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Pharmaceutical Sciences Department
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SUMMARY OF QUALIFICATIONS

Over 30 years of experience as results-oriented R&D and business leader and educator in drug discovery and development. Innovative scientist with excellent analytical, problem-solving, and communication skills and brand experience in key therapeutic markets. Design and profiling of new chemical entities as small-molecule and protein-based therapeutics by integrating cell/molecular biology, medicinal chemistry, chemical biology, pharmacology, and drug discovery/development. Proven administrative, entrepreneurial, and research-strategy expertise in project and program management within and across varied therapeutic areas as part of “international big pharma,” “start-up/emerging biotech,” and academia. Success in building R&D teams, contributing to scientific and medical advances in unmet therapeutic areas, and leading multiple discovery campaigns that have brought novel leads to the clinic and therapeutics to market. Strong background in target identification/validation; technology/model development and transfer; competitive intelligence; building and nurturing intra- and extramural multicenter collaborations and strategic research and business alliances; and implementing and critically evaluating technological and product opportunities among diverse constituencies. Established and actively maintained consultancies aimed at reducing translational risk; optimizing predictive preclinical testing and hit-to-lead strategies; improving development-candidate selection/profiling; supporting regulatory compliance and trial progression; leading academia-industry collaborations to leverage innovation output for drug and technology commercialization; and serving as expert witness. Committed to educating and mentoring scientists-in-training to help them reach their full potential and prepare them to earn and advance their place in the professional world.

PROFESSIONAL EXPERIENCE

NORTHEASTERN UNIVERSITY, Boston, MA

Visiting Professor and Graduate Program Director

2019-

Bouvé College of Health Sciences, Department of Pharmaceutical Sciences

- Chair Graduate Education Committee
- Guide and mentor graduate (MS, Ph.D.) students and ensure career readiness
- Create and monitor graduate-program learning outcomes and assessment plans: Medicinal Chemistry, Pharmacology, Pharmaceutical Sciences, Biomedical Sciences
- Teach scientific, business-development, and entrepreneurship courses
- Attract funding and collaborations to support educational and research initiatives

INDEPENDENT BIOPHARMA CONSULTANT 2006 - present

- Evaluate the therapeutic potential and positioning of potential leads and market-attractive commercial avenues
- Formulate and validate predictive R&D approaches with translational utility, including *in silico* tools, chemogenomic strategies, target identification and validation, drug design and optimization, *in vitro* and *in vivo* disease models, biomarker identification, and phenotypic/systems-biology analyses
- Construct and analyze critical-path business and product-development strategies
- Participate in decision-making from quantitative SAR through candidate differentiation and safety and efficacy testing
- Organize and direct efforts to solve formulation and ADMET problems and detect/combat adverse activities and (potential) side-effects at preclinical and development stages
- Help drive candidate selection for human trials and progression through regulatory and clinical-testing processes
- Establish formal R&D agreements, working relationships, and business strategies between academia and industry to facilitate and expedite lead optimization, development candidate profiling, drug repositioning, and clinical testing
- Plan, organize, edit, write, and execute institutional and governmental regulatory and business documents, grants (e.g., SBIRs, STTRs, Center Grants, Research Project Grants, NIH-RAID), R&D agreements (e.g., CRADAs), and allied presentations and journal publications
- Serve as expert witness regarding therapeutics, drug design/action, and pharmacology

NORTHEASTERN UNIVERSITY, Boston, MA

Assistant Director, Center for Drug Discovery 2007-2009

Deputy Director, Center for Drug Discovery 2010-2018

- Develop, coordinate, and teach state-of-the-art courses allied to the University's experiential learning approaches and Biotechnology Initiative
- Establish and maintain productive interactions among intramural departments, technology-transfer operations, and research centers of excellence within the institution's entrepreneurial ecosystem
- Mentor students, fellows, and professional staff and promote career development
- Attract funding from private, government, and commercial sources
- Serve as in-house authority on the biotechnology and pharmaceutical industries, entrepreneurship, and drug discovery and commercialization
- Attract and initiate novel R&D projects and University-industry collaborations with good strategic and technological fit for commercialization
- Oversee and expand the Center's intellectual-property interests and intellectual capital, including oversight of all research publications, patents, and grants
- Represent the Center and its R&D activities intramurally and externally

NITROMED, INC., Lexington, MA

1994 - 2006

Last position held: Founding Senior Director, R&D

- Built and mentored interdisciplinary R&D teams that addressed market needs for sexual dysfunction, cardiovascular disease, hypertension, renal disease, oncology, metabolic syndrome, and inflammation
- Established from start-up and led the Company's *in vitro* and *in vivo* R&D in applied and translational biology to ensure timely compound pipeline progression, lead profiling, and development candidate flow
- Designed and implemented research and business strategies supporting corporate funding and clinical trials that led to a high-profile product launch and IPO
- Set corporate policy as R&D Committee and Scientific Advisory Board member
- Identified, critically evaluated, and championed novel extramural ventures and alliances that enriched corporate scientific and business profiles and expedited the business plan
- Supported clinical, regulatory, and licensing efforts as pharmacology advisor and spearheaded preclinical investigations toward next-generation products
- Key brand experience: BiDil® (heart failure)

NOVARTIS PHARMACEUTICALS, Summit, NJ

1989 - 1994

Last position held: Senior Research Fellow / Manager, R&D

- Implemented and fostered research programs that introduced and advanced drug candidates for hypertension, heart disease, diabetes, and oncology
- Devised and championed cutting-edge research approaches that improved compound targeting, pharmacokinetics, bioavailability, efficacy, and safety
- Managed productive R&D projects and teams that enhanced pipeline flow and broadened the pharmacological and safety profiling of clinical candidates
- Key brand experience: Starlix® (diabetes); Lescol®, Valsartan®, Losartan® (dyslipidemias/hypertension/heart disease); Femara® (oncology)

HOFFMANN-LA ROCHE, INC., Nutley, NJ

1983 - 1989

Last position held: Research Investigator, Pharmacology

- Recruited and supervised productive research teams in applied pharmacology, drug discovery and profiling, and lead optimization
- Established and managed R&D projects that successfully identified and advanced clinical candidates/drugs for bronchopulmonary, obesity, cardiovascular, immunodeficiency, dermatology, and anti-infective indications
- Launched extramural strategic alliances across several therapeutic areas that extended corporate R&D and product portfolios
- Key brand experience: Xenical® (obesity/metabolic syndrome); Accutane® (dermatology); Cardene® (cardiovascular disease/hypertension/heart failure); Rocephin® (anti-infective)

ACADEMIC AFFILIATIONS

NORTHEASTERN UNIVERSITY, Boston, MA

Visiting Professor, Department of Pharmaceutical Sciences,
Bouvé College of Health Sciences 2019-
Professor (Adjunct Faculty), Department of Pharmaceutical Sciences,
Bouvé College of Health Sciences 2007-2018
Professor (Adjunct Faculty), Center for Drug Discovery 2007-2018

BOSTON UNIVERSITY, School of Medicine, Boston, MA

Research Associate Professor, Biochemistry 1995 - 2010
Visiting Scientist, Whitaker Cardiovascular Institute and
Department of Medicine 2003 - 2007

INTRAMURAL PROFESSIONAL ACTIVITIES

NORTHEASTERN UNIVERSITY, Boston, MA

Program Director, MS in Medicinal Chemistry
Member, Center for Drug Discovery, Scientific Advisory Board (*ex officio*)
Member, Center for Drug Discovery, Strategic Advisory Board (*ex officio*)
Member, Graduate Education Committee, Pharmaceutical Sciences
Member, Biotechnology Council
Member, Research Advisory Council
Member, Health Sciences Entrepreneurs

Grant-related Funding Activities

Member, Executive Committee and Curriculum and Research Oversight Committee,
Pre- and Postdoctoral Training Program in Medications Development
(NIH Grant DA-007312), 1/7/07-6/30/13
Scientific Coordinator, Endocannabinoid Sites as Therapeutic Target
(NIH Grant P01 DA009158-15), 7/1/14-6/30/19
Co-PI, Chemistry and Pharmacology of Drugs of Abuse Conference Series
(NIH Grant R13 DA040423), 7/1/15-6/30/20

Curent Member, Ph.D. Thesis Committees: L. Cantwell, X. Ma, P. Schaffer
(Pharmaceutical Sciences)

M.S. Thesis Mentorships Completed

- L. Lindsley (Pharmaceutical Sciences) May, 2010
"Neutral Antagonists as G Protein Coupled Receptor-directed Medicines"
- S. Mallipeddi (Pharmaceutical Sciences) May, 2012
"In Vitro Expression of Human Cannabinoid 1 Receptor for Ligand-assisted Binding Site Characterization"
- J. Raghav (Pharmaceutical Sciences) July, 2014
"A Soft-drug Approach for Cannabinoids"
- K. Raja (Medicinal Chemistry) August, 2017
"Novel Allosteric Modulators of the $\alpha 7$ Nicotinic Acetylcholine Receptor"

Ph.D. Thesis Mentorships Completed

- R. Sharma (Pharmaceutical Sciences) May, 2011
"Cannabinergic Analogs with Controlled Detoxification as Potential Therapeutics"
- M. D'Souza (Pharmaceutical Sciences) May, 2012
"Novel Cannabidiol and Anandamide Analogs"
- I. Karageorgos (Pharmaceutical Sciences) August, 2012
"The Mechanism of Monoacylglycerol Lipase Inactivation: A Study Using Nuclear Magnetic Resonance Spectroscopy and Mass Spectrometry"
- R.G. Kini (Pharmaceutical Sciences and Inflammation and Tissue Protection Institute) August, 2012
"Mechanism of A2A Adenosine Receptor-mediated Immunosuppression in Inflamed Tissue Microenvironment"
- M. Subramanian (Pharmaceutical Sciences and Inflammation and Tissue Protection Institute) August, 2012
"Mechanism of Adenosinergic Regulation of T-cell Mediated Acute Hepatitis"
- S. Tai (Pharmaceutical Sciences) August, 2012
"Behavioral Pharmacology of Cannabinoids: Towards an Animal Model for Studying Cannabinoid Dependence/Withdrawal"
- M. Nasr (Pharmaceutical Sciences) May, 2013
"Impact of Conformational Dynamics on the Molecular Enzymology of Human Monoacylglycerol Lipase as Drug Target"
- M. Trivedi (Pharmaceutical Sciences) June, 2013
"Redox/Methylation Signaling: A Novel Epigenetic-based Mechanism of Opioid Drug Action"
- G. Chopda (Pharmaceutical Sciences) August, 2013
"Cannabinoid-mediated Diuresis in Mice"

- D. Deshpande (Pharmaceutical Sciences, Pharmaceutics, Drug Delivery) August, 2013
"Multimodal Omega-3 Fatty Acid Oil-containing Nanoemulsion-based Therapeutic Strategy for the Treatment of Endothelial Dysfunction in Coronary Artery Disease"
- A. Jamal-Allial (Pharmaceutical Sciences, Statistics, Epidemiology) August, 2013
"Serum 25(OH)D Concentrations and Cardiovascular Disease Risk Associations Among Older Puerto Ricans"
- M. Johnson (Pharmaceutical Sciences) December, 2014
"Analysis of the Structure and Function of Endocannabinoid Hydrolyzing Enzymes Using Biophysical and Nanomedical Techniques"
- K. Hu (Pharmaceutical Sciences) August, 2016
"Distribution of Exogenous Radiolabeled Anandamide and Related Compounds in the Mouse Brain"
- S. Mallipeddi (Pharmaceutical Sciences) December, 2016
"Biochemical and Biophysical Study of Cannabinoid 1 and Cannabinoid 2 Receptors"
- A. Aly (Pharmaceutical Sciences) May, 2017
"An Intranasal GDNF Gene Therapy Approach for Treating Parkinson's Disease"
- A. Korde (Pharmaceutical Sciences) May, 2017
"Ligand Binding-site Characterization of Human Cannabinoid Receptors"
- M. Silva (Pharmaceutical Sciences and Tissue Protection and Inflammation Institute) June, 2017
"Driving the Germinal Center Reaction toward Subdominant Epitopes: A Potential Vaccination Strategy to Neutralize HIV"
- G. Rajarshi (Pharmaceutical Sciences) July, 2017
"Characterization of the Endocannabinoid Enzyme Monoacylglycerol Lipase by Mutagenesis, Kinetics Analyses, and Nuclear Magnetic Resonance Spectroscopy"
- B. Garg (Pharmaceutical Sciences) July, 2017
"Investigating the Role of $\alpha 7$ Nicotinic Receptors in Inflammation"
- T. Hall (Pharmaceutical Sciences) August, 2017
"Investigation into Fatty Acid Ethyl Esters in Mouse Brain after Ethanol Treatment: Detection, Quantification, and Potential Toxicity"
- C. Miyabe-Shields (Pharmaceutical Sciences) January, 2018
"Biochemical Characterization of Human Alpha/Beta-hydrolase Domain Containing 6 as Therapeutic Target"
- Q. Ye (Pharmaceutical Sciences) May, 2018
"The Role of Brain Iron Loading in Redox-Epigenetic Regulation of Psychiatric-like Behavior"

J. Gleba (Pharmaceutical Sciences) May, 2019
"A Mechanism-based Forensic Investigation into the Postmortem Redistribution of Morphine"

K. Bugda Gwilt (Pharmaceutical Sciences) May, 2019
"Trace Aminergic Regulation of Gastrointestinal Inflammation: A Novel Strategy for Ulcertive Colitis"

Ph.D. Qualifying Examination Committees Completed

H. Zhou (Chemistry and Chemical Biology) September, 2011
"Ligand-assisted Protein-structure Characterization: Binding and Functional Motifs of Ligands of the CB2 Cannabinoid Receptor"

B. Garg (Pharmaceutical Sciences) December, 2014
"The Anti-inflammatory Role of $\alpha 7$ Nicotinic Acetylcholine Receptor and its Ligands"

S. Mallipeddi (Pharmaceutical Sciences) December, 2014
"Biochemical and Biophysical Studies of Cannabinoid 1 and 2 Receptors"

A. Korde (Pharmaceutical Sciences) December, 2014
"Ligand Binding-site Studies of the Human Cannabinoid Receptor"

Q. Ye (Pharmaceutical Sciences) August, 2016
"The Role of Brain Iron Loading in Redox-Epigenetic Regulation of Psychiatric-like Behavior"

J. Gleba (Pharmaceutical Sciences) September, 2016
"A Mechanism-based Forensic Investigation into the Postmortem Redistribution of Morphine"

K. Gwilt (Pharmaceutical Sciences) November, 2017
"Trace Amine Associated Receptor 1 as Anti-inflammatory Drug Target"

P. Schaffer (Pharmaceutical Sciences) December, 2017
"Design and Development of Novel Cannabinoid Receptor Allosteric Modulators"

L. Cantwell (Pharmaceutical Sciences) December, 2017
"Development of Novel, Subtype-selective GIRK1/2-channel Activators for Treating Neuropathic Pain"

Teaching/Lecture Service

"Chemistry and Biology of Drugs of Abuse" (course director)

"Receptor Pharmacology"

"Drug Design and Development"

"Biophysical Methods in Drug Discovery"

"Drug Discovery and Development Journal Club"

"Pharmacology Journal Club"

"Bio-organic and Medicinal Chemistry"

SELECT EXTRAMURAL PROFESSIONAL ACTIVITIES

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|---|-------------|
| MASSACHUSETTS INSTITUTE OF TECHNOLOGY, Cambridge, MA | |
| Venture Mentoring Service | |
| Member (completed five-year term) | 2006 - 2011 |
| <i>Ad-hoc</i> | 2012 - |
| NATIONAL SCIENCE FOUNDATION, Washington, DC | |
| Advisor, Industrial Innovation and Partnerships Programs | 2013 - |
| NEW YORK ACADEMY OF SCIENCES, New York, New York | |
| Advisor, Program for STEM Scientist Professional Development | 2017 - |
| Editorial Board Member, <i>Free Radical Biology and Medicine</i> | 1992 - 2000 |
| Editorial Board Member, <i>Expert Opinion on Drug Discovery</i> | 2011- 2013 |
| Editor-in-Chief, <i>Expert Opinion on Drug Discovery</i> | 2013- |
| Editorial Board Member, <i>Biomedicines</i> | 2012 - 2017 |
| Editorial Advisor, Elsevier/Academic Press | 2012 - |
| Member, Federation of American Societies for Experimental Biology | 1991 - |
| Member, American Society for Pharmacology and Experimental Therapeutics | 1991 - |
| Member, New York Academy of Sciences | 2010 - |
| Member, Yale Boston Biomedical Group | 2012 - |
| Board Member, Boston Area Neurosciences Group | 2012 - |
| Boston Chapter Head, Society for Neuroscience | 2012 - 2017 |
| REVIEWER (ad-hoc) for leading biochemistry, physiology, pharmacology, medicinal chemistry, and clinical journals, international private and government granting institutions, and biomedical publishers | |

EDUCATION

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| JOHNS HOPKINS UNIVERSITY, School of Medicine, Baltimore, MD | |
| National Institutes of Health Postdoctoral Fellow , Physiological Chemistry | |
| YALE UNIVERSITY, School of Medicine, New Haven, CT | |
| Biomedical Sciences Program | |
| Ph.D. , Cell Biology and Molecular Medicine | |
| BOSTON UNIVERSITY, Boston, MA | |
| B.A. summa cum laude, Phi Beta Kappa | |
| Biology major, Chemistry minor; research honors, Molecular Genetics | |

BIBLIOGRAPHY**Research Publications**

- Janero, D.R.** and R.J. Barnett. 1981. Analytical prenyl pigment separation from a total green-plant lipid extract. *Anal. Biochem.* 111:283-290.
- Janero, D.R.** and R.J. Barnett. 1981. Analytical separation of green-plant and animal neutral lipids by thin-layer chromatography. *J. Chromatogr.* 216:417-422.
- Janero, D.R.** and R.J. Barnett. 1981. Thylakoid membrane biogenesis in *Chlamydomonas reinhardtii* 137⁺. Cell cycle variations in the synthesis and assembly of polar glycerolipid. *J. Cell Biol.* 91:126-134.
- Janero, D.R.** and R.J. Barnett. 1981. Cellular and thylakoid-membrane glycolipids of *Chlamydomonas reinhardtii* 137⁺. *J. Lipid Res.* 22:1119-1125.
- Janero, D.R.** and R.J. Barnett. 1981. Cellular and thylakoid-membrane phospholipids of *Chlamydomonas reinhardtii* 137⁺. *J. Lipid Res.* 22:1126-1130.
- Janero, D.R.** and R.J. Barnett. 1982. Comparative analysis of diacylglyceryl-trimethylhomoserine in *Ochromonas danica* and in *Chlamydomonas reinhardtii*. *Phytochemistry* 21:47-50.
- Janero, D.R.** and R.J. Barnett. 1982. Cardiolipin of *Chlamydomonas reinhardtii* 137⁺. *Phytochemistry* 21:1151-1153.
- Janero, D.R.** and R.J. Barnett. 1982. Isolation and characterization of an ether-linked homoserine lipid from the thylakoid membrane of *Chlamydomonas reinhardtii* 137⁺. *J. Lipid Res.* 23:307-316.
- Janero, D.R.** and R.J. Barnett. 1982. Sterol synthesis in *Chlamydomonas reinhardtii* 137⁺. Cell-cycle variations. *Biochim. Biophys. Acta* 710:242-247.
- Janero, D.R.** and R.J. Barnett. 1982. Thylakoid membrane biogenesis in *Chlamydomonas reinhardtii* 137⁺. II. Cell-cycle variations in the synthesis and assembly of pigment. *J. Cell Biol.* 93:411-416.
- Janero, D.R.** and R.J. Barnett. 1982. Thylakoid membrane biogenesis in *Chlamydomonas reinhardtii* 137⁺. Cell-cycle variations in the synthesis of phospholipids of non-photosynthetic membranes. *Exp. Cell Res.* 138:451-454.
- Jelsema, C.L., A.S. Michaels, **D.R. Janero** and R.J. Barnett. 1982. Membrane lipid metabolism in *Chlamydomonas reinhardtii* 137⁺ and γ -1. Biochemical localization and characterization of acyltransferase activities. *J. Cell Sci.* 58:469-488.
- Siuta-Mangano, P., **D.R. Janero** and M.D. Lane. 1982. Association and assembly of triglyceride and phospholipid with glycosylated and unglycosylated apoprotein of very low density lipoprotein in the intact liver cell. *J. Biol. Chem.* 257:11463-11467.

- Janero, D.R.** and M.D. Lane. 1983. Sequential assembly of very low density lipoprotein apolipoproteins, triacylglycerol, and phosphoglycerides by the intact liver cell. *J. Biol. Chem.* 258:14496-14504.
- Janero, D.R.** and B. Burghardt. 1988. Protection of rat myocardial phospholipid against peroxidative injury through superoxide (xanthine oxidase)-dependent, iron-promoted Fenton chemistry by the male contraceptive gossypol. *Biochem. Pharmacol.* 37:3335-3342.
- Janero, D.R.** and B. Burghardt. 1988. Analysis of cardiac membrane phospholipid peroxidation kinetics as malondialdehyde: non-specificity of thiobarbituric acid-reactivity. *Lipids* 23:452-458.
- Janero, D.R.**, B. Burghardt and C. Burghardt. 1988. Specific binding of 1-0-alkyl-2-acetyl-sn-glycero-3-phosphocholine (platelet-activating factor) to the intact canine platelet. *Thrombosis Res.* 50:789-802.
- Janero, D.R.**, C. Burghardt and D. Feldman. 1988. Amphiphile-induced heart muscle-cell (myocyte) injury: effects of intracellular fatty acid overload. *J. Cell. Physiol.* 137:1-13.
- Janero, D.R.**, B. Burghardt and C. Burghardt. 1988. Radioligand competitive binding methodology for the estimation of platelet-activating factor (PAF) and the evaluation of PAF-receptor antagonism using intact canine platelets. *J. Pharmacol. Meth.* 20:237-253.
- Janero, D.R.**, B. Burghardt and R. Lopez. 1988. Protection of cardiac membrane phospholipid against oxidative injury by calcium antagonists. *Biochem. Pharmacol.* 37:4197-4203.
- Janero, D.R.** and B. Burghardt. 1988. Myocardial membrane vitamin E (alpha-tocopherol) contents of spontaneously hypertensive and Wistar-Kyoto normotensive rats. *Int. J. Vit. Nutr. Res.* 58:292-294.
- Janero, D.R.** and B. Burghardt. 1989. Cardiac membrane malondialdehyde and vitamin E levels in normotensive and spontaneously hypertensive rats. *Lipids* 24:33-38.
- Janero, D.R.** and B. Burghardt. 1989. Thiobarbituric acid-reactive malondialdehyde formation during superoxide-dependent, iron-catalyzed lipid peroxidation: influence of peroxidation conditions. *Lipids* 24:125-131.
- Janero, D.R.**, R. Lopez, J. Pittman and B. Burghardt. 1989. Propranolol as xanthine oxidase inhibitor: implications for antioxidant activity. *Life Sci.* 44:1579-1588.
- Janero, D.R.** and B. Burghardt. 1989. Prevention of oxidative injury to cardiac phospholipid by membrane-active stabilizing agents. *Res. Commun. Chem. Pathol. Pharmacol.* 63:163-173.

- Janero, D.R.** and C. Burghardt. 1989. Non-esterified fatty acid accumulation and release during heart muscle-cell (myocyte) injury: modulation by extracellular "acceptor." *J. Cell. Physiol.* 140:150-160.
- Janero, D.R.** and B. Burghardt. 1989. Antiperoxidant effects of dihydropyridine calcium antagonists. *Biochem. Pharmacol.* 38:4344-4348.
- Janero, D.R.**, B. Burghardt, R. Lopez and M. Cardell. 1989. Influence of cardioprotective cyclooxygenase and lipoxygenase inhibitors on peroxidative injury to myocardial membrane phospholipid. *Biochem. Pharmacol.* 38:4381-4387.
- Janero, D.R.** and B. Burghardt. 1989. Oxidative injury to myocardial membrane: direct modulation by endogenous alpha-tocopherol. *J. Mol. Cell. Cardiol.* 21:1111-1124.
- Janero, D.R.**, N. Cohen, B. Burghardt and B. Schaer. 1990. Novel 6-hydroxychroman-2-carbonitrile inhibitors of membrane peroxidative injury. *Biochem. Pharmacol.* 40:551-558.
- Janero, D.R.** and C. Burghardt. 1990. Solid-phase extraction on silica cartridges as an aid to platelet-activating factor enrichment and analysis. *J. Chromatogr.* 526:11-24.
- Janero, D.R.**, C. Burghardt and B. Burghardt. 1990. Production and release of platelet-activating factor by the injured heart-muscle cell (myocyte). *Res. Commun. Chem. Pathol. Pharmacol.* 67:201-218.
- Ooiwa, H., **D.R. Janero**, A.W.H. Stanely and J.M. Downey. 1991. Examination of two small-molecule antiperoxidative agents in a rabbit model of post-ischemic myocardial infarction. *J. Cardiovasc. Pharmacol.* 17:761-767.
- Crowley, H.J., B. Yaremko, W.M. Selig, **D.R. Janero**, C. Burghardt, A.F. Welton and M. O'Donnell. 1991. Pharmacology of a novel platelet-activating factor (PAF) antagonist: Ro 24-4736. *J. Pharmacol. Exp. Ther.* 259:78-85.
- Janero, D.R.**, D. Hreniuk and H.M. Sharif. 1991. Hydrogen peroxide-induced oxidative stress to the mammalian heart-muscle cell (cardiomyocyte): lethal peroxidative membrane injury. *J. Cell. Physiol.* 149:347-364.
- Janero, D.R.**, C. Yarwood and J.K. Thakkar. 1992. Application of solid-phase extraction on anion-exchange cartridges to quantify 5'-nucleotidase activity. *J. Chromatogr.* 573:207-218.
- Thakkar, J.K., **D.R. Janero**, C. Yarwood, H. Sharif and D. Hreniuk. 1993. Isolation and characterization of AMP deaminase from mammalian (rabbit) myocardium. *Biochem. J.* 290:335-341.
- Thakkar, J.K., **D.R. Janero**, C. Yarwood and H. Sharif. 1993. Modulation of mammalian cardiac AMP deaminase by protein kinase C-mediated phosphorylation. *Biochem. J.* 291:523-527.

- Ross, J., **D.R. Janero** and D. Hreniuk. 1993. Identification and molecular characterization of a high-affinity cardiomyocyte transforming growth factor- β 2 receptor. *FEBS Lett.* 320:229-234.
- Janero, D.R.**, D. Hreniuk and H. Sharif. 1993. Hydrogen peroxide-induced oxidative stress to the mammalian heart-muscle cell (cardiomyocyte): nonperoxidative purine and pyrimidine nucleotide depletion. *J. Cell. Physiol.* 155:494-504.
- Ross, J., **D.R. Janero**, D. Hreniuk and L. Wennogle. 1993. Radioiodination of transforming growth factor- β (TGF- β) in a modified Bolton-Hunter reaction system. *J. Biochem. Biophys. Methods* 26:343-350.
- Janero, D.R.**, D. Hreniuk, H.M. Sharif and K.C. Prout. 1993. Hydroperoxide-induced oxidative stress alters pyridine nucleotide metabolism in the neonatal heart-muscle cell. *Am. J. Physiol.* 264:C1401-C1410.
- Ross, J., **D.R. Janero** and D. Hreniuk. 1993. Identification and biochemical characterization of a heart-muscle cell transforming growth factor- β 1 receptor. *Biochem. Pharmacol.* 46:511-516.
- Sandhu, G.S., A.C. Burrier and **D.R. Janero**. 1993. Adenosine deaminase inhibitors attenuate ischemic injury and preserve energy balance in isolated guinea-pig heart. *Am. J. Physiol.* 265:H1249-H1256.
- Janero, D.R.**, D. Hreniuk and H.M. Sharif. 1994. Hydroperoxide-induced oxidative stress impairs heart muscle-cell carbohydrate metabolism. *Am. J. Physiol.* 266:C179-C188.
- Thakkar, J.K., **D.R. Janero**, H.M. Sharif, D. Hreniuk and C. Yarwood. 1994. Cardiac adenylate deaminase: molecular, kinetic, and regulatory properties under phosphate-free conditions. *Biochem. J.* 300:359-363.
- Janero, D.R.** and C. Yarwood. 1995. Oxidative modulation and inactivation of mammalian (rabbit) cardiac adenylate deaminase. *Biochem. J.* 306:421-427.
- Thakkar, J.K., **D.R. Janero**, H.M. Sharif and C. Yarwood. 1995. Mammalian-heart adenylate deaminase: cross-species immunoanalysis of tissue distribution with a cardiac-directed antibody. *Mol. Cell. Biochem.* 145:177-183.
- Ewing, J.F. and **D.R. Janero**. 1995. Microplate superoxide dismutase assay employing a nonenzymatic superoxide generator. *Anal. Biochem.* 232:243-248.
- Janero, D.R.** and D. Hreniuk. 1996. Suppression of TCA cycle activity in the cardiac muscle cell by hydroperoxide-induced oxidant stress. *Am. J. Physiol.* 270:C1735-C1742.
- Ewing, J.F., **D.R. Janero**, T.A. Grinnell, J.D. Schroeder and D.S. Garvey. 1997. Reactivity of nitrogen monoxide species with NADH: implications for nitric oxide-dependent post-translational protein modification. *Arch. Biochem. Biophys.* 343:131-139.

- Ewing, J.F., D.V. Young, **D.R. Janero**, D.S. Garvey and T.A. Grinnell. 1997. Nitrosylated bovine serum albumin derivatives as pharmacologically active nitric oxide congeners. *J. Pharmacol. Exp. Ther.* 283:947-954.
- Ewing, J.F. and **D.R. Janero**. 1998. Specific S-nitrosothiol quantification as solution nitrite after vanadium(III) reduction and ozone-chemiluminescent detection. *Free Radical Biol. Med.* 25:621-628.
- Tam, S.W., J.K. Saha, D.S. Garvey, J.D. Schroeder, T.E. Shelekhin, **D.R. Janero**, L. Chen, A. Glavin and L.G. Letts. 2000. Nitrosothiol-based NO-donors inhibit the gastrointestinal mucosal damaging actions of nonsteroidal anti-inflammatory drugs (NSAIDs). *Inflammopharmacology* 8:81-88.
- Bandarage, U.K., L. Chen, X. Fang, D.S. Garvey, A. Glavin, **D.R. Janero**, L.G. Letts, G.J. Mercer, J.K. Saha, J.D. Schroeder, M.J. Shumway and S.W. Tam. 2000. Nitrosothiol esters of diclofenac: synthesis and pharmacological characterization as gastrointestinal-sparing prodrugs. *J. Med. Chem.* 43:4005-4016.
- Young, D.V., D. Serebryanik, **D.R. Janero** and S.W. Tam. 2000. Suppression of proliferation of human coronary artery smooth muscle cells by the nitric oxide donor, S-nitrosoglutathione, is cGMP independent. *Mol. Cell Biol. Res. Commun.* 4:32-36.
- Khanapure, S.P., D.S. Garvey, D.V. Young, M. Ezawa, R.A. Earl, R.D. Gaston, X. Fang, M. Murty, A. Martino, M. Shumway, M. Trocha, P. Marek, S.W. Tam, **D.R. Janero** and L.G. Letts. 2003. Synthesis and structure-activity relationship of novel, highly potent, methyl and methylcycloalkyl cyclooxygenase-2 (COX-2) selective inhibitors. *J. Med. Chem.* 46:5484-5504.
- Ranatunge, R.R., D.S. Garvey, **D.R. Janero**, L.G. Letts, A.M. Martino, M.G. Murty, S.K. Richardson, D.V. Young and I.S. Zemetseva. 2004. Synthesis and selective cyclooxygenase-2 (COX-2) inhibitory activity of a series of novel bicyclic pyrazoles. *Bioorg. Med. Chem.* 12:1357-1366.
- Ranatunge, R.R., M. Augustyniak, U.K. Bandarage, E.D. Cochran, R.A. Earl, J.L. Ellis, D.S. Garvey, **D.R. Janero**, L.G. Letts, A.M. Martino, M.G. Murty, S.K. Richardson, J.D. Schroeder, M.J. Shumway, S.W. Tam, A.M. Trocha and D.V. Young. 2004. Synthesis and selective cyclooxygenase-2 inhibitory activity of a series of novel nitric oxide donor-containing pyrazoles. *J. Med. Chem.* 47:2180-2193.
- Lin, C.-E., D.S. Garvey, **D.R. Janero**, L.G. Letts, P. Marek, S.K. Richardson, D. Serebryanik, M.J. Shumway, S.W. Tam, A.M. Trocha and D.V. Young. 2004. Combination of paclitaxel and nitric oxide as a novel treatment for the reduction of restenosis. *J. Med. Chem.* 47:2276-2282.
- Ranatunge, R.R., R.A. Earl, D.S. Garvey, **D.R. Janero**, L.G. Letts, A.M. Martino, S.K. Richardson, D.J. Schwalb, D.V. Young and I.S. Zemetseva. 2004. 3-(2-Methoxytetrahydrofuran-2-yl)pyrazoles: a novel class of potent, selective cyclooxygenase-2 (COX-2) inhibitors. *Bioorg. Med. Chem. Lett.* 14:6049-6052.

Ezawa, M., D.S. Garvey, **D.R. Janero**, S.P. Khanapure, L.G. Letts, A. Martino, R.R. Ranatunge, D.J. Schwalb and D.V. Young. 2004. Design of a heteroaryl modified, 1,5-disubstituted pyrazole cyclooxygenase-2 (COX-2) selective inhibitor. *Letts. Drug Design Discov.* 2:184-193.

Janero, D.R., N.S. Bryan, F. Saijo, V. Dhawan, D.J. Schwalb, M.C. Warren and M. Feelisch. 2004. Differential nitros(yl)ation of blood and tissue constituents during glyceryl trinitrate biotransformation *in vivo*. *Proc. Natl. Acad. Sci. USA* 101:16958-16963.

Khanapure, S.P., M.E. Augustyniak, R.A. Earl, D.S. Garvey, L.G. Letts, A.M. Martino, M.G. Murty, D.J. Schwalb, M.J. Shumway, A.M. Trocha, D.V. Young and **D.R. Janero**. 2005. 3-[4-(Methylsulfonyl)phenyl]-5-(trifluoromethyl)(2-pyridyl) phenyl ketone as a potent and orally active cyclooxygenase-2 (COX-2) selective inhibitor: synthesis and biological evaluation. *J. Med. Chem.* 48:3930-3934.

Ellis, J.L., M.E. Augustyniak, R.A. Earl, D.S. Garvey, L.J. Gordon, **D.R. Janero**, S.P. Khanapure, L.G. Letts, T.L. Melim, M.G. Murty, D.J. Schwalb, M.J. Shumway, W.M. Selig, A.M. Trocha, D.V. Young and I.S. Zemtseva. 2005. NMI-1182, a gastroprotective cyclooxygenase inhibiting nitric oxide donor. *Inflammopharmacology* 12:521-534.

Dhawan, V., D.J. Schwalb, M.J. Shumway, M.C. Warren, R.S. Wexler, I.S. Zemtseva and **D.R. Janero**. 2005. Selective nitros(yl)ation induced *in vivo* by a nitric oxide-donating cyclooxygenase-2 inhibitor: a NObonomic analysis. *Free Radical Biol. Med.* 39:1191-1207.

Young, D.V., E.D. Cochran, V. Dhawan, R.A. Earl, J.L. Ellis, D.S. Garvey, **D.R. Janero**, S.P. Khanapure, L.G. Letts, T.L. Melim, M.G. Murty, M.J. Shumway, S.-J. Wey, I.S. Zemtseva and W.M. Selig. 2005. A comparison of the cyclooxygenase inhibitor-NO donors (CINOD), NMI-1182 and AZD3582, using *in vitro* biochemical and pharmacological methods. *Biochem. Pharmacol.* 70:1343-1351.

Ranatunge, R.R., M.E. Augustyniak, V. Dhawan, J.L. Ellis, D.S. Garvey, **D.R. Janero**, L.G. Letts, S.K. Richardson, M.J. Shumway, A.M. Trocha, D.V. Young and I.S. Zemtseva. 2006. Synthesis and anti-inflammatory activity of a series of N-substituted naproxen glycolamides: nitric oxide-donor naproxen prodrugs. *Bioorg. Med. Chem.* 14:2589-2599.

Dhawan, V., **D.R. Janero** and J. Ellis. Detection of nitros(yl)ated metabolites of nitric oxide (NO) *in vivo* by gas-phase chemiluminescence assay. *Curr. Protoc. Pharmacol.* 12:12.10.

Wey, S.-J., M. Augustyniak, E. Cochran, J. Ellis, X. Fang, D. Garvey, **D.R. Janero**, L. Letts, A. Martino, T. Melim, M. Murty, S. Richardson, J. Schroeder, W. Selig, A. Trocha, R. Wexler, D. Young, I. Zemtseva and B. Zifcak. 2007. Structure-based design, synthesis, and biological evaluation of indomethacin derivatives as cyclooxygenase 2-inhibiting nitric oxide donors. *J. Med. Chem.* 50:6367-6382.

- Zvonok, N., J. Williams, M. Johnston, L. Pandarinathan, **D.R. Janero**, J. Li, S.C. Krishnan and A. Makriyannis. 2008. Full mass spectrometric characterization of human monoacylglycerol lipase generated by large-scale expression and single-step purification. *J. Proteome Res.* 7:2158-2164.
- Wood, J.T., J.S. Williams, L. Pandarinathan, A. Courville, M.R. Keplinger, **D.R. Janero**, P. Vouros, A. Makriyannis and C.J. Lammi-Keefe. 2008. Comprehensive profiling of the human circulating endocannabinoid metabolome: clinical sampling and sample-storage parameters. *Clin. Chem. Lab. Med.* 46:1289-1295.
- Zvonok, N., L. Pandarinathan, J. Williams, M. Johnston, I. Karageorgos, **D.R. Janero**, S.C. Krishnan and A. Makriyannis. 2008. Covalent inhibitors of human monoacylglycerol lipase: ligand-assisted characterization of the catalytic site by mass spectrometry and mutational analysis. *Chem. Biol.* 15:854-862.
- Pei, Y., R.W. Mercier, J. K. Anday, G.A. Thakur, A.M. Zvonok, D. Hurst, P.H. Reggio, **D.R. Janero** and A. Makriyannis. 2008. Ligand-binding architecture of human CB2 cannabinoid receptor: evidence for receptor subtype-specific binding motif and modeling GPCR activation. *Chem. Biol.* 15:1207-1219.
- Feelisch, M., B.O. Fernandez, N.S. Bryan, M.F. Garcia-Saura, S.M. Bauer, D.R. Whitlock, P.C. Ford, **D.R. Janero**, J. Rodriguez and H. Ashrafian. 2008. Tissue processing of nitrite in hypoxia: an intricate interplay of nitric oxide-generating and -scavenging systems. *J. Biol. Chem.* 283:33927-33934.
- Tiburu, E.K., A.L. Bowman, J.O. Struppe, **D.R. Janero**, H. Avraham and A. Makriyannis. 2009. Solid-state NMR and molecular dynamics characterization of cannabinoid receptor-1 (CB1) helix 7 conformational plasticity in model membranes. *Biochim. Biophys. Acta* 1788:1159-1167.
- Tiburu, E.K., S. Gulla, M. Tiburu, **D.R. Janero**, D. Budil and A. Makriyannis. 2009. Dynamic conformational responses of a human cannabinoid receptor-1 helix domain to its membrane environment. *Biochemistry* 48:4895-4904.
- Tiburu, E.K., S. Tyukhtenko, L. Deshmukh, O. Vinogradova, **D.R. Janero** and A. Makriyannis. 2009. Structural biology of human cannabinoid receptor-2 helix 6 in membrane-mimetic environments. *Biochem. Biophys. Res. Commun.* 384:243-248.
- Tyukhtenko, S., E.K. Tiburu, L. Deshmukh, O. Vinogradova, **D.R. Janero** and A. Makriyannis. 2009. NMR solution structure of human cannabinoid receptor-1 helix 7/8 peptide: candidate electrostatic interactions and microdomain formation. *Biochem. Biophys. Res. Commun.* 390:441-446.
- Wood, J.T., J.S. Williams, L. Pandarinathan, **D.R. Janero**, C.J. Lammi-Keefe and A. Makriyannis. 2010. Dietary docosahexaenoic acid supplementation alters select physiological endocannabinoid-system metabolites in brain and plasma. *J. Lipid Res.* 51:1416-1423.
- Zvonok, N., W. Xu, **D.R. Janero**, S.C. Krishnan and A. Makriyannis. 2010. Mass spectrometry-based GPCR proteomics: comprehensive characterization of the human cannabinoid 1 receptor. *J. Proteome Res.* 9:1746-1753.

- Pei, Y., R.W. Mercier, L. Pandarinathan, **D.R. Janero**, J. Zhang and A. Makriyannis. 2010. Human cannabinoid 2 GPCR ligand-interaction landscape: cysteine residues critical to biarylpyrazole antagonist binding motif and receptor modulation. *Chem Biol.* 17:1132-1142.
- Karageorgos, I., S. Tyukhtenko, N. Zvonok, **D.R. Janero**, C. Salum and A. Makriyannis. 2010. Identification by nuclear magnetic resonance spectroscopy of an active-site hydrogen-bond network in human monoacylglycerol lipase (hMGL): implications for hMGL dynamics, pharmacological inhibition, and catalytic mechanism. *Mol. Biosyst.* 6:1381-1388.
- Tiburu, E.K., S. Tyukhtenko, H. Zhou, J. Struppe, **D.R. Janero** and A. Makriyannis. 2011. Transmembrane helix 7 and cytoplasmic helix 8 contribute to mutual structural accommodation between the human cannabinoid receptor and its membrane environment. *AAPS J.* 13:92-98.
- Szymanski, D.W., M. Papanastasiou, K. Melchior, N. Zvonok, R.W. Mercier, **D.R. Janero**, S. Cha, B. Wu, B. Karger and A. Makriyannis. 2011. Mass spectrometry-based proteomics of human cannabinoid 2 GPCR: covalent cysteine 6.47(257)-ligand interaction affording megagonist receptor activation. *J. Proteome Res.* 10:4789-4798.
- Karageorgos, I., N. Zvonok, **D.R. Janero**, V.K. Vemuri, V. Shukla, T.E. Wales, J.R. Engen and A. Makriyannis. 2012. Endocannabinoid enzyme engineering: soluble human thio-monoacylglycerol lipase (sol-S-hMGL). *ACS Chem. Neurosci.* 3:393-399.
- Wood, J.T., D.S. Smith, A.M. Zvonok, **D.R. Janero** and A. Makriyannis. 2013. Therapeutic modulation of cannabinoid lipid signaling: metabolic profiling of a novel antinociceptive cannabinoid-2 receptor agonist. *Life Sci.* 92:482-491.
- Deshpande, D.D., **D.R. Janero** and M.M. Amiji. 2013. Engineering of an ω -3 polyunsaturated fatty acid-containing nanoemulsion system for combination C6-ceramide and 17 β -estradiol delivery and bioactivity in human vascular endothelial and smooth muscle cells. *Nanomedicine* 9:885-894.
- Nasar, M.L., X. Shi, A.L. Bowman, M. Johnson, N. Zvonok, **D.R. Janero**, V.K. Vemuri, T.E. Wales, J.R. Engen and A. Makriyannis. 2013. Membrane phospholipid bilayer as a determinant of monoacylglycerol lipase kinetic profile and conformational repertoire. *Protein Sci.* 22:774-787.
- Karageorgos, I., T.E. Wales, **D.R. Janero**, V.K. Vemuri, J.R. Engen and A. Makriyannis. 2013. Active-site inhibitors modulate the dynamic properties of human monoacylglycerol lipase: a hydrogen exchange mass spectrometry study. *Biochemistry* 52:5016-5026.
- Janero, D.R.**, S. Yaddanapudi, N. Zvonok, K. V. Subramanian, V. G. Shukla, E. Stahl, L. Zhou, D. Hurst, J. Wager-Miller, L. M. Bohn, P. H. Reggio, K. Mackie and A. Makriyannis. 2015. Molecular-interaction and signaling profiles of AM3677, a novel covalent agonist selective for the cannabinoid-1 receptor. *ACS Chem. Neurosci.* 6:1400-1410.

- Deshpande, D., S. Kethireddy, **D.R. Janero** and M. Amiji. 2016. Therapeutic efficacy of an ω -3-fatty acid-containing estradiol nano-delivery system against experimental atherosclerosis. *PLoS One* 11:e0147337.
- Tyukhtenko, S, I. Karageorgos, G. Rajarshi, N. Zvonok, S. Pavlopoulos, **D.R. Janero** and A. Makriyannis. 2016. Specific inter-residue interactions as determinants of human monoacylglycerol lipase catalytic competency: a role for global conformational changes. *J. Biol. Chem.* 291:2556-2565.
- Kulkarni P.M., A.R. Kulkarni, A. Korde, R.B. Tichkule, R.B. Laprairie, E.M. Denovan-Wright, H. Zhou, **D.R. Janero**, N. Zvonok, A. Makriyannis, M.G. Cascio, R.G. Pertwee and G.A. Thakur. 2016. Novel electrophilic and photoaffinity covalent probes for mapping the cannabinoid 1 receptor allosteric site(s). *J. Med. Chem.* 59:44-60.
- Laprairie, R., A. Kulkarni, P. Kulkarni, D. Hurst, D. Lynch, P. Reggio, **D.R. Janero**, R. Pertwee, L. Stevenson, M. Kelly, E. Denovan-Wright and G. Thakur. 2016. Mapping cannabinoid receptor 1 allosteric site(s): critical molecular-determinant and signaling profile of GAT100, a novel, potent, irreversibly-binding probe. *ACS Chem. Neurosci.* 7:776-798.
- Laprairie, R., P.M. Kulkarni, J.R. Deschamps, M.E.M. Kelley, **D.R. Janero**, M.G. Cascio, L.A. Stevenson, R.G. Pertwee, T.P. Kenakin, E.M. Denovan-Wright and G.A. Thakur. 2017. Enantiospecific allosteric modulation of cannabinoid 1 receptor. *ACS Chem. Neurosci.* 8:1188-1023.
- Zhou, H., Y. Peng, A. Halikhedkar, P. Fan., **D.R. Janero**, G.A. Thakur, R.W. Mercier, X. Sun, X. Ma and A. Makriyannis. 2017. Human cannabinoid receptor 2 ligand-interaction motif: transmembrane helix 2 cysteine C2.59(89) as determinant of classical cannabinoid agonist activity and binding pose. *ACS Chem. Neurosci.* 8:1338-1347.
- Karageorgos, I., V.I. Silin, N. Zvonok, J. Marino, **D.R. Janero** and A. Makriyannis. 2017. The role of human monoacylglycerol lipase (hMAGL) binding pocket in breakup of unsaturated phospholipid membranes. *Anal. Biochem.* 536:90-95.
- Szymanski, D., M. Papanastasiou, L. Pandarinathan, N. Zvonok, **D.R. Janero**, S. Pavlopoulos, P. Vouros and A. Makriyannis. 2018. Aliphatic azides as selective cysteine labeling reagents for integral membrane proteins. *J. Med. Chem.* 61:11199-11208.
- Wood, J.T., C.J. Lammi-Keefe, **D.R. Janero** and A. Makriyannis. 2019. Gestational diabetes mellitus alters select lipid-signaling molecules within the endocannabinoid metabolome of human breast milk. *Lipids* Submitted.
- Gari, S., P. Kulkarni, P. Schaffer, L. Leo, A. Brandt, A. Zagzoog, T. Black, X. Lin, D. Hurst, **D.R. Janero**, M. Abood, A. Straiker, R. Pertwee, M. Kelly, A.-M. Szczesniak, E. Denovan-Wright, K. Mackie, A. Hohmann, P. Reggio, R.B. Laprairie and G.A. Thakur. 2019. Application of fluorine- and nitrogen-walk approaches: Defining the structural and functional diversity of 2-phenylindole class of CB1-receptor positive allosteric modulators. *J. Med. Chem.* Submitted.

Invited Reviews / Editorials / Book Chapters: Peer-reviewed

- Janero, D.R.**, P. Siuta-Mangano, K.W. Miller and M.D. Lane. 1984. Synthesis, processing, and secretion of hepatic very low density lipoprotein. *In: Protein Transport and Secretion*. CETUS-UCLA Symposia on Molecular and Cellular Biology. D.L. Oxender and C.F. Fox, editors. Alan R. Liss, Inc., NY; pp. 183-204.
- Janero, D.R.**, P. Siuta-Mangano, K.W. Miller and M.D. Lane. 1984. Synthesis, processing, and secretion of hepatic very low density lipoprotein. *J. Cell. Biochem.* 24:131-152.
- Lane, M.D., **D.R. Janero**, P. Siuta-Mangano and K.W. Miller. 1988. Synthesis, assembly, and secretion of hepatic very low density lipoprotein. *Arztl. Lab. Int. Med.* 34:33-42.
- Janero, D.R.** 1990. Malondialdehyde and thiobarbituric acid-reactivity as diagnostic indices of lipid peroxidation and peroxidative tissue injury. *Free Radical Biol. Med.* 9:515-540.
- Janero, D.R.** 1990. Oxidative myocardial injury and cardiac-derived experimental systems. *In: Biological Oxidation Systems*. C.C. Reddy, G.A. Hamilton and K.M. Madyastha, editors. Academic Press, NY; Volume 2, pp. 977-998.
- Janero, D.R.** 1991. Therapeutic potential of vitamin E against myocardial ischemic-reperfusion injury. *Free Radical Biol. Med.* 10:315-324.
- Janero, D.R.** 1991. The therapeutic potential of vitamin E in the pathogenesis of spontaneous atherosclerosis. *Free Radical Biol. Med.* 11:129-144.
- Janero, D.R.** 1994. Myocardial ischemia-reperfusion injury and the cardioprotective potential of natural antioxidants. *In: Natural Antioxidants in Health and Disease*. B. Frei, editor. Academic Press, NY; pp. 411-445.
- Janero, D.R.** 1995. Ischemic heart disease and antioxidants: mechanistic aspects of oxidative injury and its prevention. *Crit. Revs. Food Sci. Nutr.* 35:65-81.
- Janero, D.R.** and J.E. Francis 1995. Synthetic antioxidants as therapy against myocardial ischemia-reperfusion injury: drug discovery and development considerations. *In: The Oxygen Paradox*. K.J.A. Davies and F. Ursini, editors. Cleup University Press, Italy; pp. 625-640.
- Janero, D.R.** 2000. Nitric oxide (NO)-related pharmaceuticals: contemporary approaches to therapeutic NO modulation. *Free Radical Biol. Med.* 28:1495-1506.
- Janero, D.R.** and J.F. Ewing. 2000. Nitric oxide and post-angioplasty restenosis: pathological correlates and therapeutic potential. *Free Radical Biol. Med.* 29:1199-1221.
- Bandarage, U.K. and **D.R. Janero**. 2001. Nitric oxide-releasing nonsteroidal anti-inflammatory drugs (NSAIDs): novel gastrointestinal-sparing prodrugs. *Med. Chem. Revs.* 1:57-70.

- Janero, D.R.** 2001. Nutritional aspects of nitric oxide: human health implications and therapeutic opportunities. *J. Nutr.* 17:896-903.
- Janero, D.R.** 2003. Nitric oxide and mammalian aging: "surplus" and "deficit" as the two faces of a pharmaceutical currency for nitric oxide-modulator drugs. *In: Critical Reviews of Oxidative Stress and Aging: Advances in Basic Science, Diagnostics, and Intervention.* R.G. Cutler and H. Rodriguez, editors. World Scientific Publishers, NJ; Volume 2, pp. 1404-1417.
- Lin, C.-E., **D.R. Janero** and D.S. Garvey. 2005. Nitric oxide (NO)-based molecular strategies for restenosis therapy. *Exp. Opin. Ther. Patents* 15:483-495.
- Janero, D.R.** and D.S. Garvey. 2005. Nitric oxide donors as anti-platelet agents for thromboembolic disorders: clinical status and therapeutic prognosis. *In: Nitric Oxide Donors for Pharmaceutical and Biological Applications.* P.G. Wang, T.B. Chi and N. Taniguchi, editors. Wiley-VCH Verlag, Germany; pp. 299-328.
- Khanapure, S.P., D.S. Garvey, **D.R. Janero** and L.G. Letts. 2007. Eicosanoids in inflammation: biosynthesis, pharmacology, and therapeutic frontiers. *Curr. Topics Med. Chem.* 7:311-340.
- Janero, D.R.** and A. Makriyannis. 2007. Targeted modulators of the endogenous cannabinoid system: future medications to treat addiction disorders and obesity. *Curr. Psychiatry Rep.* 9:365-373.
- Vemuri, V.K., **D.R. Janero** and A. Makriyannis. 2008. Pharmacotherapeutic targeting of the endocannabinoid signaling system: drugs for obesity and the metabolic syndrome. *Physiol. Behav.* 93:671-686.
- Janero, D.R.** and A. Makriyannis. 2009. Cannabinoid receptor antagonists: pharmacological opportunities, clinical experience, and translational prognosis. *Expert Opin. Emerg. Drugs* 14:43-65.
- Janero, D.R.**, S.K. Vadivel and A. Makriyannis. 2009. Pharmacotherapeutic modulation of the endocannabinoid system in psychiatric disorders: drug-discovery strategies. *Int. Rev. Psychiatry* 21:122-133.
- Hwang, J., C. Adamson, D. Butler, **D.R. Janero**, A. Makriyannis and B.A. Bahr. 2010. Enhancement of endocannabinoid signaling by fatty acid amide hydrolase inhibition: a neuroprotective therapeutic modality. *Life Sci.* 86:615-623.
- Janero, D.R.**, L. Lindsley, V.K. Vemuri and A. Makriyannis. 2011. Cannabinoid 1 GPCR (periphero-)neutral antagonists: emerging therapeutics for treating obesity-driven metabolic disease and reducing cardiovascular risk. *Expert Opin. Drug Discov.* 6:995-1025.
- Deshpande D.D., **D.R. Janero** and M.M. Amiji. 2011. Therapeutic strategies for endothelial dysfunction. *Expert Opin. Biol. Ther.* 11:1637-1654.

- Janero, D.R.** 2012. Cannabinoid-1 receptor (CB1R) blockers as medicines: beyond obesity and cardiometabolic disorders to substance abuse/drug addiction with CB1R neutral antagonists. *Expert Opin. Emerg. Drugs* 17:17-29.
- Janero, D.R.** 2012. Productive university, industry, and government relationships in preclinical drug discovery and development: considerations toward a synergistic *lingua franca*. *Expert Opin. Drug Discov.* 7:449-456.
- Janero, D.R.** 2013. Developing doctoral scientists for drug discovery: pluridimensional education required. *Expert Opin. Drug Discov.* 8:105-113.
- Janero, D.R.** 2014. Relieving the cardiometabolic disease burden: a perspective on phytometabolite functional and chemical annotation for diabetes management. *Expert Opin. Pharmacother.* 15:5-10.
- Janero, D.R.** 2014. Synthetic agents in the context of metabolic/bariatric surgery: expanding the scope and impact of diabetes drug discovery. *Expert Opin. Drug Discov.* 9:221-228.
- Janero, D.R.** 2014. The future of drug discovery: enabling technologies for enhancing lead quality and development success. *Expert Opin. Drug Discov.* 9:847-858.
- Janero, D.R.** and A. Makriyannis. 2014. Terpenes and lipids of the endocannabinoid and transient-receptor-channel biosignaling systems. *ACS Chem. Neurosci.* 5:1097-1106.
- Janero, D.R.** 2014. Medications development for substance-use disorders: contextual influences (dis)incentivizing pharmaceutical-industry positioning. *Expert Opin. Drug Discov.* 11:1265-1279.
- Janero, D.R.** 2015. Positioning for success in university-industry drug-discovery research collaborations: Initiatives towards effective trans-constituency team science. *Int. J. Drug Dev. & Res.* 7:60-64.
- Janero D.R.** 2016. The reproducibility issue in preclinical academic drug discovery: educational and institutional initiatives fostering translation success. *Expert Opin. Drug Discov.* 9:835-842.
- Janero D.R.** and G.A. Thakur. 2016. Leveraging allostery to improve G protein-coupled receptor (GPCR)-directed therapeutics: cannabinoid receptor 1 as discovery target. *Expert Opin. Drug Discov.* 11:1223-1237.
- Deshpande, D., **D.R. Janero**, E. Blanco, J. Cooke and M. Amiji. 2016. Nucleic acid delivery for endothelial dysfunction in cardiovascular diseases. *Methodist DeBakey Cardiovasc. J.* 12:134-140.
- Mallipeddi, S., **D.R. Janero**, N. Zvonok and A. Makriyannis. 2017. Functional selectivity at G-protein coupled receptors: advancing cannabinoid receptors as drug targets. *Biochem. Pharmacol.* 128:1-11.

Janero, D.R., A. Korde, A. Makriyannis. 2017. Ligand-assisted protein structure (LAPS): an experimental paradigm for characterizing cannabinoid-receptor ligand-binding domains. *Methods Enzymol.* 593:218-235.

Kulkarni, A.R., S. Gari, **D.R. Janero,** G.A. Thakur. 2017. Design and synthesis of cannabinoid 1 receptor (CB1R) allosteric modulators: drug discovery applications. *Methods Enzymol.* 593:283-315.

Janero, D.R., V.K. Vemuri and A. Makriyannis. 2018. The molecular basis of cannabinoid activity: Application to therapeutics design and discovery for cannabis use disorders. In: *Cannabis Use Disorders*. I.D. Montoya and S.R.B. Weiss, editors. Springer, NY; pp. 43-54.

Published Abstracts of Presentations: 103 (not listed)

Published Interviews

Vasodilating drugs may help--and harm. 1991. *Science News.* 140:214-215.

Science parley at the "Big Easy." *New York Newsday.* March 31, 1993.

Vitamin E aids heart. *New Orleans Times-Picayune.* March 31, 1993.

How vitamin E prevents heart disease. Evidence is mounting that vitamin E prevents the initiation and/or progression of atherosclerosis. *Whole Foods.* April, 1993.

Antioxidants and health: a special report. *Nutrition Research Newsletter.* October, 1993.

Is being the first ever 'better' than being the best? 2014. *Expert Opin. Pharmacother.* 15:i-ii.

Perspectives on substance abuse drug discovery. 2014. *Expert Opin. Drug Discov.* 11:1379-1381.