynelis SF, and Kastrup JS.
Proc Natl Acad Sci U S A (2007). 104(35):14116-21.

9. **Subunit-specific agonist activity for glutamate analogs at NR2A, NR2B, NR2C, and NR2D N-methyl-D-aspartate glutamate receptors.**
Erreger K, Geballe MT, Kristensen AS, Chen PE, Hansen KB, Lee CJ, Yuan H, Le P, Lyuboslavsky P, Micale N, Jørgensen L, Clausen RP, Wyllie DJ, Snyder JP, and Traynelis SF.
Mol Pharmacol (2007). 72(4):907-20.

8. **Structural aspects of AMPA receptor activation, desensitization, and deactivation.**
Hansen KB, Yuan H, and Traynelis SF.
Curr Opin Neurobiol (2007). 17(3):281-88.

7. **Synthesis and pharmacology of glutamate receptor ligands: New isothiazole analogues of ibotenic acid.**
Jørgensen CG, Clausen RP, Hansen KB, Bräuner-Osborne H, Nielsen B, Metzler B, Kehler J, Krogsgaard-Larsen P, and Madsen U.
Org Biomol Chem (2007). 5:463-71.

6. **Pharmacological characterization of mouse GPRC6A, an L-α-amino-acid receptor modulated by divalent cations.**
Christiansen B, Hansen KB, Wellendorph P, and Bräuner-Osborne H.
Br J Pharmacol (2007). 150:798-807.

5. **Synthesis, binding affinity at glutamic acid receptors, neuroprotective effects, and molecular modeling investigation of novel dihydroisoxazole amino acids.**
Conti P, De Amici M., Grazioso G, Roda G, Pinto A, Hansen KB, Nielsen B, Madsen U, Bräuner-Osborne H, Egebjerg J, Vestri V, Pellegrini-Giampietro DE, Sibille P, Acher FC, and De Micheli C.
J Med Chem (2005). 48:6315-25.

4. **Tweaking agonist efficacy at N-Methyl-D-aspartate receptors by site-directed mutagenesis.**
Hansen KB, Clausen RP, Bjerrum EJ, Bechmann C, Greenwood JR, Christensen C, Kristensen JL, Egebjerg J, and Bräuner-Osborne H.
Mol Pharmacol (2005). 68:1510-23.

3. **Deorphanization of GPRC6A: a promiscuous L-α-amino acid receptor with preference for basic amino acids.**
Wellendorph P, Hansen KB, Balsgaard A, Greenwood JR, Egebjerg J, and Bräuner-Osborne H.
Mol Pharmacol (2005). 67:589-97.

2. **The respective N-hydroxypyrazole analogues of the classical glutamate receptor ligands ibotenic acid and (RS)-2-amino-2-(3-hydroxy-5-methyl-4-isoxazolyl)acetic acid.**
Clausen RP, Hansen KB, Cali P, Nielsen B, Greenwood JR, Begtrup M, Egebjerg J, and Bräuner-Osborne H.
Eur J Pharmacol (2004). 499:35-44.

1. **(S)-2-Amino-3-(3-hydroxy-7,8-dihydro-6H-cyclohepta[d]isoxazol-4-yl)propionic acid, a potent and selective agonist at the GluR5 subtype of ionotropic glutamate receptors. Synthesis, modeling, and molecular pharmacology.**
Brehm L, Greenwood JR, Hansen KB, Nielsen B, Egebjerg J, Stensbøl TB, Bräuner-Osborne H, Slok FA, Kronborg TT, and Krogsgaard-Larsen P.
J Med Chem (2003). 46:1350-58.

Book Chapters

3. **Structure-function correlates of glutamate-gated ion channels.**
Hansen KB, Wollmuth LP, and Traynelis SF.

In "*Comprehensive Biophysics*" edited by Egelman EH, edn 1, Academic Press (2012), Chapter 6.11, 4-30.

2. **Structure and function relationship of the NMDA receptor.**
Yuan H, Geballe MT, Hansen KB, and Traynelis SF.
In "*Structural and Functional Organization of the Synapse*" edited by Ehlers MD and Hell JW, edn 1, Springer (2008), Chapter 11, 289-316.

1. **Structural correlates of ionotropic glutamate receptor function.**
Kristensen AS, Hansen KB, Wollmuth LP, Egebjerg J, and Traynelis SF.
In "*The Glutamate Receptors*" edited by Gereau RW and Swanson GT, edn 1, Humana Press (2007), Chapter 6, 247-98.

Abstracts and Posters

68. **Design and characterization of potent NMDA receptor glycine site agonists with GluN2 subunit-specific activity.**
Diamant E, Zhao F, Mariottini S, Atxabal U, Yi F, Lotti JS, Rouzbeh N, Liu N, Bunch L, Hansen KB, and Clausen RP.
Soc Neurosci Abstr (2022). 52

67. **Negative allosteric modulation of GluN3-containing NMDA receptors with a novel mechanism of action.**
Rouzbeh N, Lotti JS, and Hansen KB.
Biophysical Society Annual Meeting (2022). 66

66. **Determination of binding affinity and efficacy for NMDA receptor agonists and GluN2A-selective modulators.**
Lotti JS and Hansen KB.
Biophysical Society Annual Meeting (2022). 66

65. **Modulation of spine density in CA1 hippocampal neurons by GluN3A-containing NMDA receptors.**
Anderson C, Rouzbeh N, and Hansen KB.
Annual CBSD-CoBRE Research Retreat, Missoula, MT (2021)

64. **Teasing apart binding affinity and efficacy for NMDA receptor ligands.**
Lotti JS and Hansen KB.
Annual CBSD-CoBRE Research Retreat, Missoula, MT (2021)

63. **Unique pharmacological properties of GluN1/GluN2A/GluN2D triheteromeric receptors.**
Bhattacharya S, Hansen KB, and Traynelis SF.
Soc Neurosci Abstr (2019). 49

62. **Negative allosteric modulation of GluN1/GluN3A N-methyl-D-aspartate receptors.**
Yuan H, Zhu Z, Epplin MP, Yi F, Summer SL, Mizu R, Hansen KB, Liotta DC, and Traynelis SF.
Soc Neurosci Abstr (2019). 49

61. **Functional and pharmacological properties of triheteromeric GluN1/2B/2D NMDA receptors.**
Yi F, Bhattacharya S, Thompson CM, Traynelis SF, and Hansen KB.
7th Annual iGluR Retreat, McGill University, Montreal, Canada (2019).

60. **Novel positive allosteric modulators for NMDARs demonstrate enantiomer-specific actions.**
Traynelis SF, Strong KL, Epplin MP, Ogden KK, Kusumoto H, Bhattacharya S, Shaulsky G, Perszyk RE, Menaldino D, Hansen KB, Wilding TJ, Camp CR, Mcdaniel MJ, Zhang J, Le P, Huettner JE, and Liotta DC.
Soc Neurosci Abstr (2018). 48

59. **Selective expression of triheteromeric NMDA receptors reveals unique properties.**
Bhattacharya S, Yi F, Khatri AH, Swanger SA, Yuan H, Hansen KB, and Traynelis SF.
Soc Neurosci Abstr (2018). 48

58. **Negative allosteric modulation of NMDA receptors with GluN2A gain-of-function mutations.**
Farnsworth J, Yi F, Volkmann RA, Menniti FS, and Hansen KB.
6th Annual iGluR Retreat, University of Pittsburgh, PA (2018).

57. **MPXD079- A positive allosteric modulator of NMDA receptors containing GluN2C or GluN2D subunits.**
Volkmann RA, Xu Y, Gordon E, Bettini E, Yi F, Nelson F, Callahan P, Terry AV, Hansen KB, and Menniti FS.
6th Annual iGluR Retreat, University of Pittsburgh, PA (2018).

56. **Subunit-selective NMDA receptor modulation by a non-psychoactive cannabinoid analog dexanabinol (HU-211).**
Ullman EZ and Hansen KB.
2nd Annual Institute of Cannabis Research Conference, Colorado State University - Pueblo, Pueblo, CO (2018).

55. **Subunit-selective NMDA receptor modulation by a non-psychoactive cannabinoid analog dexanabinol (HU-211).**
Ullman EZ and Hansen KB.
Front Range Neuroscience, 15th annual meeting, Colorado State University, Fort Collins, CO (2017).

54. **Single channel properties of triheteromeric GluN1/GluN2A/GluN2C NMDA receptors are distinct from diheteromeric GluN1/GluN2A and GluN1/GluN2C.**
Traynelis SF, Khatri A, Swanger SA, Bhattacharya S, Hansen KB, and Yuan H.
Soc Neurosci Abstr (2017). 47

53. **Triheteromeric GluN1/GluN2A/GluN2C NMDA receptors have unique pharmacological properties.**
Bhattacharya S, Khatri A, Swanger SA, Hansen KB, Yuan H, and Traynelis SF.
Soc Neurosci Abstr (2017). 47

52. **Properties of triheteromeric NMDA receptors containing two distinct GluN1 isoforms.**
Yi F, Dorsett KN, and Hansen KB.
5th Annual iGluR Retreat, Yale University, New Haven, CT (2017).

51. **Allosteric interactions between NMDA receptor subunits shape the developmental shift in channel properties.**
Sun, W, Hansen KB, and Jahr CE.
5th Annual iGluR Retreat, Yale University, New Haven, CT (2017).

50. **Evaluation of GluN2A-selective negative allosteric modulators as pharmacological tools.**
Yi F, Volkmann RA, Menniti FS, and Hansen KB.
Winter Conference on Brain Research (2017). 50

49. **Structural basis for negative allosteric modulation of GluN2A-containing NMDA receptors.**
Yi F, Mou T-C, Volkmann RA, Menniti FS, Sprang SR, and Hansen KB.
Soc Neurosci Abstr (2016). 46

48. **Structural and pharmacological evaluation of a class of GluN2A-selective competitive NMDAR antagonists with novel binding mode.**
Lind GE, Pinto A, Tamborini L, Conti P, and Hansen KB.
Soc Neurosci Abstr (2016). 46

47. **Structural basis for negative allosteric modulation of GluN2A-containing NMDA receptors.**
Yi F, Mou T-C, Volkmann RA, Menniti FS, Sprang SR, and Hansen KB.
26th Neuropharmacology Conference: Ionotropic Glutamate Receptors, San Diego, CA (2016)

46. **Structural and pharmacological evaluation of a class of GluN2A-selective competitive NMDAR antagonists with novel binding mode.**
Lind GE, Pinto A, Tamborini L, Conti P, and Hansen KB.
26th Neuropharmacology Conference: Ionotropic Glutamate Receptors, San Diego, CA (2016)

45. **Structural basis for negative allosteric modulation of GluN2A-containing NMDA receptors.**
Yi F*, Mou T-C*, Dorsett KN, Volkmann RA, Menniti FS, Sprang SR, and Hansen KB.
5th Annual CoBRE Research Retreat, Missoula, MT (2016).

44. **MPX-004 and MPX-007: New pharmacological tools to study the physiology of NMDA receptors containing the GluN2A subunit.**

Volkmann RA, Fanger CM, Anderson DR, Sirivolu VR, Paschetto K, Gordon E, Virginio C, Gleyzes M, Buisson B, Steidl E, Mierau SB, Fagiolini M, Yi F, Mou T-C, Dorsett KN, Sprang SR, Hansen KB, and Menniti FS.
Mind Brain Research Day 2016, Brown University, Providence, RI (2016).

43. **The human GluN2A mutation P552R enhances NMDA receptor function and promotes neurotoxicity.**
Traynelis SF, Ogden KK, Chen W, Tankovic A, Aizenman E, Hansen KB, and Yuan H.
Soc Neurosci Abstr (2015). 45

42. **Discovery of high affinity subtype-selective NMDA receptor antagonists and preliminary efforts to develop PET/SPECT ligands for SNC imaging.**
Conti P, Pinto A, Tamborini L, Baruffaldi R, De Micheli C, Hansen KB, Traynelis SF, Finley P, Foss C, Horti A, Chen Y, and Pomper M.
XXIII National Meeting on Medicinal Chemistry (2015).

41. **Functional Changes of a De Novo GRIN2B Missense Mutation in a Patient with Developmental Delay.**
Yuan H, Swanger SA, Wells G, Hansen KB, Adams DR, Boerkoel CF, Toro C, Gahl WA, Snyder JP, and Traynelis SF.
American Neurological Association Annual Meeting (2014). 139

40. **A Human Mutation in the M4 Helix of GluN2A Accelerates Forward Gating Transitions in NMDA Receptors.**
Ogden KK, Yuan H, Hansen KB, Zhang J, Gibb AJ, and Traynelis SF.
Biophysical Society Annual Meeting (2014). 58

39. **Pharmacological and functional properties of triheteromeric GluN1/GluN2A/GluN2B NMDA receptors**
Hansen KB, Ogden KK, and Traynelis SF.
Winter Conference on Brain Research (2014). 47

38. **Pharmacology and function of triheteromeric GluN1/GluN2A/GluN2B NMDA receptors.**
Hansen KB, Ogden KK, and Traynelis SF.
Benzon Symposium No. 59 - Membrane proteins: Structure, Function and Dynamics (2013).

37. **Subunit-selective potentiation of NMDA receptors: Tools to test the glutamatergic hypothesis.**
Traynelis SF, Santangelo RM, Strong KL, Ogden KK, Vance KM, Hansen KB, and Liotta DC.
ACS National Meeting (2012). 244

36. **Molecular determinants for subtype-selective ion channel block of NMDA receptors by argiotoxin analogs.**
Kristensen AS, Poulsen MH, Jensen CB, Andersen J, Hansen KB, Strømgaard K.
Biophysical Society Annual Meeting (2012). 56

35. **Subunit-selective allosteric inhibition of glycine binding to NMDA receptors.**
Ogden KK, Hansen KB and Traynelis SF.
Winter Conference on Brain Research (2012). 45

34. **Subunit-selective Glun2C/D NMDA receptor modulators: Structure-activity relationship and mechanism.**
Acker TM, Yuan H, Hansen KB, Vance KM, Ogden KK, Burger PB, Snyder JP, Liotta DC, and Traynelis SF.
Soc Neurosci Abstr (2011). 41

33. **GluN1 splice variant control of GluN1/GluN2D NMDA receptors.**
Vance KM, Hansen KB, and Traynelis SF.
Soc Neurosci Abstr (2011). 41

32. **Structural determinants for subunit-selective activation of NMDA receptors**
Hansen KB, Ogden KK, Risgaard R, Clausen RP,, and Traynelis SF.
Soc Neurosci Abstr (2011). 41

31. **Crystal structure of the ionotropic glutamate receptor GluN1 in complex with a new antagonist.**
Steffensen TB, Carlino TK, Greenwood JR, Tabrizi FM, Hansen KB, Gajhede M, Pickering DS, Traynelis SF, Bräuner-Osborne H, and Kastrup JS.
Danish Crystallographic Meeting (2011). 41

30. **Structural determinants and mechanism for inhibition of NMDA receptors by a new class of non-competitive antagonists.**
Hansen KB and Traynelis SF.
Winter Conference on Brain Research (2011). 44

29. **Structural basis for potentiation by a novel subunit-selective modulator of GluN2C- and GluN2D-containing NMDA receptors.**
Hansen KB, Ogden KK, Vance KM, Mullasseril P, Yuan H, and Traynelis SF.
Soc Neurosci Abstr (2010). 40

28. **Mechanistic and single channel studies of CIQ, a novel allosteric modulator of GluN2C- and GluN2D-containing NMDA receptors.**
Ogden KK, Vance KM, Hansen KB, Mullasseril P, Yuan H, and Traynelis SF.
Soc Neurosci Abstr (2010). 40

27. **Efforts toward recombinant NMDA GluN2C/D subunit-selective antagonists.**
Acker TM, Mosley CA, Hansen KB, Mullasseril P, Burger P, Andersen KT, Le P, Vellano KM, Bräuner-Osborne H, Liotta DC, and Traynelis SF.
ACS National Medicinal Chemistry Symposium (2010). 32

26. **Synthesis and SAR of a novel class of tetrahydroisoquinoline-based potentiators of NR2C/D containing NMDA receptors.**
Santangelo RM, Vance KM, Ogden KK, Yuan H, Hansen KB, Mullasseril P, Kurtkaya NL, Orr AG, Le P, Vellano KM, Traynelis SF, and Liotta DC.
ACS National Medicinal Chemistry Symposium (2010). 32

25. **Subunit-specific activation of NMDA receptors.**
Hansen KB, Burger P, Vance KM, Snyder JP, Clausen RP, and Traynelis SF.
Biophysical Society Annual Meeting (2010). 54

24. **Identification and electrophysiological characterization of new NR3-containing NMDA receptor modulators.**
Kvist T, Greenwood JR, Hansen KB, Clausen RP, Traynelis SF, and Bräuner-Osborne H.
World Congress of Basic and Clinical Pharmacology (2010). 16

23. **Characterization of GPRC6A – a promiscuous 7TM receptor activated by basic L-amino acids.**
Bräuner-Osborne H, Hansen KB, Christiansen B, Clemmesen C, Johansen LD, Pedersen DS, Gloriam DE, Smajilovic S, and Wellendorph P.
World Congress of Basic and Clinical Pharmacology (2010). 16

22. **Novel NMDA receptor antagonists identified using a cell-based screening assay for allosteric modulators of NR2D-containing NMDA receptors.**
Hansen KB, Mullasseril P, Dawit S, Kvist T, Kurtkaya NL, Kurtkaya S, Snyder JP, Bräuner-Osborne H, and Traynelis SF.
Winter Conference on Brain Research (2010). 43

21. **Structural basis for subunit-specific activation of NMDA receptors.**
Hansen KB, Burger P, Vance KM, Snyder JP, Clausen RP, and Traynelis SF.
Winter Conference on Brain Research (2010). 43

20. **Chemogenomic Discovery of the First Selective Allosteric Antagonists at the GPRC6A Receptor.**
Bräuner-Osborne H, Bhatia VK, Christiansen B, Clemmensen C, Hansen KB, Gloriam DE, Johansen LD, Pedersen DS, Smajilovic S, and Wellendorph P.
International Drug of Abuse Research Society Meeting (2009). 2

19. **Novel NMDA receptor antagonists identified using a cell-based screening assay for allosteric modulators of NR2D-containing NMDA receptors.**
Kvist T, Mullasseril P, Hansen KB, Kurtkaya NL, Yuan H, Vance KM, Orr AG, Le P, Vellano KM, Lewis I, Kurtkaya S, Du Y, Qui M, Bräuner-Osborne H, and Traynelis SF.
Soc Neurosci Abstr (2009). 39

18. **Structural basis for subunit-specific activation of NMDA receptors.**
Hansen KB, Burger P, Vance KM, Snyder JP, Clausen RP, and Traynelis SF.
Soc Neurosci Abstr (2009). 39

17. **The amino terminal domain of the NR2 subunit controls activation properties of N-methyl-D-aspartate receptors.**
Yuan H, Hansen KB, Vance KM, Ogden KK, and Traynelis SF.
Soc Neurosci Abstr (2009). 39

16. ***N*-Hydroxypyrazolyl Glycine Derivatives as Selective *N*-Methyl-D-aspartic Acid Receptor Partial Agonists and Antagonists.**
Clausen RP, Hansen KB, Greenwood JR, Egebjerg J, Bräuner-Osborne H, Kristensen JL, and Traynelis SF.
18th Neuropharmacology Conference – Ligand-Gated Ion Channels (2008).

15. **Modulation of the ionotropic glutamate-like receptor δ2 by D-serine and extracellular calcium.**
Hansen KB, Naur P, Kurtkaya NL, Kristensen AS, Kastrup JS, and Traynelis SF.
18th Neuropharmacology Conference – Ligand-Gated Ion Channels (2008).

14. **The amino terminal domain of the NR2 subunit controls the deactivation time course and the open probability of N-methyl-D-aspartate receptors.**
Yuan H, Hansen KB, and Traynelis SF.
Soc Neurosci Abstr (2008). 38

13. **Modulation of the dimer interface at ionotropic glutamate-like receptor δ2 by extracellular calcium.**
Hansen KB, Naur P, Kurtkaya NL, Kristensen AS, Kastrup JS, and Traynelis SF.
Soc Neurosci Abstr (2008). 38

12. **NR2 ligand -specific deactivation of N-methyl-D-aspartate (NMDA) receptors.**
Vance KM, Hansen KB, and Traynelis SF.
Soc Neurosci Abstr (2008). 38

11. **Location of the antidepressant binding site in the human serotonin transporter.**
Andersen J, Taboureau O, Hansen KB, Olsen L, Egebjerg J, Strømgaard K, and Kristensen AS.
Soc Neurosci Abstr (2007). 38

10. **Activation of recombinant rat NR1/NR2D N-methyl-D-aspartate (NMDA) receptors.**
Traynelis SF, Vance KM, and Hansen KB.
Soc Neurosci Abstr (2008). 38

9. **Quinazolin-4-one derivatives – a novel class of non competitive N-Methyl-D-Aspartate Receptor antagonists.**
Mullasseril P, Mosley C, Hansen KB, Yuan H, Kurtkaya NL, Vance KM, Orr A, Haustein KM, Le P, Wilson LJ, Liotta DC, and Traynelis SF.
Soc Neurosci Abstr (2008). 38

8. **Definition of the escitalopram binding pocket in the human serotonin transporter.**
Andersen J, Hansen KB, Jensen AA, Bang-Andersen B, Egebjerg J, Strømgaard K, and Kristensen AS.
Soc Neurosci Abstr (2007). 37

7. **Subunit-specific binding and agonist activity of glutamate and SYM2081 at NR2A and NR2D containing N-methyl-D-aspartate glutamate receptors.**
Geballe M, Hansen KB, Erreger K, Lee CJ, Kristensen AS, Chen PE, Wyllie DJ, Snyder JP, and Traynelis SF.
Soc Neurosci Abstr (2007). 37

6. **The amino terminal domain of the NR2 subunit controls channel open probability of N-methyl-D-aspartate receptors.**
Yuan H, Hansen KB, and Traynelis SF.
Soc Neurosci Abstr (2007). 37

5. **Subunit-specific activation of N-methyl-D-aspartate (NMDA) receptor subtypes by analogs of N-hydroxypyrazole-5-glycine (NHP5G).**

Vance KM, Hansen KB, Micale N, Clausen RP, and Traynelis SF.
Soc Neurosci Abstr (2007). 37

4. **Modulation of GluRδ2 function by extracellular calcium.**
Hansen KB, Levasseur NL, Kristensen AS, Naur P, Kastrup JS, and Traynelis SF.
Soc Neurosci Abstr (2007). 37

3. **Identification of ligands capable of modulating the activity of the orphan glutamate-like receptor GluRδ2 Lurcher mutant.**
Levasseur NL, Hansen KB, Kristensen AS, Naur P, Kastrup JS, and Traynelis SF.
Soc Neurosci Abstr (2007). 37

2. **Functional interaction between the serotonin transporter and ionotropic glutamate receptors.**
Hansen KB and Egebjerg J.
Benzon Symposium No. 51 - Neurotransmitter Transporters: Basal Function and Drug Targets (2004).

1. **Molecular pharmacology and modeling of (S)-2-Amino-3-(3-hydroxy-7,8-dihydro-6H-cyclohepta[d]isxoxazol-4-yl)propionic acid, a potent and selective agonist at the GluR5 subtype of ionotropic glutamate receptors.**
Hansen KB, Brehm L, Greenwood JR, Nielsen B, Egebjerg J, Stensbøl TB, and Bräuner-Osborne H.
PhysPharm2003 - a Scandinavian Congress of Physiology and Pharmacology (2003).

Invited seminars and lectures

39. **DANDRITE lecture, Aarhus University, Denmark, 2022.**
Seminar: *Mechanism of NMDA receptor potentiation by subunit-selective competitive antagonists*

38. **Center for Biomolecular and Structural Dynamics, University of Montana, Missoula, MT, 2022.**
Research presentation: *Mechanism of NMDA receptor potentiation by subunit-selective competitive antagonists*

37. **DANDRITE lecture, Aarhus University, Denmark, 2021.**
Seminar: *Structural and functional mechanisms of allosteric NMDA receptor modulation*

36. **Drug Research Academy Summer School, University of Copenhagen, Denmark, 2021.**
Seminar: *Designing and navigating your academic adventure: How can you become Principal Investigator?*

35. **53th Winter Conference on Brain Research, Big Sky, MT, 2020.**
Presenter and panel co-organizer
Panel: Regulation of excitability: From channels to diseases.
Subtype-specific modulation of NMDA receptors by glycine site agonists

34. **7th Annual Glutamate Receptor Retreat, McGill University, Montreal, Canada, 2019.**
Seminar: *Subtype-specific modulation of NMDA receptors by glycine site agonists*

33. **University of Pittsburgh, Pittsburgh, PA, Department of Neuroscience, 2019.**
Seminar: *Subtype-specific modulation of NMDA receptors by glycine site agonists*

32. **University of Copenhagen, Copenhagen, Denmark, Department of Drug Design and Pharmacology, 2018.**
Seminar: *Investigations of ligand binding to NMDA receptors*

31. **7th Annual CoBRE Research Retreat, Seeley Lake, MT, 2018.**
Research presentation: *Resolving receptor subunit composition using FRET-FLIM*

30. **6th Annual CoBRE Research Retreat, Missoula, MT, 2017.**
Research presentation: *Investigations of ligand binding to NMDA receptors*

29. **Center for Structural and Functional Neuroscience, University of Montana, Missoula, MT, 2017.**
Seminar: Investigations of ligand binding to NMDA receptors

28. **50th Winter Conference on Brain Research, Big Sky, MT, 2017.**
Presenter and panel organizer

Panel: Modulation of NMDA receptor signaling: From structure-function to physiology.
Molecular mechanism of subunit-selective allosteric inhibition in NMDA receptors

27. **Janssen (Johnson & Johnson), La Jolla, CA, 2017.**
Seminar: *Subunit-selective allosteric modulation of NMDA receptors*

26. **Vollum Institute, Oregon Health & Science University, Portland, OR, 2016.**
Seminar: *Structural Basis for Negative Allosteric Modulation of GluN2A-Containing NMDA Receptors*

25. **2016 LS Skaggs Biomedical Research Symposium, Idaho State, Pocatello, ID, 2016.**
Research presentation: *Structural basis for subunit-selective NMDA receptor antagonism in CNS disorders*

24. **5th Annual CoBRE Research Retreat, Missoula, MT, 2016.**
Research presentation: *Structural basis for negative allosteric modulation of NMDA receptors*

23. **University of Copenhagen, Copenhagen, Denmark, Department of Drug Design and Pharmacology, 2016.**
Seminar: *Structural basis for negative allosteric modulation of NMDA receptors*

22. **Lundbeck, Copenhagen, Denmark, 2016.**
Seminar: *Structural basis for negative allosteric modulation of NMDA receptors*

21. **4th Annual CoBRE Research Retreat, Seeley Lake, MT, 2015.**
Seminar: *Negative allosteric modulation of NMDA receptors*

20. **3rd Annual Glutamate Receptor Retreat, University of Albany SUNY, Albany, NY, 2015.**
Seminar: *Negative allosteric modulation of GluN2A-containing NMDA receptors*

19. **University of Buffalo SUNY, Buffalo, NY, Department of Biochemistry, 2015.**
Seminar: *Subtype-selective allosteric inhibition of NMDA receptors*

18. **48th Winter Conference on Brain Research, Big Sky, MT, 2015.**
Presenter and panel organizer
Panel: Recent developments in NMDA receptor research: From structure-function to physiology.
Triheteromeric and GluN3A-containing NMDA receptors

17. **Montana State University, Bozeman, MT, Department of Cell Biology and Neuroscience, 2014.**
Seminar: *Subtype-selective allosteric inhibition of NMDA receptors*

16. **3rd Annual CoBRE Research Retreat, Seeley Lake, MT, 2014.**
Seminar: *Structural and functional analysis of GluN3-containing NMDA receptors.*

15. **Naurex, Evanston, IL, 2014.**
Seminar: *Modulation of NMDA receptor function by subunit-selective ligands*

14. **Novartis Institutes for Biomedical Research, Cambridge, MA, 2014.**
Seminar: *Modulation of NMDA receptor function by subunit-selective ligands*

13. **1st Annual Glutamate Receptor Retreat, Cornell University, Ithaca, NY, 2013.**
Seminar: *Functional and pharmacological properties of triheteromeric GluN1/GluN2A/GluN2B NMDA receptors*

12. **University of Montana, Missoula, MT, Department of Biomedical & Pharmaceutical Sciences, 2013.**
Seminar: *Modulation of NMDA receptor function by subunit-selective ligands*

11. **46th Winter Conference on Brain Research, Breckenridge, CO, 2013.**
Presenter and panel organizer
Panel: New insights into the pharmacology and physiology of triheteromeric NMDA receptors.
Pharmacology of triheteromeric GluN1/GluN2A/GluN2B NMDA receptors

10. **Emory University School of Medicine, Atlanta, GA, Department of Anesthesiology, 2012.**
    Anesthesiology Grand Rounds
    Structure, Function, and Physiology of NMDA Receptors

9. **University of Copenhagen, Denmark, Faculty of Health and Medical Sciences, 2012.**
    GluTarget Symposium. Session: Allosteric modulators of iGluRs.
    Modulation of NMDA receptor function by subunit-selective ligands

8. **45th Winter Conference on Brain Research, Snowbird, UT, 2012.**
    Presenter and panel organizer
    Panel: New insights to modulation of ionotropic glutamate receptor function.
    Subtype-selective allosteric inhibition of NMDA receptors.

7. **International Society for Neurochemistry Satellite Meeting "*The Glutamatergic Synapse*", Crete, Greece, 2011.**
    Session: Glutamate receptor structure, pharmacology and electrophysiology.
    Modulation of NMDA receptor function by subunit-selective ligands.

6. **44th Winter Conference on Brain Research, Keystone, CO, 2011.**
    Panel: New approaches to modulation of NMDA receptor gating.
    GluN2C/D-selective NMDA receptor modulators: Structural and mechanistic determinants.

5. **43th Winter Conference on Brain Research, Breckenridge, CO, 2010.**
    Panel: NMDA Receptor from Biophysics to Disease.
    Control of NMDA receptor function by the amino terminal domain.

4. **Emory University School of Medicine, Atlanta, GA, Department of Pharmacology, 2009.**
    Calcium Club Seminar.
    Modulation of the ionotropic glutamate-like receptor δ2 and the metabotropic receptor GPRC6A by extracellular calcium.

3. **Society for Neuroscience, 2008.**
    Symposium: Non-NMDA Glutamate Receptors: Structure and Physiology.
    Modulation of the dimer interface at ionotropic glutamate-like receptor δ2 by extracellular calcium.

2. **Danish University of Pharmaceutical Sciences, 2006.**
    Symposium: Receptor Structure and Function.
    How small ligands can activate large protein complexes: Structure and function of ion channels.

1. **Danish University of Pharmaceutical Sciences, 2005**.
    Symposium: Day of Research.
    Studies on the structural basis for activation of NMDA receptors.

Committee Involvement

- **University of Montana (current member)**
  - Institutional Animal Care and Use Committee (IACUC) (January 2018 – present)
  - Internal Advisory Board - Center for Biomolecular Structure and Dynamics (CBSD) (Fall 2017 - present)
  - Graduate Admissions Committee (Chair) - Neuroscience Graduate Program (Spring 2016 - present)
  - Graduate Education Committee - Neuroscience Graduate Program (Fall 2018 – present)
  - Graduate Admissions Committee - Biochemistry and Biophysics Graduate Program (Summer 2021 - present)
  - Graduate Standards and Curriculum Committee - PSDD Graduate Program (Summer 2015 – present)
  - Advisory Committee for the Division of Biological Sciences (Fall 2022 – present)
  - Advisory Board, Neural Injury Center, (2018 - present)

- **University of Montana (previous member)**
  - Search Committee - CBSD Chief Operating Officer (Spring 2022)
  - Skaggs School of Pharmacy Dean Search Committee - School of Pharmacy (Fall 2019)
  - Faculty Search Committee - CMMB and Neuroscience programs (Fall 2019 – Spring 2020)
  - Search Committee - Director of Research Compliance and Technology Transfer (Fall 2019 – Spring 2020)
  - Search Committee - CBSD core facility manager (Fall 2019 – Spring 2020)

- Academic Standards Committee – School of Pharmacy (2014 - 2019)
- Research Council (advisory body on matters pertaining to research and creative activities) (2018 - 2020)
- Graduate Admissions Committee - Neuroscience Graduate Program (Spring 2015)
- Graduate Admissions Committee - Biochemistry & Biophysics Graduate Program (Spring 2015 – Spring 2016)
- Unit Standards Committee - Department of Biomedical and Pharmaceutical Sciences (2014 - 2015)
- Faculty Search Committee - Department of Biomedical and Pharmaceutical Sciences (Fall 2014 – Spring 2015)
- Website Committee - Department of Biomedical and Pharmaceutical Sciences (2015 - 2016)

- **Professional Organizations (current member)**
  - Committee for Professional Opportunities for Women (CPOW) - Biophysical Society (July 2018 – present)

Mentoring Experience

2022-present: Advisor for Neuroscience Ph.D. student Christopher Trolinder, *"TBD"* (University of Montana, MT).

2022-present: Advisor for Pharm Sci and Drug Design Ph.D. student Avery Benton, *"TBD"* (University of Montana, MT).

2022-present: Advisor for Neuroscience Ph.D. student Lauren Cornelison, *"TBD"* (University of Montana, MT).

2021-present: External Mentor for CoBRE-sponsored Junior Investigator Joseph McQuail (University of South Carolina School of Medicine, SC).

2020-present: Advisor for Pharm Sci and Drug Design Ph.D. student James Lotti, *"TBD"* (University of Montana, MT).

2020-present: Advisor for Neuroscience Ph.D. student Carly Anderson, *"TBD"* (University of Montana, MT).

2018-2022: Advisor for Neuroscience Ph.D. student Nirvan Rouzbeh, *"Functional and Pharmacological Characterization of GluN3-Containing NMDAReceptors"* (University of Montana, MT).

2017-2019: Advisor for Neuroscience Ph.D. student Jill Farnsworth, *"Negative allosteric modulation of NMDA receptors with GluN2A gain-of-function mutations"* (University of Montana, MT).

2017-2018: Advisor for Neuroscience M.Sc. student Janet Bobango, *"Structural Studies on Ligand Binding to Neurotransmitter Receptors"* (University of Montana, MT).

2017-2018: Mentor for Postdoctoral Fellow Linda G. Zachariassen (University of Montana, MT).

2016 and 2017: Advisor for CSFN Summer Undergraduate Research Fellow Elijah Ullman (University of Montana, MT).

2015-present: Mentor for Postdoctoral Fellow Feng Yi (University of Montana, MT).

2015-2017: Advisor for Ph.D. student Genevieve Lind, *"Modulation of NMDA receptor-mediated synaptic transmission"* (University of Montana, MT).

2014-2018: Co-advisor for Ph.D. student Maja Jessen, *"Modulation of glutamate NMDA receptors by glycine site ligands"* (University of Copenhagen, Denmark).

2010-2013: Co-advisor for Ph.D. student Trine Kvist Carlino, *"Novel Pharmacological Modulators of NMDA Receptors"* (University of Copenhagen, Denmark).

2010: Co-advisor for master's student Maiken Hedegaard, *"Electrophysiological Comparison of Human and Rat N-methyl-D-Aspartate Receptors and Characterization of Novel and Classical Compounds"* (University of Copenhagen, Denmark).

2008: Co-advisor for master's student Karen T. Andersen, *"Identification and Characterization of Novel Subtype Selective NMDA Receptor Ligands"* (University of Copenhagen, Denmark).

2004: Co-advisor for master's student Christian Bechmann, *"Molecular Pharmacological Characterization of Cloned NMDA Receptors"* (University of Copenhagen, Denmark).

Graduate Student Committees

2022-present: Harrison Muth, PhD student, Biochemistry and Biophysics Program (University of Montana, MT).

2022-present: Andrew Voss, PhD student, Pharmaceutical Sciences and Drug Design Program (University of Montana, MT).

2021-present: Jessica Bailey, MSc student, Cellular, Molecular and Microbial Biology Program (University of Montana, MT).

2021-present: Danette Seiler, MSc student, Neuroscience Program (University of Montana, MT).

2021-present: Patrick Hanni, MSc student, Psychology Program (University of Montana, MT).

2020-present: Elizabeth Sather, PhD student, Pharmaceutical Sciences and Drug Design Program (University of Montana, MT).

2020-2021: Jacob Leatherwood, MSc student, Neuroscience Program (University of Montana, MT).

2019-2021: Emily Osterli, MSc student, Pharmaceutical Sciences and Drug Design Program (University of Montana, MT).
2018-2020: Denis Shchepakin, PhD student, Neuroscience Program (University of Montana, MT).
2018-present: Eric John, PhD student, Chemistry Program (University of Montana, MT).
2017-2019: Lindsay Achzet, PhD student, Neuroscience Program (University of Montana, MT).
2016-2019: Joachim Veit, PhD student, Pharmaceutical Sciences and Drug Design Program (University of Montana, MT).
2016-2020: Xiaobo Wang, PhD student, Cellular, Molecular and Microbial Biology Program (University of Montana, MT).

Teaching Experience

Fall 2022: BMED 667 “Topics in Neurobiology”: Course for Neuroscience PhD students (University of Montana).
Spring 2022: BMED 667 “Topics in Neurobiology”: Course for Neuroscience PhD students (University of Montana).
Spring 2022: BCH 294 "Intro Biochemistry Seminar": Course for undergraduate students (University of Montana).
Fall 2021: BMED 667 “Topics in Neurobiology”: Course for Neuroscience PhD students (University of Montana).
Fall 2021: BIOH 458 "Neuroscience Research": Lab course for Neuroscience undergraduate students (University of Montana).
Spring 2021: BMED 667 “Topics in Neurobiology”: Course for Neuroscience PhD students (University of Montana).
Spring 2021: BMED 662 "Neuroscience II": Course for PhD students (University of Montana).
Spring 2021: BCH 294 "Intro Biochemistry Seminar": Course for undergraduate students (University of Montana).
Fall 2020: BMED 667 “Topics in Neurobiology”: Course for Neuroscience PhD students (University of Montana).
Fall 2020: PHAR 421 "Medicinal Chemistry I": Course for PharmD students (University of Montana Skaggs School of Pharmacy).
Fall 2020: BIOH 458 "Neuroscience Research": Lab course for Neuroscience undergraduate students (University of Montana).
Spring 2020: BMED 615 "Molecular Pharmacology": Course for PhD students (University of Montana).
Spring 2020: BCH 294 "Intro Biochemistry Seminar": Course for undergraduate students (University of Montana).
Fall 2019: PHAR 421 "Medicinal Chemistry I": Course for PharmD students (University of Montana Skaggs School of Pharmacy).
Fall 2019: PHAR 371 "Integrated Studies I": Course for PharmD students (University of Montana Skaggs School of Pharmacy).
Fall 2019: BIOH 458 "Neuroscience Research": Lab course for Neuroscience undergraduate students (University of Montana).
Fall 2019: CHS 194 “H&S Freshman Seminar”: Course for undergraduate students (University of Montana).
Spring 2019: BCH 294 "Intro Biochemistry Seminar": Course for undergraduate students (University of Montana).
Spring 2019: PHAR 372 "Integrated Studies II": Course for PharmD students (University of Montana Skaggs School of Pharmacy).
Fall 2018: PHAR 421 "Medicinal Chemistry I": Course for PharmD students (University of Montana Skaggs School of Pharmacy).
Fall 2018: PHAR 371 "Integrated Studies I": Course for PharmD students (University of Montana Skaggs School of Pharmacy).
Fall 2018: BIOH 458 "Neuroscience Research": Lab course for Neuroscience undergraduate students (University of Montana).
Fall 2018: BIOH 441 "CNS Diseases ": Course for Neuroscience undergraduate and graduate students (University of Montana).
Spring 2018: BCH 294 "Intro Biochemistry Seminar": Course for undergraduate students (University of Montana).
Spring 2018: PHAR 372 "Integrated Studies II": Course for PharmD students (University of Montana Skaggs School of Pharmacy).
Spring 2018: BMED 615 "Molecular Pharmacology": Course for PhD students (University of Montana).
Fall 2017: PHAR 421 "Medicinal Chemistry I": Course for PharmD students (University of Montana Skaggs School of Pharmacy). *Voted “Teacher of the Month” by the Rho Chi Society (Academic Honor Society in Pharmacy) (November 2017)*
Fall 2017: PHAR 371 "Integrated Studies I": Course for PharmD students (University of Montana Skaggs School of Pharmacy).
Fall 2017: BIOH 458 "Neuroscience Research": Lab course for Neuroscience undergraduate students (University of Montana).
Fall 2017: BMED 661 "Neuroscience I": Course for PhD students (University of Montana). *Course co-coordinator*
Spring 2017: BCH 294 "Intro Biochemistry Seminar": Course for undergraduate students (University of Montana).
Spring 2017: PHAR 372 "Integrated Studies II": Course for PharmD students (University of Montana Skaggs School of Pharmacy).

Fall 2016: PHAR 421 "Medicinal Chemistry I": Course for PharmD students (University of Montana Skaggs School of Pharmacy). *Voted "Teacher of the Month" by the Rho Chi Society (Academic Honor Society in Pharmacy) (November 2016)*

Fall 2016: PHAR 371 "Integrated Studies I": Course for PharmD students (University of Montana Skaggs School of Pharmacy).

Spring 2016: BCH 294 "Intro Biochemistry Seminar": Course for undergraduate students (University of Montana).

Spring 2016: BMED 624 "Methods in Medicinal Chemistry": Course for PhD students (University of Montana).

Spring 2016: PHAR 372 "Integrated Studies II": Course for PharmD students (University of Montana Skaggs School of Pharmacy).

Fall 2015: PHAR 421 "Medicinal Chemistry I": Course for PharmD students (University of Montana Skaggs School of Pharmacy).

Fall 2015: BMED 615 "Molecular Pharmacology": Course for PhD students (University of Montana).

Fall 2015: PHAR 371 "Integrated Studies I": Course for PharmD students (University of Montana Skaggs School of Pharmacy).

Spring 2015: PHAR 372 "Integrated Studies II": Course for PharmD students (University of Montana Skaggs School of Pharmacy).

Spring 2015: PHAR 362 "Pharmaceutical Sciences Laboratory II": Lab course for PharmD students (University of Montana Skaggs School of Pharmacy).

Fall 2014: PHAR 421 "Medicinal Chemistry I": Course for PharmD students (University of Montana Skaggs School of Pharmacy).

2012: IBS 555 "Basic Biomedical and Biological Sciences I": Course for graduate students (Emory University).

2011: Ion Channel Physiology: Course for postdocs and graduate students (Cold Spring Harbor Laboratory Course).

2010: Ion Channel Physiology: Course for postdocs and graduate students (Cold Spring Harbor Laboratory Course).

2009: Ion Channel Physiology: Course for postdocs and graduate students (Cold Spring Harbor Laboratory Course).

2009: IBS 531 "Principles and Approaches to Pharmacology": Course for graduate students (Emory University).

2007: Medicinal chemistry: Course for undergraduate pharmacy students (University of Copenhagen, Denmark).

2006: Lecturer in "Receptor Structure and Function"
Course for graduate students (University of Copenhagen, Denmark).

2005: Advanced Techniques in Molecular Pharmacology: Course for Ph.D. students (University of Copenhagen, Denmark).

2004: Medicinal chemistry: Course for undergraduate pharmacy students (University of Copenhagen, Denmark).

2003: Medicinal chemistry: Course for undergraduate pharmacy students (University of Copenhagen, Denmark).