BIOGRAPHICAL SKETCH

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NAME	POSITION TITLE
Daniel R. Kapusta	Professor of Pharmacology
eRA COMMONS USER NAME (credential, e.g., agency login) DKAPUS	

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)*

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	YEAR(s)	FIELD OF STUDY
University of Florida, Gainesville, FL	B.S.	1982	Zoology
Louisiana State Univ. Med. Ctr., New Orleans,LA	Ph.D.	1986	Pharmacology
University of Iowa Coll. Med., Iowa City, IA	Postdoc	1987-1990	Nephrology/Hypertension

Please refer to the application instructions in order to complete sections A, B, and C of the Biographical Sketch.

A. Positions and Honors

Research and Professional Experience

1990-1991 Assistant Research Scientist; Dept. of Int. Med, University of Iowa Col. Medicine Iowa City, IA
1/91-6/95 Assistant Professor; Dept. of Pharmacology, Louisiana State Univ. Med. Ctr. New Orleans, LA
7/95-6/00 Associate Professor; Dept. of Pharmacology, Louisiana State Univ. Med. Ctr., New Orleans, LA
7/00-present Professor; Dept. of Pharmacology, Louisiana State Univ. Med. Ctr., New Orleans, LA

Awards and Other Professional Activities

1987-88 Institutional National Research Service Award; HL07121.
1988-90 Individual NRSA; HL07793, Role of endogenous opioids in the regulation of renal function.
1/91-7/92 American Heart Association LA Affiliate Grant-In-Aid, Role of Central Endogenous Mu-Opioid Peptides in the Regulation of Renal Function; P.I.
9/91-8/92 LSUMC/NIH Basic Research Service Grant, Role of Endogenous Mu-Opioid Peptides in the Regulation of Renal Function; P.I.
7/92-6/95 Louisiana Educational Quality and Support Fund R&D Program - Research Competitiveness Subprogram, Opioids in the Acute and Chronic Regulation of Renal Function; P.I.
1992 International Narcotics Research Conference Travel Fellowship; Keystone, CO.
11/92-10/97 NIH FIRST Award, Opioids and Central Neural Regulation of Renal Function; P.I.
7/96-6/98 American Heart Association LA Affiliate Grant-In-Aid, Opioid Control of Renal Function; Central Sites and Mechanisms; P.I.
12/97-11/01 NIH/NIDDK Competitive Renewal (RO1), Opioids and Central Neural Regulation of Renal Function; P.I.
5/99-4/04 NIH/NIDDK Career Development Award (Independent Scientist Award, KO2), Opioids and Central Neural Regulation of Renal Function; P.I.
7/02-6/04 American Heart Association, Southeast Affiliate Grant-In-Aid, Opioid Control of Renal Function-Central Sites and Mechanisms; P.I.
4/23/2007 Receipt of Aesculapian Society Excellence in Teaching Award, LSUHSC
5/17/2007 Receipt of the Allen A. Copping Award for Excellence in Teaching, Highest Teaching Honor Awarded at LSUHSC
2/15/07 NIH/NCRR Center of Biomedical Research Excellence (COBRE) Competitive Renewal (P20PR018766) P.I., Director and Mentor, Daniel R. Kapusta, Ph.D.; Mentoring in Cardiovascular Biology; 7/1/08-6/30/13.
7/08-6/10 American Heart Association LA Affiliate Grant-In-Aid, CNS G alpha-subunit protein control of plasma AVP and urine output - Modulation by high NaCl; P.I.

B. Selected Peer-Reviewed Publications

1. Kapusta, D.R., and Robie, N.W.: Effects of cocaine and nomifensine on canine renal venous norepinephrine and dopamine content during electrical stimulation of the renal nerves J. Cardiovasc. Pharmacol., 11:511-517, 1988.
2. Kapusta, D.R., and Robie, N.W.: Plasma dopamine in regulation of canine renal blood flow. Am. J. Physiol., 255:R379-R387, 1988.
3. Kapusta, D.R., Knardahl S., Koepke, J.P., Johnson, A.K. and DiBona, G.F.: Selective central alpha-2 adrenoceptor control of regional hemodynamic responses to air jet stress in conscious spontaneously hypertensive rats. J. Hypertension, 7:189-194, 1989.
4. Kapusta, D.R., Jones, S.Y., Kopp, U.C., and DiBona, G.F.: Role of renal nerves in excretory responses to exogenous and endogenous opioid peptides. J. Pharmacol. Exp. Therap., 248(3):1039-1047, 1989.
5. Kapusta, D.R., Jones, S.Y., and DiBona, G.F.: Opioids in the systemic hemodynamic and renal responses to stress in conscious SHR. Hypertension, 13:808-816, 1989.
6. Kapusta, D.R., Jones, S.Y., and DiBona, G.F.: Role of renal nerves in excretory responses to administration of kappa agonists in conscious spontaneously hypertensive rats. J. Pharmacol. Exp. Therap., 251:230-237, 1989.
7. Kapusta, D.R., Jones, S.Y., and DiBona, G.F.: Effects of opioid peptides on neural control of renal function in spontaneously hypertensive rats. Hypertension, 15:767- 773, 1990.
8. Kapusta, D.R., Jones, S.Y. and DiBona, G.F.: Renal Mu- opioid receptor mechanisms in the regulation of renal function in rats. J. Pharmacol. Exp. Therap. 258:111- 117, 1991.
9. Kapusta, D.R., Obih, J.C. and DiBona, G.F.: Central Mu- opioid receptor-mediated changes in renal function in conscious rats. J. Pharmacol and Exp. Therap. 265:134- 143, 1993.
10. Kapusta, D.R. and Obih, J.C.: Central kappa-opioid receptor evoked changes in renal function in conscious rats: Participation of renal nerves. J. Pharmacol. Exp. Therap. 267:197-204, 1993.
11. Mossaddeghi, M., Kapusta, D.R., Minor, L.D., Duan, N. and Paul, D.: Effects of μ-opioid receptor agonists on stimulated phosphoinositide hydrolysis in rat kidney. Eur. J. Pharm., 289:411-417, 1995.
12. Kapusta, D.R., and Obih, J.C.: Role of endogenous central opioid mechanisms in maintenance of body sodium balance. Am. J. Physiol., 268:R723-R730, 1995.
13. Greenberg, S.S., Xie, J., Zatarain, J.M., Kapusta, D.R. and Miller, M.J.S.: Hydroxocobalamin (vitamin B12a) prevents and reverses endotoxin-mediated hypotension and mortality: Role of nitric oxide. J. Pharmacol. Exp. Therap., 273:257-265, 1995.
14. Kapusta, D.R., and Obih, J.C.: Central kappa opioids blunt the renal excretory responses to volume expansion by a renal nerve-dependent mechanism. J. Pharmacol. Exp. Therap., 273:199-205, 1995.
15. Kapusta, D.R., and Dzialowski, E.: Central mu opioids differentially control the renal excretion of water and sodium in conscious rats. Life Sciences, 56:PL243-248, 1995.
16. Kapusta, D.R. : Opioid mechanisms controlling renal function. Clin. Exp. Pharm. Phys. 22:891-902, 1995.
17. Kapusta, D.R., Sezen, S.F., Chang, J.K., Lippton, H., and Kenigs, V.A.: Diuretic and antinatriuretic responses produced by the endogenous opioid-like peptide, nociceptin. Life Sci., 60:PL15-21, 1997.
18. Petersen, J.S., Liu, W., Kapusta, D.R. and Varner, K.J.: Metformin inhibits ganglionic neurotransmission in renal nerves. Hypertension, 29:1173-1177, 1997.
19. Greenberg SS., Lancaster, JR., Xie, J., Sarphie, TG., Zhao, X., Hua, L., Freeman, T., Kapusta, DR., Giles, TD., Powers, DR.: Effects of NO synthase inhibitors, arginine-deficient diet, and amiloride in pregnant rats. Am. J.Physiol. 273:R1031-45, 1997.
20. Cabral, A.-M., Varner, K.J., and Kapusta, D.R.: Renal excretory responses produced by central administration of opioid agonists in ketamine and xylazine-anesthetized rats. JPET. 282:609-616,1997.
21. Kapusta, D.R. (Inventor): Method for maintaining kidney function during surgery or severe trauma under general anesthesia. U.S. Patent Number, 5,859,043; Patent Date, Jan 12, 1999. International Publication Number: WO97/33580, International Pub. Date: Sept. 18, 1997.
22. Sezen, S.F., Kenigs, V.A., and Kapusta, D.R.: Renal excretory responses produced by the delta opioid agonist, BW373U86, in conscious rats. J. Pharmacol. Exp. Therap., 287:238-245, 1998.
23. Cabral, A.-M., Kapusta, D.R., Kenigs, V.A, Varner, K.J.: Central alpha-2 receptor mechanisms contribute to enhanced renal responses during ketamine/xylazine anesthesia. Am. J. Phys.., 275:R1867-R1874, 1998.

24. Kapusta, D.R., J.-K. Chang, and Kenigs, V.A.: Central administration of [Phe$^{1}\Psi$(CH_2-NH)Gly^{2}]Nociceptin(1-13)-NH_2 and orphanin FQ/nociceptin (OFQ/N) produce similar cardiovascular and renal responses in conscious rats. J. Pharmacol. Exp. Therap. 289:173-180, 1999.
25. Kapusta, D.R. and Kenigs, V.A.: Cardiovascular and renal responses produced by central Orphanin FQ/Nociceptin occur independent of renal nerves. Amer. J. Physiol., 277:R987-R995,1999.
26. Menegaz, R.G., Kapusta, D.R., and Cabral, A.M.: Role of intrarenal alpha-2 adrenoceptors in the renal responses to xylazine in rats. Am. J. Physiol. 278:R1074-R1081, 2000.
27. Krowicki, J.K., Kapusta, D.R., and Hornby, P.J.: Orphanin FQ and Phe$^{1}\Psi$(CH_2-NH) Gly^{2}]-Nociceptin(1-13)-NH_2 stimulate gastric motor function in anesthetized rats. Br. J. Pharm. 130:1639-1645, 2000.
28. Kapusta, D.R. (Invited Review Article): Neurohumoral effects of orphanin FQ/nociceptin: Relevance to cardiovascular and renal function. Peptides, 21:1081-1099, 2000.
29. Menegaz, R.G., Maud, H., Kapusta, D.R., Cabral., A.M.: Activation of α2-adrenoceptors in the rostral ventro-lateral medulla (RVLM) produces natriuresis by a renal nerve-dependent mechanism. AJP, R98-R107, 2001.
30. Kapusta, D.R., Dayan, L.A. and Kenigs, V.A.: Nociceptin/orphanin FQ modulates the cardiovascular, but not renal responses, to stress in SHR. Clin. Exp. Ther., 29:254-259, 2002.
31. Larsen, B.D., Petersen, J.S., Harlow, K., and Kapusta, D.R. (Inventors): Novel peptide conjugates. Int. Patent Publication Number WO 01/98324.
32. Kapusta, D.R. (Inventor): Method for maintaining kidney function during surgery or trauma. U.S. Patent Number, 6,468,971; Patent Date, October 22, 2002.
33. Kapusta, D.R., Larsen, Bjarne, Petersen, Jorgen S., Harlow, K.W.: Peptide conjugates modified N- and/or C-terminally by short charged peptide chains. Int. Patent App. PCT/US01/19113, Int. filing Date 6/15, 2001.
34. Hadrup, N, Petersen, JS, Praetorius, J, Meier, E, Graebe, M, Brond, L, Staahltoft, D, Nielsen, S, Christensen, S, Kapusta, DR, Jonassen, TEN: Opioid receptor-like 1 stimulation in the collecting duct induces aquaresis through AVP-independent aquaporin-2 down-regulation. AJP, 287:F160-F168, 2004.
35. Hicks, A., Kapusta, D.R., and Varner, K.J.: Gamma-hydroxybutyrate (GHB) as a cardiovascular stimulant: Role of GABAb and GHB receptors. J. Cardiovascular Pharmacol., 44:631-638, 2004.
36. Gottlieb, H.B., Varner, K.J., Kenigs, V.A., and Kapusta, D.R.: Differential cardiovascular and renal responses produced by microinjection of the kappa opioid, U-50488H, into subregions of the paraventricular nucleus. J. Pharmacol. Exp. Therap., 312:678-685, 2005.
37. Carrà, G., Rizzi, A., Guerrini, R., Barnes, T.A., McDonald, J., Hebbes, C.P., Mela, F., Kenigs, V.A., Marzola, G., Rizzi, D., Gavioli, E., Zucchini, S., Regoli, D., Morari, M., Salvatori, S., Rowbotham, D., Lambert, D., Kapusta, D.R., and Calo', G. [(pF)Phe^{4},Arg^{14},Lys^{15}]N/OFQ-NH_2 (UFP-102), a highly potent and selective agonist of the N/OFQ receptor. Br. J. Pharm., 312:1114-1123, 2005.
38. Kapusta, D.R., Burmeister, M., Calo', G., et. al., V.A.: Functional selectivity of nociceptin/orphanin FQ peptide receptor partial agonists on cardiovascular and renal function. JPET, 314:643-651, 2005.
39. Kapusta, D.R., Thorkildsen, C., Kenigs, V.A., Meier, E., Vinge, M.M., Quist, C., and Petersen, J.S.: Pharmacodynamic characterization of ZP120, a novel functionally selective NOP receptor partial agonist with sodium-potassium-sparing aquaretic activity. J. Pharmacol. Exp. Ther., 314:652-660, 2005.
40. Calo', G., Guerrini, R., Rizzi, A., Salvadori, S., Burmeister, M., Kapusta, D.R., Lambert, D.R., and Regoli, D.: UFP-101, a peptide antagonist for the N/OFQ receptor. CNS Drug Rev, 11:97-112, 2005.
41. Gottlieb, H. and Kapusta, D.R.: Endogenous central kappa opioid systems enhance renal sympathetic nerve activity and contribute to maximal urinary sodium retention during hypotonic saline volume. Am. J. Physiol., 289:R1289-1296, 2005.
42. Larsen, B.D., Petersen, J.S., Harlow, K., Kapusta, D.R.: A diuretic nociceptin derivative. US patent # 09/882,291.
43. Krowicki, Z.B. and Kapusta, D.R.: Tonic nociceptinergic inputs to neurons in the hypothalamic paraventricular nucleus contribute to sympathetic vasomotor tone and water and electrolyte homeostasis in conscious rats. J Pharmacol. Exp. Ther. 317:446-53, 2006.
44. Rizzi, A., Spagnolo, B., Wainford, R.D., Fischetti, C., Guerrini, R., Marzola, G., Baldisserotto, A., Salvadori, S., Regoli, D., Kapusta, D.R., Calo, G.: In vitro and in vivo studies on UFP-112, a novel potent and long lasting agonist selective for the N/OFQ receptor. Peptides, 28:1240-51, 2007.

45. Burmeister, M.A. and Kapusta, D.R.: Centrally administered nociceptin/orphanin FQ (N/OFQ) evokes bradycardia, hypotension, and diuresis in mice via activation of central N/OFQ peptide receptors. J Pharmacol Exp Ther., 322:324-31, 2007.
46. Wainford, R.A., Kurtz, K., Kapusta, D.R: Central G-alpha subunit protein mediated control of cardiovascular function, urine output and vasopressin (AVP) secretion in conscious Sprague-Dawley rats. Am. J. Physiol., 295:R535-R542, 2008.
47. Burmeister, M.A. and Kapusta, D.R.: Nociceptin/orphanin FQ (N/OFQ)-evoked bradycardia, hypotension and diuresis are absent in N/OFQ peptide (NOP) receptor knockout (NOP-/-) mice. J. Pharmacol. Exp. Therap., 326:897-904, 2008.
48. Wainford, R.D., Kristine Kurtz, and Kapusta, D.R: Central G-alpha subunit protein mediated control of cardiovascular function, urine output and vasopressin (AVP) secretion in conscious Sprague-Dawley rats. Am. J. Physiol., 295:R535-R542, 2008.
49. Wainford, R.D. and Kapusta, D.R.: Chronic high-NaCl intake prolongs the cardiorenal responses to central N/OFQ and produces regional changes in the endogenous brain NOP receptor system. Am. J. Physiol. 296:R280-R288, 2009.

C. Research Support

ONGOING

R01 HL71212-01 Kapusta (PI) 8/1/03 – 7/30/10
NIH/NHLBI
Cardio-Renal Actions of Novel Nociceptin Analogues
These studies use whole animal and molecular-cellular approaches to identify novel nociceptin ligands and establish the mechanisms by which these ligands elicit water diuresis and affect cardiorenal function.
Role on Project: Principal Investigator

P20 PR018766 Kapusta (PI) 7/1/08 – 6/30/13
NIH/NCRR
Mentoring in Cardiovascular Biology
This COBRE grant is to mentor a group of outstanding investigators within the multidisciplinary and interdepartmental effort in cardiovascular biology.
Role on Project: Program Director and Mentor

0855293E Kapusta (PI) 7/1/08 – 6/30/10
AHA Southeastern Affiliate
CNS G alpha-subunit protein control of plasma AVP and urine output – modulation by high NaCl
These studies examine the role of central G alpha-subunit proteins in the regulation of AVP secretion and urine output in rodents.
Role on Project: Principal Investigator

COMPLETED

R01 DK43337-17 Kapusta (PI) 1/1/03 – 7/31/09
NIH/NIDDK
Opioids and Central Neural Regulation of Renal Function
These studies examined the brain sites and neural/humoral mechanisms involved in the central kappa opioid and nociceptin control of renal function in conscious rats.
Role on Project: Principal Investigator

R01 HL080544-01 Francis (PI) 7/1/05 – 6/31/09
NIH/NHLBI
Cytokine-induced Neurohumoral Excitation in Heart Failure
The studies in this grant investigated the mechanisms by which cytokines enhance sympathetic nerve activity in heart failure.
Role on Project: Collaborating Investigator