

DR. JENNY W WANG

EDUCATION

UNIVERSITY OF ABERDEEN, Aberdeen, United Kingdom, **PhD, Biomedical Sciences and Pharmacology**

UCLA SCHOOL OF MEDICINE, Los Angeles, California, **MS, Biochemistry**

Chinese Academy of Sciences, Beijing, China, **MS, Environmental Chemistry**

PEKING UNIVERSITY, Beijing, China, **BS, Biochemistry**

AWARDS

UCLA ACCESS Training Grant: 1994 – 1996

NIH National Research Award in Biotechnology: 1995

ALLERAN Award for Excellence: 1999 and 2010

ALLERGAN Certificate of Special Recognition on Best Paper, Basic Science: 2008 and 2014

PUBLICATIONS

1. Ligresti, A., Silvestri, C., Vitale, R.M., Martos, J.L., Piscitelli, F., **Wang, J.W.**, Allarà, M., Carling, R.W., De Chiaro, M., Guida, F., Illiano, A., Amoresano, A., Maione, S., Amodeo, P., Woodward, D.F., Di Marzo, V., Marino, G., “New mechanism of FAAH inhibition by newly designed multi-target analgesics”, in process.
2. **Wang JW**, Vu C, Poloso NJ, “Potent Anti-Inflammatory Activities of a PGI2 Analog in Human Primary Immune Cells and a Uveitis Model”, *J Ocul Pharmacol Ther.* 2017, 33(3):186-192.
3. Woodward DF, **Wang JW**, Ni M, Bauer A, Martos JL, Carling RW, Poloso NJ, “In vivo studies validating multitargeting of prostanoid receptors for achieving superior anti-inflammatory effects”. *FASEB J.* 2017, 31(1):368-375.
4. Woodward DF, **Wang JW**, Poloso NJ, “Prostaglandin E2-glycerol ester: Evidence for a distinct pharmacological identity from in vivo ocular studies”. *J Pharmacol Exp Ther.* 2016, 358(2):173-80.
5. **Wang JW**, Woodward DF, Martos JL, Cornell CL, Kingsley PJ, Marnett LJ, “Multitargeting of Selected Prostanoid Receptors Provides Agents with Enhanced Anti-inflammatory Activity in Macrophages.” *FASEB J.* 2016, 30:394-404.
6. Di Marzo V and **Wang JW**, **co-editor of the book entitled**: “The Endocannabinoidome-The World of Endocannabinoids and Related Mediators”, Academic Press, ISBN 9780124201262, September 2014 Elsevier.
7. Woodward DF and **Wang JW**, “The pharmacology of prostaglandin ethanolamide F2 α (prostamide F2 α) and bimatoprost reveals a unique feed-back mechanism on endocannabinoid actions”, an invited chapter of the book entitled: *The Endocannabinoidome-The World of Endocannabinoids and Related Mediators*. Editors: Di Marzo V and Wang JW, published September 2014 Elsevier.
8. Urquhart P, **Wang J**, Woodward DF and Nicolaou A, “Identification of prostamide E2, fatty acyl ethanolamines and their biosynthetic precursors in rabbit cornea.” *J. Lipid Research*, 2015,56(8):1419-33

9. Ligresti A, Martos J, **Wang J**, Allarà M, Palmieri V, Woodward D, Di Marzo V, "Prostamide F(2) α receptor antagonism combined with inhibition of FAAH may block the pro-inflammatory mediators formed following selective FAAH inhibition." *Br J Pharmacol.*, 2014, 171(6):1408-19.
10. **Wang JW (Corresponding author)**, Woodward DF, Stamer WD, "Differential Effects of Prostaglandin E2-Sensitive Receptors on Contractility of Human Ocular Cells that Regulate Conventional Outflow." *Invest Ophthalmol Vis Sci.* 2013, 54(7):4782-90.
11. Woodward DF, **Wang JW**, Poloso NJ, "Recent Progress in Prostaglandin F2 α Ethanolamide (Prostamide F2 α) Research and Therapeutics". *Pharmacol Rev.* 2013 65(4):1135-47.
12. Jones RL, Wan Ahmad WA, Woodward DF, **Wang J**. "Nature of the slow relaxation of smooth muscle induced by a EP2 receptor agonist with a non-prostanoid structure." *Prostaglandins Leukot Essent Fatty Acids.* 2013, 88(4): 321-30.
13. Poloso NJ, Urquhart P, Nicolaou A, **Wang J**, Woodward DF. "PGE2 differentially regulates monocyte-derived dendritic cell cytokine responses depending on receptor usage (EP2/EP4)." *Mol Immunol.* 2013, 54(3-4):284-95.
14. Woodward DF, Tang ES, Attar M, **Wang JW (Corresponding author)**. "The biodisposition and hypertrichotic effects of bimatoprost in mouse skin." *Exp Dermatol.* 2013, 22(2):145-8.
15. Khidhir KG, Woodward DF, Farjo NP, Farjo BK, Tang ES, **Wang JW**, Picksley SM, Randall VA. "The prostamide-related glaucoma therapy, bimatoprost, offers a novel approach for treating scalp alopecias." *FASEB J.* 2013, 27(2):557-67.
16. Invited meeting report by Thomson Reuters: Ocular Diseases Drug Discovery – GTCbio's Fourth Annual Conference, Las Vegas, USA. **Wang J**. Reference number RF1269825. <https://partnering.thomson-pharma.com/>. Thomson Reuters, 2012.
17. Jones R, Woodward D, **Wang J**, Clark R. "Roles of affinity and lipophilicity in the slow kinetics of prostanoid receptor antagonists on isolated smooth muscle preparations." *Br J Pharmacol.* 2011, 162: 863-879.
18. Stamer WD, Piwnica D, Jolas T, Carling RW, Cornell CL, Fliri H, Martos J, Pettit SN, **Wang JW**, Woodward DF. "Cellular basis for bimatoprost effects on human conventional outflow". *Invest Ophthalmol Vis Sci.* 2010 Oct; 51(10):5176-81.
19. Richie-Jannetta R, Nirodi CS, Crews BC, Woodward DF, **Wang JW**, Duff PT, Marnett LJ. "Structural determinants for calcium mobilization by prostaglandin E2 and prostaglandin F2 α glyceryl esters in RAW 264.7 cells and H1819 cells". *Prostaglandins Other Lipid Mediat.* 2010 Jun; 92(1-4):19-24.
20. Woodward DF, Carling RW, Cornell CL, Fliri HG, Martos JL, Pettit SN, Liang Y, **Wang JW**. "The pharmacology and therapeutic relevance of endocannabinoid derived cyclo-oxygenase (COX)-2 products". *Pharmacol Ther.* 2008 Oct;120(1): 71-80. Epub 2008 Aug 6, Review.
21. Liang Y, Woodward D, Guzman V, Li C, Scott D, **Wang JW**, Wheeler L, Garst M, Landsverk K, Sachs G, Krauss A, Cornell C, Martos J, Pettit S, Fliri H, "Identification and Pharmacological Characterization of Prostaglandin FP

- Receptor and FP Receptor Variant Complexes”, *Br J Pharmacol.* 2008 Jul; 154(5):1079-93.
22. Woodward DF, Liang Y, **Wang JW**, Burk RM and Krauss A. “The pharmacology of cyclo-oxygenase-2 products of mammalian endocannabinoids”, *Current Topics in Pharmacology*, 2007, 11(1):71-80.
 23. Wan Z, Woodward DF, Cornell CL, Fliri HG, Martos JL, Pettit SN, **Wang JW**, Kharlamb AB, Wheeler LA, Garst ME, Landsverk KL, Struble CS, Stamer WD. “Bimatoprost, prostamide activity, and conventional drainage”, *Invest Ophthalmol Vis Sci.* 2007 Sep;48(9):4107-15.
 24. Matias I, **Wang JW**, Morielloa AS, Nieves A, Woodward DF and DiMarzo V, “Changes in Endocannabinoid and Palmitoylethanolamide Levels in Eye Tissues of Patients with Diabetic Retinopathy and Age-Related Macular Degeneration”, *Prostaglandins Leukot Essent Fatty Acids.* 2006 Dec;75(6):413-8.
 25. Woodward DF, Krauss A, **Wang JW**, Protzman CE, Nieves AL, Liang Y, Donde Y, Burk RM, Landserk K, and Struble C, “Identification of an Antagonist that Selectively Blocks the Activity of Prostamides in the Feline Iris”, *Br J Pharmacol.* 2007 Feb;150(3):342-52.
 26. Xiao JH, Ghosn C, Hinchman C, Forbes C, **Wang J**, Snider N, Cordrey A, Zhao Y, Chandraratna RA, “APC-independent regulation of beta-catenin degradation via a retinoid X receptor-mediated pathway”, *J Biol. Chem.* 278: 29954 – 29962, 2003.
 27. Klein ES, **Wang JW**, Khalifa B, Gavigan S, and Chandraratna RAS, “Recruitment of Nuclear Receptor Co-Repressor and Co-Activator to the Retinoic Acid Receptor by Retinoid Ligands: Influence of DNA-Heterodimer Interactions”, *J. Biol. Chem.* 275:19401-19408, 2000.
 28. Dascal N, Douppnik CD, Ivanina T, Bausch S, **Wang W**, Lin C, Garvey J, Chavkin C, Lester HA, and Davidson N, “ Inhibition of Function in Xenopus Oocytes of the Inwardly Rectifying G Protein-Activated Atrial K Channel (GIRK1) by Over-Expression of a Membrane Attached Form of the C-Terminal Tail”, *Proc. Natl. Acad. Sci.* 92:6758-6765, 1995.
 29. Dascal N, Schreibmayer W, Lim NF, **Wang W**, Chavkin C, DiMagno L, Labarca C, Kieffer BL, Gaveriaux-Ruff C, Trollinger D, Lester HA, and Davidson N, “Atrial G Protein-activated K Channel: Expression Cloning and Molecular Properties”, *Proc. Natl. Acad. Sci.* 90:10235-10239, 1993.
 30. Dascal N, Lim NF, Schreibmayer W, **Wang W**, Davidson N, and Lester HA, “Expression of an Atrial G-Protein-activated Potassium Channel in Xenopus Oocytes”, *Proc. Natl. Acad. Sci.* 90: 6596-6600, 1993.
 31. Kashani-Sabet M, Funato T, Tone T, Jiao L, **Wang W**, & et al. “Reversal of the Malignant Phenotype by an Anti-ras Ribozyme”, *Antisense Research and Development*, 2:3-15, 1992, Mary Ann Liebert, Inc., Publishers.
 32. Scanlon KJ, Jiao L, Funato T, **Wang W**, Tone T, Rossi JJ, and Kashani-Sabet M, “Ribozyme-mediated Cleavage of c-fos mRNA Reduces Gene Expression of DNA Synthesis Enzymes and Metallothionein”, *Proc. Natl. Acad. Sci.* 88:10591-10595,1991.

33. Jiao L, Funato T, **Wang W**, & et al. "The Role of the c-fos Oncogene in Cisplatin Resistance", Platinum and Other Metal Coordination Compounds in Cancer Chemotherapy, Plenum Press, 1991.
34. Kashani-Sabet M, **Wang W**, Scanlon KJ, "Cyclosporin A Suppresses Cisplatin-Induced c-fos Gene Expression in Ovarian Carcinoma Cells", J. Biol. Chem. 265:11285-11288, 1990.
35. Scanlon KJ, **Wang W**, Han H, "Cyclosporin A Suppresses Cisplatin-Induced Oncogene Expression in Human Cancer Cells," Cancer Treatment Reviews, 17(Supplement A): 27-35, 1990.
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37. **Wang W**, Tang J and Peng A, "Isolation, Identification and Bioactivities of Se-Containing Proteins in Se-rich Garlic", Chinese Journal of Biochemistry, 5(3): 229-234, 1989.
38. **Wang W**, Tang J and Peng A, "The Distribution of Selenium (Se) in Se-rich Garlic", Journal of Trace Elements, 3:49-52, 1988.

PATENTS ISSUED

1. William L Carling, Jose L Martos, Jussi J Kangasmetsa, **Jenny W Wang**, David F Woodward: Compounds act at multiple prostaglandin receptors giving a general anti-inflammatory response. US 9090566
2. Jose L Martos, William L Carling, David F Woodward, **Jenny W Wang**, Jussi J Kangasmetsa: Compounds act at multiple prostaglandin receptors giving a general anti-inflammatory response. US 9085567
3. Jussi J Kangasmetsa, William L Carling, Jose L Martos, David F Woodward, **Jenny W Wang**: Compounds act at multiple prostaglandin receptors giving a general anti-inflammatory response. US 9035071
4. Jussi J. Kangasmetsa, William L Carling, Jose L Martos, **Jenny W Wang**, David F Woodward: Compounds acting at multiple prostaglandin receptors giving a general anti-inflammatory response. US 8969589
5. David F. Woodward, **Jenny W Wang**: Method of enhancing hair growth. US 8932567
6. **Jenny W Wang**, David F Woodward, Ming Ni, Jose L Martos, William R Carling: Inhibition of inflammation by simultaneous blockade of multiple prostanoid receptors. US 8901159
7. David F Woodward, **Jenny W Wang**, Neil J Poloso, Todd Gac, Robert M Burk, Michael E Garst: Ester Derivatives of Bimatoprost compositions and methods. US 8865766
8. **Jenny W Wang**, David F Woodward: Compounds and methods for enhancing hair growth. US 8859616
9. David F Woodward, William L Carling, Jose L Martos, **Jenny W Wang**, Jussi J Kangasmetsa: Compounds act at multiple prostaglandin receptors giving a general anti-inflammatory response. US 8859606

10. Jose L Martos, William L Carling, David F Woodward, **Jenny W Wang**, Jussi J Kangasmetsa: Compounds act at multiple prostaglandin receptors giving a general anti-inflammatory response. US 8653118
11. William L Carling, Jose L Martos, David F Woodward, **Jenny W Wang**, Jussi J Kangasmetsa: Compounds act at multiple prostaglandin receptors giving a general anti-inflammatory response. US 8492424
12. David F Woodward, **Jenny W Wang**, Clive L Cornell, Hans G Fliri, Jose L Martos, Simon N Pettit: Prostanoid receptor antagonists. US 7868032

PATENTS PUBLISHED

1. David F. Woodward, **Jenny W Wang**: Method of enhancing hair growth. US 20150290104
2. Jose L Martos, David F Woodward, **Jenny W Wang**, Steven Dabbs, Jussi J. Kangasmetsa: Antagonists acting at multiple prostaglandin receptors for the Treatment of Inflammation. US 20150210689
3. David F Woodward, **Jenny W Wang**, Neil J Poloso, Michael E Garst, Robert M Burk, Todd Gac: Phosphate esters of bimatoprost and the prostanoids. US 20150119367
4. David F Woodward, William L Carling, Jose L Martos, **Jenny W Wang**, Jussi J Kangasmetsa: Compounds act at multiple prostaglandin receptors giving a general anti-inflammatory response. US 20150080446
5. David F Woodward, **Jenny W Wang**, Neil J Poloso, Todd Gac, Robert M Burk, Michael E Garst: Ester Derivatives of Bimatoprost compositions and methods. US 20150005377
6. **Jenny W Wang**, David F Woodward: Inhibition of neovascularization by inhibition of prostanoid IP receptors. US 20140275238
7. **Jenny W Wang**, David F Woodward: Inhibition of neovascularization by simultaneous inhibition of prostanoid IP and EP4 receptors. US 20140275200
8. **Jenny W Wang**, David F Woodward, Neil J Poloso, Julia Herrmann: Prostanoid receptor agonist compounds and methods of use for same. US 20140275266
9. David F Woodward, Jose L Martos, William R Carling, Andrew D Jones, **Jenny W Wang**: Fatty acid amide hydrolase inhibitors for treating pain. US 20140187596
10. David F Woodward, William L Carling, Jose L Martos, **Jenny W Wang**, Jussi J Kangasmetsa: Compounds act at multiple prostaglandin receptors giving a general anti-inflammatory response. US 20140121258
11. David F Woodward, **Jenny W Wang**, Neil J Poloso, Todd Gac, Robert M Burk, Michael E Garst: Ester Derivatives of Bimatoprost compositions and methods. US 20130324606
12. William L Carling, Jose L Martos, David F Woodward, **Jenny W Wang**, Jussi J Kangasmetsa: Compounds act at multiple prostaglandin receptors giving a general anti-inflammatory response. US 20130253028
13. William L Carling, Jose L Martos, Jussi J Kangasmetsa, David F Woodward, **Jenny W Wang**: Compounds act at multiple prostaglandin receptors giving a general anti-inflammatory response. US 20130184463

14. Jussi J Kangasmetsa, William L Carling, Jose L Martos, **Jenny W Wang**, David F Woodward: Compounds act at multiple prostaglandin receptors giving a general anti-inflammatory response. US 20130165665
15. David F Woodward, **Jenny W Wang**: EP2 Agonist from non-prostanoid structures designed as PGE2 antagonists. US 20130158122
16. David F Woodward, Jose L Martos, William R Carling, Andrew D Jones, **Jenny W Wang**: Fatty acid amide hydrolase inhibitors for treating pain. US 20120329843
17. David F. Woodward, Jose L. Martos, William R. Carling, **Jenny W Wang**, Neil J. Poloso: Fatty acid amide hydrolase inhibitors for treating pain. US20120270915
18. Jose L Martos, William R Carling, David F Woodward, **Jenny W Wang**, Jussi J Kangasmetsa: Compounds act at multiple prostaglandin receptors giving a general anti-inflammatory response. US 20120077858
19. David F Woodward, **Jenny W Wang**: EP2 Agonist from non-prostanoid structures designed as PGE2 antagonists. US 20110201684
20. David F Woodward, **Jenny W Wang**: EP2 Agonist from non-prostanoid structures designed as PGE2 antagonists. US 20100298436
21. David F Woodward, **Jenny W Wang**: Prostaglandin E receptor antagonists. US 20100256385
22. Elliott S. Klein, Weizhen **Wang**, Roshantha A. Chandraratna: Methods of detecting dissociated nuclear hormone receptor ligands. US 20030003517
23. Elliott S. Klein, Weizhen **Wang**, Roshantha A. Chandraratna: Identification of Nuclear Receptor-Dependent Coregulator Recruitment. US 20020037514

PATENTS PENDING

1. Jose L Martos, William L Carling, David F Woodward, **Jenny W Wang**, Jussi J. Kangasmetsa: Compounds act at multiple prostaglandin receptors giving a general anti-inflammatory response. US 14/178347
2. David F Woodward, **Weizhen Wang**: patent application filed 08/2015
3. David F Woodward, **Weizhen Wang**: patent application filed 01/2016
4. **Weizhen Wang**, David F Woodward: patent application filed 07/2016

ORAL PRESENTATIONS

1. **Invited speaker**, 7th Ocular Diseases and Drug Discovery Conference, San Diego, USA, March 2015. "A Comparison of Animal Models of Anterior Segment Inflammation as Predictors of Clinical Performance".
2. **Session organizer & co-chair /invited speaker**, 12th Association for Ocular Pharmacology and Therapeutics (AOPT), Charleston, USA, February 2015. "Disease Modifying/Reversing Anti-Glaucoma Drugs: A High-Throughput Method for Lead Discovery".
3. **Session co-chair /invited speaker**, 13th International Conference on Bioactive Lipids in Cancer, Inflammation and Related Diseases, San Juan, Puerto Rico, November 2013. "Multi-Targeting of Selected Prostanoid Receptors Yields Agents with Enhanced Anti-inflammatory Activity."

4. **Invited Speaker**, 11th International Drug Discovery Science and Technology (IDDST), Haikou, China, 2013. "Multi-Targeting of Selected Prostanoid Receptors Yields Agents with Enhanced Anti-inflammatory Activity."
5. **Speaker**, 10th International Drug Discovery Science and Technology (IDDST), Nanjing, China, November 2012. "Hair Growth Characteristics and Cutaneous Biodisposition of Bimatoprost and its Congeners".
6. **Invited speaker**, 4th Ocular Diseases and Drug Discovery Conference, Las Vegas, USA, February 2012. "Involvement of Prostanoid EP Receptors in Retinal Neovascularization".
7. **Speaker**, 9th International Drug Discovery Science and Technology (IDDST), Shenzhen, China, November 2011. "Cellular Dielectric Spectroscopy: A Cost Effective & Eco-Friendly Method for Drug Discovery".
8. **Invited speaker**, Discovery Summit, Cannes, France, March 2010. "Bypassing Traditional Methods to Enhance Drug Discovery and Clinical Success by Using Primary Human Cells and Cellular Dielectric Spectroscopy".
9. **Speaker**, the XVIII International Congress of Eye Research, Beijing, China, September 2008. "Pharmacological Characterization of Prostanoid F2 α Activity Using Potent and Selective Antagonists".
10. **Invited speaker**, at the Polish National Academy of Sciences, Krakow, Poland, October 2007. "Novel Therapy for Rheumatoid Arthritis & Other Inflammatory Diseases".
11. **Speaker**, 3rd International Conference on Phospholipases A2 and Lipid Mediators, Sorrento, Italy, May 2007. "Second Generation Prostanoid Antagonist".
12. **Speaker**, 16th Annual Symposium on the Cannabinoids, Tihany, Hungary, June 2006. "Lack of Effect of Fatty Acid Amide Hydrolase (FAAH) Inhibitors on Intraocular Pressure in Glaucomatous Monkeys".