

MARK NORMAN, Ph.D.

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PROFESSIONAL SUMMARY

Innovative and vision-driven Scientific Executive with over 35 years of success providing effective research, project management, solution development, and employee oversight in high-pressure environments. Conscientious professional with a distinctive legacy in the scientific world and a demonstrated history of effectively leading teams through new initiatives and program implementation. Committed to excellence; dedicated to maintaining a reputation built on quality, service, and uncompromising ethics.

AREAS OF EXPERTISE

- Medicinal Chemistry/Drug Discovery
 - Project/Program Management
 - Operations Streamlining
 - Informatics Tool Creation
 - Cross-Functional Team Management
 - Complex Problem Resolution
 - Safety Compliance/Adherence
 - Procedure Development/Implementation
 - Staff Oversight & Mentoring
 - Risk Assessment/Mitigation
 - Licensing Negotiations
 - Conflict Management
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PROFESSIONAL EXPERIENCE

Scicon Solutions – Thousand Oaks, CA 2016 – present
President

Providing scientific consulting, medicinal chemistry support, and discovery research services to pharmaceutical and biotech companies and academia. Website: <https://sciconsolutions.com/>

BrainStorm Therapeutics, Inc. – San Diego, CA 2023 – present
Scientific Advisory Board

BrainStorm Therapeutics is a biotechnology company developing a proprietary "human-first" CNS drug discovery platform utilizing patient iPSC-derived models of brain disease to discover molecules that restore synaptic network function and halt, prevent, or reverse neurodegeneration. Website: <https://www.brainstormtherapeutics.org/>

ADRx Pharmaceuticals, Inc. – Thousand Oaks, CA 2016 – present
Scientific Advisory Board

Guiding ADRx's scientific team in their efforts to develop a unique approach to halting diseases of protein aggregation by utilizing structural insights of aggregated proteins in the form of amyloid and biomolecular condensates. Website: <https://www.adrxpharma.com/>

California Lutheran University – Thousand Oaks, CA 2016 – 2018
Adjunct Chemistry Professor

Taught undergraduate organic chemistry.

Amgen, Inc. – Thousand Oaks, CA 1996 – 2015
Scientific Executive Director (2011 – 2015)

Director of Research (2006 – 2011)

Associate Director of Research II (2004 – 2006)

Provided effective chemistry research team and project leadership several drug discovery projects, from initial hit identification to clinical trials in the areas of oncology, inflammation, metabolic disorders, and neuroscience.

- Acted as Medicinal Chemistry Leader, Co-Manager, or Project Team Leader for multiple initiatives including: PI3K α , c-Met, B-Raf, TRPM8, and GKRP drug discovery programs leading to clinical candidates: AMG 511, 208, 458, 337, 333, and 339, which progressed into clinical trials for the treatment of cancer, pain, and migraine.

- Personally authored and published several high-impact research publications some of which were utilized in external training programs (Drew University School of Medicinal Chemistry and Gordon Research Conference).
- Key contributor to informatics tool development for the department; designed a MyTeams site for Medicinal Chemistry Department, which helped to significantly enhance the staff's productivity.
- Team Lead for several drug discovery projects such as TRPV1, CDK5, B1, PTP1B, NPY5, CB1, and MC4 research programs; Directed medicinal chemistry efforts aimed at identifying clinical candidates for the treatment of stroke, pain, diabetes, obesity, and Parkinson's disease that lead to: AMG 517, 628, and 474.
- Discovery Research Leader and Program Manager for Amgen's B14/B29 building consolidation project supporting Amgen's Full Potential Geographic Footprint Initiative. Acted as key point of accountability with multiple internal and external organizations, architects, contractors, and equipment specialists, and provided strategic direction for reorganization and consolidation efforts.
- Served as Site Head for Environmental Health Safety & Sustainability/EHSS for the 435K sq. ft. Thousand Oaks B29 site housing 490 full-time personnel. Set site safety goals, scheduled appropriate safety training, established metrics reporting and risk assessment plans, conducted regular laboratory inspections, and set overall tone for safe practices.
- Led a cross-functional Site-Safety team comprised of 45 members; Served on the core team of the R&D Safety Improvement Plan: Safe Laboratory Practices and Safety Culture leading to significantly fewer accidents and injuries from the previous year.
- Successfully led the \$2.5M cross-site electronic notebook, "e-Notebook" project initiative; collaborated with the Research Informatics group and an outside vendor to design, deploy, and implement an efficient electronic notebook system for the entire Medicinal Chemistry Department, thereby completely eliminating paper notebooks and providing the chemists and patent attorneys a valuable, real-time, searchable database.

Additional significant contributions include:

- » Contributed to the identification of eleven clinical candidates.
- » Distinction of holding more Amgen patents than any other employee and for being one of the most published authors in the company's cumulative history.
- » First Scientist featured on Amgen's R&D website.
- » Requested by upper management to evaluate licensing opportunities focused on the treatment of head trauma, stroke, obesity, epilepsy, diabetes, arrhythmia, cancer, inflammation, and pain; performed extensive analyses and made appropriate recommendations to senior management. Efforts led to the in-licensing of a promising series of compounds for the treatment of inflammatory conditions.
- » Client sponsor for Chemistry's Research Informatics projects that included the successful development of a new compound registration system (CoRe) and the Retire ISIS Project (RIP). The compound registration system was integrated with the electronic notebook system saving time and streamlining the chemist's workflow.
- » Member of BACE Medicinal Chemistry Team that recently identified 2 clinical candidates, AMG 978 & AMG 138.
- » Member of the Research Management Committee/RMC for the BioFocus collaboration.
- » Medicinal Chemistry Chairman; coordinated internal/external speaker presentations for departmental meetings.
- » Accountable for overseeing teams and introducing effective learning courses and project initiatives for department.
- » Introduced courses such as "Scientific & Technical Writing" that improved the employee skill sets within the Medicinal Chemistry Division.

Additional Relevant Positions

Amgen • Research Scientist II, Research Scientist III, and Associate Director of Research I	1996 – 2004
Glaxo Wellcome, Inc. • Senior Research Investigator	1995 – 1996
Burroughs Wellcome Co. • Research Scientist III, Research Scientist IV, and Research Scientist V	1987 – 1995
University of California, Berkeley • Research Assistant	1982 – 1987

Alfa Products, Thiokol/Ventron Division • Synthetic Organic Chemist 1982

University of New Hampshire (Chemical Engineering Department) • Analytical Chemist 1981

EDUCATION

Ph.D. Organic Chemistry • GPA 3.98/4.00 • University of California, Berkeley

B.S. Chemistry • GPA 3.71/4.00; **Summa cum Laude** • University of New Hampshire

PROFESSIONAL AFFILIATIONS

Associate Editor • *The Journal of Pharmacognosy*

Editorial Advisory Board • *Pharmaceuticals* • *Medicinal Chemistry Reviews* • *Current Topics in Medicinal Chemistry* • *Medicinal Chemistry-Online* • *The Open Drug Discovery Journal* • *Journal of International Research in Medical & Pharmaceutical Sciences*

Referee • *Journal of Medicinal Chemistry* • *Bioorganic & Medicinal Chemistry Letters* • *Journal of Organic Chemistry* • *Journal of Heterocyclic Chemistry* • *Medicinal Chemistry*

Member • American Chemical Society

HONORS AND AWARDS

- Amgen Discovery Research Innovation Award
 - Journal of Medicinal Chemistry Highly Read Article Award
 - Featured scientist profiled for Amgen's R&D website
 - Amgen Star and Bravo Awards (17x)
 - Bioorganic & Medicinal Chemistry Letters: Most Cited Paper Award
 - Amgen Special Recognition Award
 - Burroughs Wellcome Co. Excellence and Special Performance Awards
 - Marquis Who's Who in Medicine and Healthcare
 - Sigma Xi Scientific Research Society
 - Bruce H. Mahan Memorial Teaching Award
 - Phi Lambda Upsilon Honor Society
 - Phi Beta Kappa Honor Society
 - Phi Kappa Phi Honor Society
 - Bailey Prize in Chemistry
 - Richard M. Ford Memorial Award
 - Heman C. Fogg Fellowship in Analytical Chemistry
 - Sophomore Award in Organic Chemistry
 - High School Valedictorian
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PUBLICATIONS/PRESENTATIONS/PATENTS (See Appendix for a detailed reference list)

81 • Publications in peer-reviewed journals

1 • Book Chapter

89 • Presentations

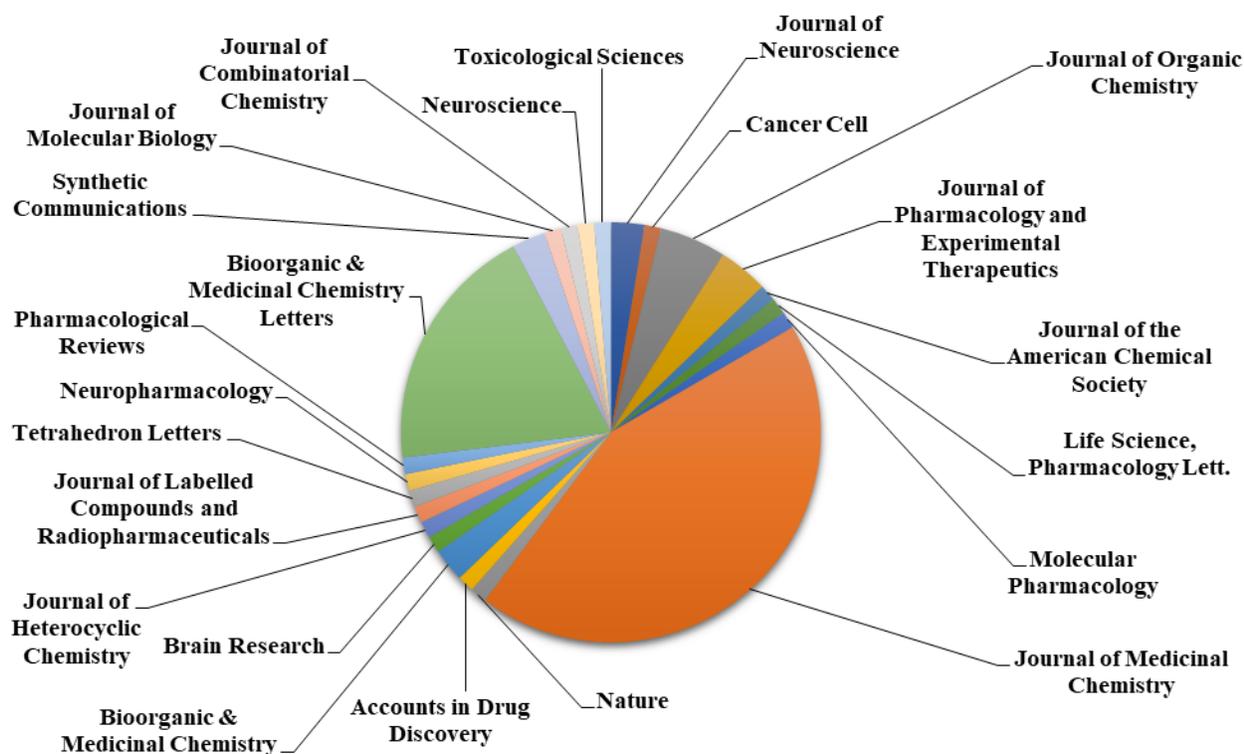
67 • Patents

VOLUNTEER & COMMUNITY SERVICE

Alzheimer's Association • Conejo Parks & Recreation • Habitat for Humanity • Manna Conejo Valley Food Distribution Center • American Cancer Society • Tushita Kadampa Buddhist Center • Children's Hospital LA International Medical Corps • Arthritis Foundation • Leukemia & Lymphoma Society, Inc. • Wells Bring Hope

APPENDIX

PUBLICATIONS



1. Clayton H. Heathcock, Mark H. Norman, and David E. Uehling, "Stereoselection in the Michael Addition Reaction. 1. The Mukaiyama-Michael Reaction" *Journal of the American Chemical Society*, **1985**, 107(9), 2747-2799.
2. Mark H. Norman and Clayton H. Heathcock, "Novel Transformations Leading to 3-Benzylindolizidin-2-one" *Journal of Organic Chemistry*, **1987**, 52(2), 226-235.
3. Mark H. Norman and Clayton H. Heathcock, "Improved Synthesis of N-Benzyl-5-ethyl-1,2,3,4-tetrahydropyridine" *Journal of Organic Chemistry*, **1988**, 53(14), 3370-3371.
4. Clayton H. Heathcock, Mark H. Norman, and Daniel A. Dickman, "Total Synthesis of (+/-)-Vallesamidine" *Journal of Organic Chemistry*, **1990**, 55(3), 798-811.
5. Mark H. Norman, Merrick R. Almond, Barbara E. Reitter, and S. George Rahim, "Novel Synthesis of (+/-)-cis-4-Amino-2-cyclopentene-1-methanol, a Key Intermediate in the Preparation of Carbocyclic 2',3'-Didehydro-2',3'-dideoxy Nucleosides" *Synthetic Communications*, **1992**, 22(22), 3197-3204.

6. Mark H. Norman, Douglas J. Minick, and Gary E. Martin, "Structural Elucidation of an Oxazolo[5,4-b]pyridine: An Alternative Cyclization Product Related to Nevirapine" *Journal of Heterocyclic Chemistry*, **1992**, 30(3), 771-779.
7. Mark H. Norman, James L. Kelley, and Elizabeth B. Hollingsworth, "Conformationally Restricted Analogues of Remoxipride as Potential Antipsychotic Agents" *Journal of Medicinal Chemistry*, **1993**, 36(22), 3417-3423.
8. Mark H. Norman, Greg C. Rigdon, Frank Navas III, and Barrett R. Cooper, "Cyclic Benzamides as Mixed Dopamine D₂/Serotonin 5-HT₂ Receptor Antagonists: Potential Atypical Antipsychotic Agents" *Journal of Medicinal Chemistry*, **1994**, 37(16), 2552-2563.
9. David K. Stammers, D. O'N. Somers, C. K. Ross, I. Kirby, P. H. Ray, J. E. Wilson, Mark H. Norman, J. S. Ren, R. M. Esnouf, E. F. Garman, E. Y. Jones and D. I. Stuart, "Crystals of HIV-1 Reverse Transcriptase Diffracting to 2.2Å Resolution" *Journal of Molecular Biology*, **1994**, 242, 586-588.
10. Michael J. Durcan, Greg C. Rigdon, Philip F. Morgan, and Mark H. Norman, "Is Clozapine Selective for the Dopamine D₄ Receptor?" *Life Sciences, Pharmacology Lett.*, **1995**, 57(18), 275-283.
11. Mark H. Norman, H. David Smith, C. Webster Andrews, Flora L. M. Tang, Conrad L. Cowan, and Robert P. Steffen, "4-(Heteroarylthio)-2-biphenyltetrazoles as Nonpeptide Angiotensin II Antagonists" *Journal of Medicinal Chemistry*, **1995**, 38, 4670-4678.
12. Mark H. Norman, Douglas J. Minick, and Greg C. Rigdon, "Effect of Linking Group Modifications on the Antipsychotic Profile of Some Phthalimide and Isoindolinone Derivatives" *Journal of Medicinal Chemistry*, **1996**, 39, 149-157.
13. Greg C. Rigdon, Gerald Pollard, Virginia Boncek, Walter Faison, Mark H. Norman, and James Howard, "1192U90 in Animal Tests That Predict Antipsychotic Efficacy and Extrapyramidal Side Effects" *Neuropharmacology*, **1996**, 15, 231-242.
14. Mark H. Norman, Greg C. Rigdon, Frank Navas III, and William Hall, "Structure-Activity Relationships within a Series of Substituted Benzamides: Potent D₂/5-HT₂ Antagonists as Neuroleptic Agents" *Journal of Medicinal Chemistry*, **1996**, 39, 1172-88.
15. Frank Navas III and Mark H. Norman, "The Design and Synthesis of a Hapten for 1192U90: A Potential Atypical Antipsychotic Agent" *Synthetic Communications*, **1996**, 26, 1411-1421.
16. Mark H. Norman and Stephen D. Gabriel, "Synthesis of ¹³C- and ¹⁴C-labeled 1192U90, an ortho-Amino Benzamide with a Preclinical Atypical Antipsychotic Profile" *Journal of Labelled Compounds and Radiopharmaceuticals*, **1996**, 38, 269-280.
17. Mark H. Norman, Frank Navas III, James Thompson, and Greg C. Rigdon, "Synthesis and Evaluation of Heterocyclic Carboxamides as Potential Atypical Antipsychotic Agents" *Journal of Medicinal Chemistry*, **1996**, 39, 4692-4703.

18. Douglas J. Minick and Mark H. Norman, "An IR Investigation of Intramolecular Hydrogen Bonding in a Set of N, N'-Disubstituted Piperazine Hydrochlorides" Submitted to the *Journal of Molecular Structure*, **1997**.
19. Frank Navas III, Flora L. M. Tang, Lee Schaller and Mark H. Norman, "Analogues of the Potential Antipsychotic Agent 1192U90: Amide Modifications" *Journal of Bioorganic & Medicinal Chemistry*, **1998**, 6, 811-823.
20. Ning Chen, Yuelie Lu, Kumar Gadamasetti, Clarence R. Hurt, Mark H. Norman and Christopher Fotsch, "A Short, Facile Synthesis of 3-Amino-2-carboxy-5-substituted Pyrroles" *Journal of Organic Chemistry*, **2000**, 65, 2603-2605.
21. Anthony W. Bannon, Jennifer. Seda, Michelle Carmouche, J. M. Francis, Mark H. Norman, William Karbon and Michael L. McCaleb, "Behavioral Characterization of Neuropeptide Y Knockout Mice" *Brain Research*, **2000**, 868, 79-87.
22. Mark H. Norman, Ning Chen, Zhidong Chen, Chris Fotsch, Ray Hurt, Clarence Hale, Bruce Han, Tracy Jenkins, John Kincaid, Longbin Liu, Yuelie Lu, Ofir Moreno, Vincent Santora, Jennifer D. Sonnenberg, and William Karbon, "Structure-Activity Relationships of a Series of Deazapurines as NPY-5 Receptor Antagonists" *Journal of Medicinal Chemistry*, **2000**, 43(22), 4288-4312.
23. Christopher Fotsch, Jennifer D. Sonnenberg, Ning Chen, Clarence Hale, William Karbon, and Mark H. Norman, "Structure-Activity Relationships of Trisubstituted Phenyl Urea Derivatives as NPY-5 Receptor Antagonists" *Journal of Medicinal Chemistry*, **2001**, 44(14), 2344-2356.
24. Premilla Arasasingham, Chris Fotsch, Xiaohu Ouyang, Mark H. Norman, Michael G. Kelly, Kevin L. Stark, William Karbon, Clarence hale, Jamie Baumgartner, Martha Zambrano, and Nuria A. Tamayo, "SAR of (1-Aryl-2-piperazinylethyl)piperazines: Antagonists for the AGRP/Melanocortin Receptor Binding" *Journal of Medicinal Chemistry*, **2003**, 46(1), 9-11.
25. Samuel W. Gerritz, Mark H. Norman, Judd Berman, Eric Bigham, Michael J. Bishop, Deanna E. Garrison, Dennis Heyer, Steven J. Hodson, James Linn, Brian E. Marron, Suganthini S. Nanthakumar, and Frank Navas, "High Throughput Manual Parallel Synthesis using Mimotopes SynPhase™ Crowns" *Journal of Combinatorial Chemistry*, **2003**, 5(2), 110-117.
26. Christopher Fotsch, Duncan M. Smith, Jeffrey A. Adams, Janet Cheetham, Michael Croghan, Elizabeth M. Doherty, Clarence Hale, Mark A. Jarosinski, Michael G. Kelly, Mark H. Norman, Nuria A. Tamayo, Ning Xi, and James W. Baumgartner, "Design of a new peptidomimetic agonist for the melanocortin receptors based on the solution structure of the peptide ligand, Ac-Nle-cyclo[Asp-Pro-dPhe-Arg-Trp-Lys]-NH₂" *Bioorganic & Medicinal Chemistry Letters* **2003**, 13(14), 2337-2340.
27. Ning Xi, Clarence Hale, Michael G. Kelly, Mark H. Norman, Markian Stec, Shimin Xu, Baumgartner, and Chris Fotsch, "Synthesis of novel melanocortin 4 receptor agonists and antagonists containing a succinamide core" *Bioorganic & Medicinal Chemistry Letters* **2004**, 14(2), 377-381.
28. Elizabeth M. Doherty, Christopher Fotsch, Yunxin Bo, Partha P. Chakrabarti, Ning; Chen, Narender Gavva, Nianhe Han, Michael G. Kelly, John Kincaid, Lana Klionsky, Qingyian Liu, Vassil I. Ognyanov,

Rami Tamir, Xianghong Wang, Jiawang Zhu, Mark H. Norman, and James J. S. Treanor, "Discovery of Potent, Orally Available Vanilloid Receptor-1 Antagonists. Structure-Activity Relationship of N-Aryl Cinnamides" *Journal of Medicinal Chemistry* **2005**, 48(1), 71-90.

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30. Christopher Fotsch, Nianhe Han, Premilla Arasasingham, Yunxin Bo, Michelle Carmouche, Ning Chen, James Davis, Martin H. Goldberg, Clarence Hale, Feng-Yin Hsieh, Michael G.; Kelly, Qingyian Liu, Mark H. Norman, Duncan M. Smith, Markian Stec, Nuria Tamayo, Ning Xi, Shimin Xu, Anthony W. Bannon, and James W. Baumgartner, "Melanocortin subtype-4 receptor agonists containing a piperazine core with substituted aryl sulfonamides" *Bioorganic & Medicinal Chemistry Letters* **2005**, 15(6), 1623-1627.

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32. Narender R. Gavva, Rami Tamir, Lana Klionsky, Mark H. Norman, Jean-Claude Louis, Kenneth D. Wild, and James J. S. Treanor, "Proton activation does not alter antagonist interaction with the capsaicin-binding pocket of TRPV1" *Molecular Pharmacology* **2005**, 68(6), 1524-1533.

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33. D'Amico, Derin C.; Aya, Toshi; Human, Jason; Fotsch, Christopher; Chen, Jian Jeffrey; Biswas, Kaustav; Riahi, Bobby; Norman, Mark H.; Willoughby, Christopher A.; Hungate, Randall; Reider, Paul J.; Biddlecome, Gloria; Lester-Zeiner, Dianna; Van Staden, Carlo; Johnson, Eileen; Kamassah, Augustus; Arik, Leyla; Wang, Judy; Viswanadhan, Vellarkad N.; Groneberg, Robert D.; Zhan, James; Suzuki, Hideo; Toro, Andras; Mareska, David A.; Clarke, David E.; Harvey, Darren M.; Burgess, Laurence E.; Laird, Ellen R.; Askew, Benny; Ng, Gordon. "Identification of a Nonpeptidic and Conformationally Restricted Bradykinin B1 Receptor Antagonist with Anti-Inflammatory Activity" *Journal of Medicinal Chemistry* **2007**, 50(4), 607-610.

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Louis, Jean-Claude. “The Vanilloid Receptor TRPV1 is Tonicly Activated In Vivo and Involved in Body Temperature Regulation” *Journal of Neuroscience* **2007**, 27(13), 3366-3374.

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36. Norman, Mark H.; Zhu, Jiawang; Fotsch, Christopher; Bo, Yunxin; Chen, Ning; Chakrabarti, Partha; Doherty, Elizabeth M.; Gavva, Narender R.; Nishimura, Nobuko; Nixey, Thomas; Ognyanov, Vassil I.; Rzasa, Robert M.; Stec, Markian; Surapaneni, Sekhar; Tamir, Rami; Viswanadhan, Vellarkad N.; Treanor, James J. S. “Novel Vanilloid Receptor-1 Antagonists: 1. Conformationally Restricted Analogues of trans-Cinnamides” *Journal of Medicinal Chemistry* **2007**, 50(15), 3497-3514.

37. Doherty, Elizabeth M.; Fotsch, Christopher; Bannon, Anthony W.; Bo, Yunxin; Chen, Ning; Dominguez, Celia; Falsey, James; Gavva, Narender R.; Katon, Jodie; Nixey, Thomas; Ognyanov, Vassil I.; Pettus, Liping; Rzasa, Robert M.; Stec, Markian; Surapaneni, Sekhar; Tamir, Rami; Zhu, Jiawang; Treanor, James J. S.; Norman, Mark H.. “Novel Vanilloid Receptor-1 Antagonists: 2. Structure-Activity Relationships of 4-Oxopyrimidines Leading to the Selection of a Clinical Candidate” *Journal of Medicinal Chemistry* **2007**, 50(15), 3515-3527.

38. Wang, Hui-Ling; Katon, Jodie; Balan, Chenera; Bannon, Anthony W.; Bernard, Charles; Doherty, Elizabeth M.; Dominguez, Celia; Gavva, Narender R.; Gore, Vijay; Ma, Vu; Nishimura, Nobuko; Surapaneni, Sekhar; Tang, Phi; Tamir, Rami; Thiel, Oliver; Treanor, James J. S.; Norman, Mark H.. “Novel Vanilloid Receptor-1 Antagonists: 3. The Identification of a Second-Generation Clinical Candidate with Improved Physicochemical and Pharmacokinetic Properties” *Journal of Medicinal Chemistry* **2007**, 50(15), 3528-3539.

39. Alexandre A. Steiner, Victoria F. Turek, Maria C. Almeida, Jeffrey J. Burmeister, Daniela L. Oliveira, Jennifer L. Roberts, Anthony W. Bannon, Mark H. Norman, Jean-Claude Louis, James J. S. Treanor, Narender R. Gavva, and Andrej A. Romanovsky “Nonthermal Activation of Transient Receptor Potential Vanilloid-1 Channels in Abdominal Viscera Tonicly Inhibits Autonomic Cold-Defense Effectors” *Journal of Neuroscience* **2007**, (27), 7459-7468.

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Vanilloid Receptor TRPV1 Antagonists Attenuates Hyperthermia Elicited by TRPV1 Blockade” *Journal of Pharmacology and Experimental Therapeutics*, **2007** (323), 128-137.

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47. Nuria Tamayo, Hongyu Liao, Markian M. Stec, Xianghong Wang, Partha Chakrabarti, Dan Retz, Elizabeth M. Doherty, Sekhar Surapaneni, Rami Tamir,[#] Anthony W. Bannon, Narender R. Gavva, and Mark H. Norman “The Design and Synthesis of Peripherally Restricted Transient Receptor Potential Vanilloid 1 (TRPV1) Antagonists” *Journal of Medicinal Chemistry* **2008**, 51, 2744-2757.
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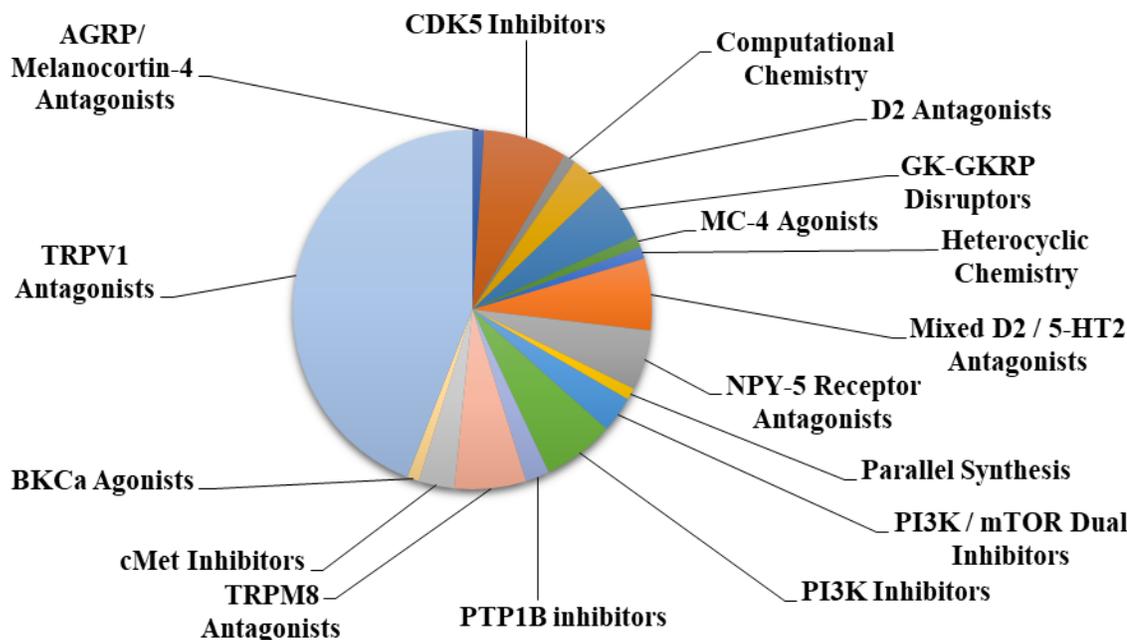
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28. Anthony W. Bannon, James R. Davis, Dawn Zhu, Mark H. Norman, Elizabeth M. Doherty, Ella Magal, James J. S. Treanor. "Involvement of TRPV1 in the regulation of Body Temperature in Rats and Mice" Program No. 890.24. Presented at the Society for Neuroscience 34th Annual Meeting, San Diego CA, October 23-27, **2004**.
29. Gal Hever, Rong Kuang, Jue Wang, Shoushu Jiao, Sekhar Surapaneni, A. Bak, Mark H. Norman, James S. Treanor, Jean-Claude Louis, and Ella Magal "A Novel VR1 Antagonist Inhibits Thermal Hyperalgesia Evoked by Carrageenan Injection in the Rat Paw" Program No. 864.1. Presented at the Society for Neuroscience 34th Annual Meeting, San Diego CA, October 23-27, **2004**.
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32. Wenge Zhong, Hu Liu, Matthew R. Kaller, Thomas T. Nguyen, Robert M. Rzasa, Hui-Ling Wang, Mark H. Norman, Xiaoling Xiong, David Powers, Weiya Wang, Charles Henley, Ella Magal, Jiandong Zhang, and Timothy Osslund "Quinolin-2(1H)-one derivatives as CDK5 inhibitors" Presented at the 229th American Chemical Society meeting, San Diego, CA, March 13-17, **2005**.

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39. Ella Magal, Anthony W. Bannon, Shoushu Jiao, Sekhar Surapaneni, Annette Bak, Mark H. Norman, Narender Gavva, Jean-Claude Louis, James J. S. Treanor, "Efficacy of a Novel TRPV1 Antagonist, AMG8163, in Various Rat Models of Pain" Presented at the International Society for the Study of Pain meeting in Sydney, Australia, August 21-26, **2005**.
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47. Mark H. Norman, "TRPV1 Antagonists: A Case Study- from High Throughput Screening to Human Clinical Trials" Presented at the Cambridge Healthtech Institute's 'Mastering Medicinal Chemistry' Conference in San Francisco, CA, February, **2007** (Invited Speaker).
48. Mark H. Norman, "Small Molecule Drug Discovery TRPV1 Antagonists: A Case Study" Presented at the Cambridge Healthtech Institute's 'Mastering Medicinal Chemistry' Presented at California Lutheran University, April 15, **2007** (Invited Speaker).

49. Sonya G. Lehto, Rami Tamir, Dawn Zhu, April Le, Brad Youngblood, Ella Magal, James J. S. Treanor, Mark H. Norman, Jean-Claude Louis, and Narender R. Gavva “Differential pharmacology of TRPV1 antagonists determines the magnitude of body temperature changes in rats” Presented at the 2nd International Conference on Neuropathic Pain, Berlin, Germany, June 7-10, **2007**.
50. Xianghong Wang, Partha P. Chakrabarti, Vassil I. Ognyanov, Liping H. Pettus, Rami Tamir, Helming Tan, Phi Tang, James J. S. Treanor, Narender R. Gavva, and Mark H. Norman “Design of Trisubstituted Pyrimidines as Vanilloid Receptor 1 (TRPV1) Antagonists with Improved Solubility” Presented at the 234th American Chemical Society Meeting, Boston, MA, August 19-23, **2007**.
51. Vellarkad Viswanadhan, Yaxiong Sun, and Mark H. Norman “3D-QSARs and activity predictions of human TRPV1 channel antagonists: CoMFA and CoMSIA analyses” Presented at the 234th American Chemical Society Meeting, Boston, MA, August 19-23, **2007**.
52. Andrej A. Romanovsky, Alexandre A. Steiner, Victoria F. Turek, Maria C. Almeida, Jeffrey J. Burmeister, Daniela L. Oliveira, Jennifer L. Roberts, Anthony W. Bannon, Mark H. Norman, Jean-Claude Louis, James J. S. Treanor, Narender R. Gavva “Non-thermal activation of TRPV1 channels in abdominal viscera tonically inhibits autonomic cold-defense effectors” Presented at the Transient Receptor Potential Ion Channel Superfamily Keystone Symposium Symposia, September 18-23, **2007**, Breckenridge, CO.
53. Doherty, Elizabeth M.; Fotsch, Christopher; Bannon, Anthony W.; Bo, Yunxin; Chen, Ning; Dominguez, Celia; Falsey, James; Gavva, Narender R.; Katon, Jodie; Nixey, Thomas; Ognyanov, Vassil I.; Pettus, Liping; Rzasa, Robert M.; Stec, Markian; Surapaneni, Sekhar; Tamir, Rami; Zhu, Jiawang; Treanor, James J. S.; Norman, Mark H.. “TRPV1 antagonists: SAR and the Selection of AMG 517 as a Clinical Candidate” Presented at the Western Regional Meeting ACS, October 11, **2007**, San Diego CA.
54. Andrej A. Romanovsky, Alexandre A. Steiner, Victoria F. Turek, Maria C. Almeida, Jeffrey J. Burmeister, Daniela L. Oliveira, Jennifer L. Roberts, Anthony W. Bannon, Mark H. Norman, Jean-Claude Louis, James J. S. Treanor, Narender R. Gavva “Non-thermal activation of TRPV1 channels in abdominal viscera tonically inhibits autonomic cold-defense effectors” Presented at the Society for Neuroscience 37th Annual Meeting, November 5-8, **2007**, San Diego, CA.
55. Narender R. Gavva, Andras Garami, Liang Fang, Sekhar Surapaneni, Anna Akrami, Francisco Alvarez, Annette Bak, Mary Darling, Anu Gore, Graham R. Jang, Patrick Kesslak, Liyun Ni, Mark H. Norman, Gabrielle Palluconi, Mark J. Rose, Margaret Salfi, Edward Tan, James J. S. Treanor, Andrej Romanovsky, Christopher Banfield, and Gudarz Davar “The Capsaicin Receptor TRPV1: Is it a Pain Transducer or a Regulator of Body Temperature?” Presented at the Society for Neuroscience 37th Annual Meeting, November 5-8, **2007**, San Diego, CA.
56. Mark H. Norman, “Small Molecule Drug Discovery TRPV1 Antagonists: A Case Study” Presented at California State Northridge, March 5, **2008**, Northridge CA (Invited Speaker).
57. Aaron Siegmund, Steve Bellon, Shon Booker, Alan Cheng, Derin D’Amico, Noel D’Angelo, Tae-Song Kim, Jasmine Lin, Mark Stec, Ning Xi, Kevin Yang, Yajing Yang, Yihong Zhang, Mark H. Norman, Isabelle Dussault, Jean-Christophe Harmange, and Longbin Liu “Pyridazinones as Potent and Selective cMET Kinase Inhibitors” Presented at the Keystone Computer-Aided Drug Design Symposia, March 29 - April 3, 2008, **2008**, Steamboat Springs, CO.

58. Steve Bellon, David Bauer, Shon Booker, Debbie Choquette, Isabelle Dussault, Yan Gu, Jean-Christophe Harmange, Tae-Seong Kim, Matt Lee, Longbin Liu, Alex Long, Mark H. Norman, Anne O'Connor, Paul Rose, Aaron Siegmund, Doug Whittington, Ning Xi, and Michael Zhang "Designing selective c-Met inhibitors: A structural approach" Presented at the AACR meeting, April 14-18, **2008**, San Diego, CA.
59. Deborah Choquette, Longbin Liu, Tae-Seong Kim, Mark H. Norman, Aaron Siegmund, Ning Xi, Steven F. Bellon, Paula Kaplan-Lefko, Matthew Lee, Jasmine Lin, Karen Rex, Yohannes Teffera, Isabelle Dussault, Jean-Christophe Harmange "Discovery of 1-(2-Hydroxy-2-methylpropyl)-N-(5-(7-methoxyquinolin-4-yloxy)pyridin-2-yl)-5-methyl-3-oxo-2-phenyl-2,3-dihydro-1H-pyrazole-4-carboxamide (AMG 458): A Potent, Selective, and Orally Bioavailable c-Met Inhibitor" Presented at the AACR meeting, April 14-18, **2008**, San Diego, CA.
60. Narender R. Gavva, Andras Garami, Liang Fang, Sekhar Surapaneni, Anna Akrami, Francisco Alvarez, Annette Bak, Mary Darling, Anu Gore, Graham R. Jang, Patrick Kesslak, Liyun Ni, Mark H. Norman, Gabrielle Palluconi, Mark J. Rose, Margaret Salfi, Edward Tan, James J. S. Treanor, Andrej Romanovsky, Christopher Banfield, and Gudarz Davar "AMG 517, a selective TRPV1 antagonist causes marked hyperthermia in humans" Presented at the Spring Pain Conference, Grand Cayman, British West Indies, April 26-May 2, **2008**.
61. Nuria Tamayo, Hongyu Liao, Markian M. Stec, Xianghong Wang, Partha Chakrabarti, Dan Retz, Elizabeth M. Doherty, Sekhar Surapaneni, Rami Tamir, Anthony W. Bannon, Narender R. Gavva, and Mark H. Norman "Can we identify Transient Receptor Potential Vanilloid 1 (TRPV1) antagonists that do not cause hyperthermia?" Presented at the Cambridge Healthtech Institute "Targeting Pain with Novel Therapeutics", May 12-13, **2008**, Philadelphia, PA (Invited Speaker).
62. Mark H. Norman, "TRPV1 Antagonists: From High Throughput Screening to the Selection of a Clinical Candidate and Beyond" Presented at the 17th International Conference on Organic Synthesis, June 22-27, **2008**, Daejeon, Korea (Invited Speaker).
63. Vu V. Ma, Vijay K. Gore, Ruoyuan Yin, Joe Ligutti, David Immke, Elizabeth M. Doherty, and Mark H. Norman "Structure activity relationship (SAR) investigations of tetrahydroquinolines as BKCa agonists." Abstracts of Papers, 236th ACS National Meeting, Philadelphia, PA, United States, August 17-21, **2008**.
64. Mark H. Norman, "Discovery of a Selective TRPV1 Antagonist, AMG 517: A Clinical Candidate for the Treatment of Pain" Presented at the XXth International Symposium on Medicinal Chemistry, September 1-6, **2008**, Vienna, Austria (Invited Speaker).
65. Tamayo, Nuria; Liao, Hongyu; Stec, Markian M.; Wang, Xianghong; Chakrabarti, Partha; Retz, Dan; Doherty, Elizabeth M.; Surapaneni, Sekhar; Tamir, Rami; Bannon, Anthony W.; Gavva, Narender R.; Norman, Mark H. "Peripherally Restricted Transient Receptor Potential Vanilloid 1 (TRPV1) Antagonists" Presented at the "Ion Channels as Therapeutic Targets" Boston MA, October 21-23, **2008** (Invited Speaker).

66. Wang, Hui-Ling; Katon, Jodie; Balan, Chenera; Bannon, Anthony W.; Bernard, Charles; Doherty, Elizabeth M.; Dominguez, Celia; Gavva, Narender R.; Gore, Vijay; Ma, Vu; Nishimura, Nobuko; Surapaneni, Sekhar; Tang, Phi; Tamir, Rami; Thiel, Oliver; Treanor, James J. S.; Norman, Mark H.. “Design & Synthesis of TRPV1 Antagonists with Improved Physicochemical and Pharmacokinetic Properties” Presented at the Cambridge Healthtech Institute’s ‘Mastering Medicinal Chemistry’ Conference in San Francisco, CA, February 27, **2009** (Invited Speaker).

67. Mark H. Norman, “Small Molecule Drug Discovery TRPV1 Antagonists: A Case Study” Presented at the 50-year awards luncheon of CalPACS (American Chemical Society), October 3, **2009** (Invited Speaker).

68. Kenneth D. Wild, Sonya G. Lehto, Sunny Chen, Jeff Clarine, Carl Davis, Hong Deng, Anu Gore, Lana Klionsky, Holger Monenschein, Mark H. Norman, Karthik Nagapudi, Nuria Tamayo, Judy Wang, Tingrong Wang, Weiya Wang, Brad Youngblood, Maosheng Zhang, Dawn Zhu, James J.S. Treanor, and Narender R. Gavva “TRPM8 selective antagonists are not effective in rat models of pain” Presented at the Spring Pain Conference, Grand Cayman, British West Indies, April 17-April 24, **2010**.

69. Sonya G. Lehto, Sunny Chen, Jeff Clarine, Carl Davis, Hong Deng, Anu Gore, Lana Klionsky, Holger Monenschein, Mark H. Norman, Karthik Nagapudi, Nuria Tamayo, Judy Wang, Tingrong Wang, Weiya Wang, Brad Youngblood, Maosheng Zhang, Dawn Zhu, James J.S. Treanor, Kenneth D. Wild, and Narender R. Gavva “TRPM8 selective antagonists are not effective in rat neuropathic or inflammatory pain models” Presented at the Third International Congress on Neuropathic Pain, Athens, Greece, May 27-30, **2010**.

70. Monenschein, Holger; Bo, Yunxin; Clarine, Jeffrey; Davis, Carl; Deng, Hong; Gore, Vijay; Horne, Daniel; Horner, Michelle; Kaller, Matthew; Lehto, Sonya; Ma, Vu; Nagapudi, Karthik; Nguyen, Thomas; Nishimura, Nobuko; Norman, Mark; Tamayo, Nuria; Treanor, James; Wang, Yueh-Ju; Wang, Tingrong; Wang, Weiya; Wild, Kenneth; Youngblood, Bradley; Zhang, Maosheng; Zhong, Wenge; Zhu, Dawn; Gavva, Narender. “Development of TRPM8 selective antagonists for the treatment of inflammatory and neuropathic pain” Presented at the 240th American Chemical Society Meeting, Boston, MA, August 22-26, **2010**.

71. Mark H. Norman, “Red Hot Chili Peppers - Small Molecule Drug Discovery Recipes for the Treatment of Pain” Presented at the University of New Hampshire, November 8, **2010**, Durham, NH (Invited Speaker).

72. Bradley D. Youngblood, Hong Deng, Dawn Zhu, Weiya Wang, Judy Wang, Tingrong Wang, Maosheng Zhang, Holger Monenschein, Mark H. Norman, Nuria Tamayo, Sunny Chen, Carl Davis, Jeff Clarine, James J.S. Treanor, Kenneth D. Wild, Sonya G. Lehto, and Narender R. Gavva “Transient Receptor Potential Melastatin 8 antagonists do not prevent acute oxaliplatin-induced painful hypersensitivity to cold in rats” Presented at the 2010 Society for Neuroscience (SFN) San Diego, CA Nov 14th, **2010**.

73. Nuria A. Tamayo, Yunxin Bo, Vijay Gore, Vu Ma, Nobuko Nishimura, Phi Tang, Sonia Letho, Narender R. Gavva, and Mark H. Norman "TRPM8 Channel: A Target for the Treatment of Pain" Presented at the World Pharma Congress Drug Discovery Summit on *Targeting Pain with Novel Therapeutics* in Philadelphia, PA, June 7-8, **2011**.
74. Noel D. D'Angelo, Tae-Seong Kim, Kristin Andrews, Shon K. Booker, Sean Caenepeel, Kui Chen, Derin D'Amico, Dan Freeman, Jian Jiang, Longbin Liu, John D. McCarter, Tisha San Miguel, Erin L. Mullady, Michael Schrag, Raju Subramanian, Jin Tang, O Robert C. Wahl, Ling Wang, Douglas A. Whittington, Tian Wu, Ning Xi, Yang Xu, Peter Yakowec, Kevin Yang, Leanne P. Zalameda, Nancy Zhang, Paul Hughes, and Mark H. Norman "Discovery and Optimization of a Series of Benzothiazole PI3K / mTOR Dual Inhibitors" Presented at the 242nd National American Chemical Society meeting in Denver Colorado, August 28-September 1, **2011**.
75. Markian M. Stec, Kristin L. Andrews, Shon K. Booker, Sean Caenepeel, Daniel J. Freeman, Jian Jiang, Hongyu Liao, John McCarter, Erin L. Mullady, Tisha San Miguel, Raju Subramanian, Nuria Tamayo, Ling Wang, Kevin Yang, Leanne P. Zalameda, Nancy Zhang, Paul E. Hughes, and Mark H. Norman "Investigations of Various Heterocycles to Improve Metabolic Stability within a Series of PI3K/mTOR Dual Inhibitors" Presented at the 242nd National American Chemical Society meeting in Denver Colorado August 28-September 1, **2011**.
76. Kevin Yang, Nobuko Nishimura, Aaron Siegmund, Longbin Liu, Marian C. Bryan, Kristin L. Andrews, Yunxin Bo, Shon K. Booker, Sean Caenepeel, Daniel Freeman, Hongyu Liao, John McCarter, Erin L. Mullady, Tisha San Miguel, Raju Subramanian, Nuria Tamayo, Ling Wang, Douglas A. Whittington, Leanne Zalameda, Nancy Zhang, Paul E. Hughes, and Mark H. Norman "Discovery and Structure-Activity Relationships of a Series of Quinoline and Quinoxaline Derivatives as Potent PI3K/mTOR Dual Inhibitors" Presented at the American Chemical Society Western Regional Meeting in Pasadena, CA, November 10-11, **2011**.
77. Nancy Zhang, Sean Caenepeel, Ling Wang, Mark H. Norman, Terri Burgess, Richard Kendall, Robert Radinsky, Paul E. Hughes, Daniel J. Freeman "AMG 511, a Potent and Selective Class I PI3K Inhibitor, Demonstrates Anti-Tumor Activity in Multiple Xenograft Models" Presented at the American Association for Cancer Research (AACR) in Chicago, IL, March 31-April 4, **2012**.
78. Sean Caenepeel, Nancy Zhang, Ling Wang, Mark H. Norman, Terri Burgess, Robert Radinsky, Rick Kendall, Daniel Freeman, Paul E. Hughes "In vitro characterization of AMG 511, a potent and selective class I PI3K inhibitor for the treatment of cancer" Presented at the American Association for Cancer Research (AACR) in Chicago, IL, March 31-April 4, **2012**.
79. Mark H Norman "Selective Class I Phosphoinositide 3-Kinase (PI3K) Inhibitors: Identification of a Clinical Candidate" Presented at the BIT Life Sciences 3rd Annual International Conference of Medichem in Beijing China, May 10-14, **2012** (Invited Speaker and Chairman).

80. Fang-Tsao Hong, Adrian L. Smith, Noel D. D'Angelo, Yunxin Y. Bo, Shon K. Booker, Victor J. Cee, Brad Herberich, Claire L. M. Jackson, Brian A. Lanman, Longbin Liu, Nobuko Nishimura, Liping H. Pettus, Anthony B. Reed, Seifu Tadesse, Nuria A. Tamayo, Ryan P. Wurz, Kevin Yang, Kristin L. Andrews, Douglas A. Whittington, John D. McCarter, Tisha San Miguel, Leeanne Zalameda, Jian Jiang, Raju Subramanian, Erin L. Mullady, Sean Caenepeel, Daniel J. Freeman, Ling Wang, Nancy Zhang, Tian Wu, Paul E. Hughes, and Mark H. Norman "Identification of a Novel Series of Highly Potent and Selective Inhibitors of the Class I Phosphatidylinositol 3-Kinases for the Treatment of Cancer" Presented at the 244th American Chemical Society Meeting, Philadelphia, PA, August 19-23, **2012**.

81. Nuria A. Tamayo, Yunxin Bo, Vijay Gore, Vu Ma, Nobuko Nishimura, Phi Tang, Hong Deng, Lana Klionsky, Sonya G. Lehto, Weiya Wang, Brad Youngblood, Jiyun Chen, Narender R. Gavva, and Mark H. Norman "The Discovery and Structure-Activity Relationships of a Novel Series of Fused Piperidines as Potent TRPM8 Antagonists" Presented at the 244th American Chemical Society Meeting, Philadelphia, PA, August 19-23, **2012**.

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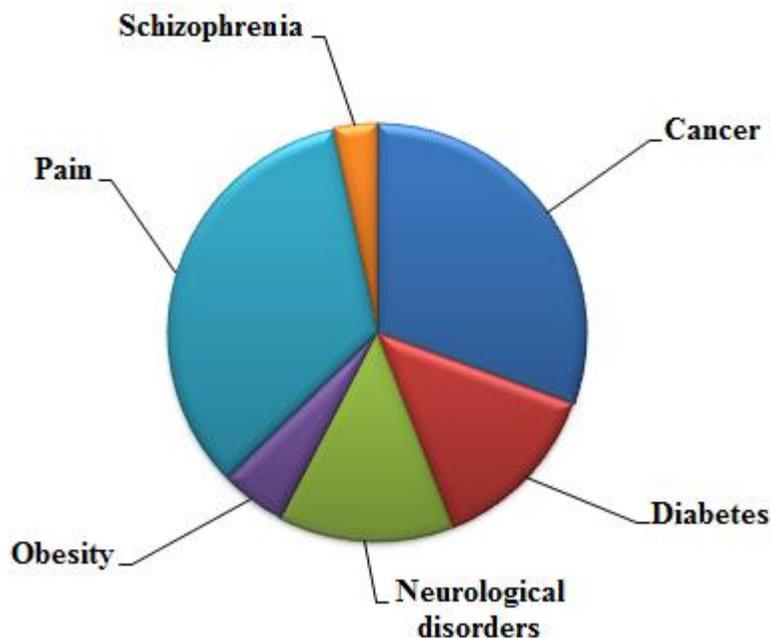
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