# Natalia Dmitrieva

## **Curriculum Vitae**

February, 2015

### **GENERAL INFORMATION**

University address: Program in Neuroscience

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# FOCUS OF RESEARCH AND ORIGINAL CREATIVE WORK

In search of potential targets for medical treatments, I focus my research on mechanisms of neural plasticity that underlie development of chronic pain states and ways to modulate these processes. I am also interested in how neural plasticity changes with ageing and how these changes affect women's health.

During my research carrier, I worked with different animal models of human conditions (uterine inflammation, interstitial cystitis, ageing-related bladder condition) using physiological, electrophysiological techniques, immunohistochemical and behavior techniques (extracellular recording in the brain, spinal cord and from sensory afferents, nerve stimulation, microdialysis in the brain and spinal cord, cystometry, bath-organ and capillary electrophoresis).

In recent years, I focused my research on the rat model of endometriosis. I developed a behavior technique to study abnormal visceral/pelvic nociception. This technique combines telemetry-based technology and viscero-motor response (VMR) recording from the abdominal muscle. I use this technique to test drugs for endometriosis-related pains but its concept is applicable to other conditions related to chronic pain. Recently, I began a series of imaging experiments in FSU Magnet lab. These studies are designed to answer a question of how the brain generates and processes chronic pain. Recently I submitted an RO1 proposal that offers to study the role of NF-kB mediated inflammation in development and maintenance of inflammatory signs induced by endometriosis.

#### PROFESSIONAL PREPARATION

PhD, University of London, London, UK. Major: Neurophysiology. Supervisor: Prof. S.B. McMahon.

doctoral dissertation: *Mechanisms and modulation of visceral pain in an animal* 

model of chronic cystitis. University of London, London, UK.

MSc, Instituto Venezolano de Invesigaciones Científicas (IVIC), Caracas, Venezuela. Major: Physiology and Biophysics. Supervisor: Dr. H. Vanegas.

master's thesis: The role of on- and off-cells of the rostral ventromedial medulla in thermal nociception, Instituto Venezolano de Invesigaciones Científicas (IVIC),

Caracas, Venezuela.

1985 BSc in Biology. Department of Biology, University of Moscow, Russia.

## **POSTDEGREE EDUCATION AND TRAINING**

2001–2003 Program in Neuroscience, Dept. of Psychology, FSU.

## PROFESSIONAL WORK EXPERIENCE

October 2013 - present Research Professor, Program in Neuroscience, Dept. of Psychology,

Florida State University. I design, set up and conduct experiments, mentor students and supervise research assistants, analyze and present

results, write articles and project/grant applications.

August 2003 - October 2013 Research Associate, Program in Neuroscience, Dept. of Psychology,

Florida State University, Tallahassee, FL

June 1998 - August 2001 Research Faculty, laboratorio de Fisiología de la Conducta, Medicina,

Universidad de los Andes (ULA), Mérida, Venezuela

June 1997 - October 1997 Researcher, UMDS, Sherrington School of Physiology, University of

London, UK

### HONORS, AWARDS, AND PRIZES

'Promotion of Investigators', National Council of Scientific and Technological Investigation, Venezuela (2003).

Studentship for PhD doctoral study in the University of London (CONICIT, Venezuela, 1993-1997).

Honorary studentship for undergraduate studies, University of Moscow (Russia, 1983-1985).

# **CURRENT MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS**

International Association for the Study of Pain (IASP)

Society for Neuroscience

## **CONTRACTS AND GRANTS**

# **New proposals**

Dmitrieva, N. PI (submitted February 5, 2015) a new RO1 application "Role of NF-kB-mediated visceral inflammation in a rat model of endometriosis".

Dmitrieva, N. PI (in preparation) a new contract with Ironwood Pharmaceuticals, Cambridge, MA. This project will study anti-inflammatory effects of a newly discovered intestinal enzyme guanylate cyclase-C in a rat model of endometriosis.

#### **Contracts and Grants Funded**

- Dmitrieva, N., **PI** (June 2013–Aug2015). *Effects of anti-inflammatory drugs on pain-related behavior in a rat model of endometriosis.* Funded by Bayer HealthCare, Germany.
- Dmitrieva, N., **PI** (Nov 2012–Aug2015). *Grants4Targets: Analgesic Effects Of Resolvins In A Rat Model Of Endometriosis*. Funded by Bayer HealthCare, Germany.
- Dmitrieva, N., **PI** (Aug 2011–Jun 2013). *Model Development and Drug Testing*. Funded by Bayer Schering Pharma AG, Germany.
- Dmitrieva, Natalia, **PI** (May 2005–Apr 2008). *Aging Effects on α-Adrenergic Activity in Female Bladder*. Funded by National Institute on Aging. (1 R03 AG025736).

### **TEACHING EXPERIENCE**

2014 Brain and Behavior course.

I supervised and taught laboratory methods to over 15 undergraduate, graduate students and technicians over past 10 years.

#### SERVICE

Judge for poster competition at the 4th Annual FSU Life Sciences Symposium (Feburary 13-14, 2014).

Judge in Tri-Beta poster competition, Dept. of Biology, FSU (November 21, 2013).

Ad hoc reviewer: European Journal of Obstetrics & Gynecology and Reproductive Biology, Comparative Physiology, The American Journal of Physiology- Regulatory, Integrative and Neurobiology of Aging, The Journal of Pain, Neuroscience, Neuroendocrinology, Pharmacological Research, Neurourology and Urodynamics, Reproductive Sciences, World Journal of Urology

Grant application reviewer for the Medical Research Counsil, UK. September (2012)

Invitation and talk organization for a guest speaker Prof. J. Andersen (Buck Institute for Age Research Novato, CA) at Neuroscience lecture series and Graduate student seminar (September 2009).

Grant application reviewer for the Health Research Board (HRB), Ireland (2008).

Member of the Graduate student training committee (Program in Neuroscience, 2006 - 2008).

## THE PROFESSION

## **Professional and Career Courses Taken After Graduation**

During my scientific career I continued taking courses related to my research and teaching:

January-April 2015 Faculty Instructional Development Workshop Series offered by FSU

Office of Distance Learning.

September-October 2014 Introduction to Linux Data Transfer Workshops offered by FSU

Computer Resources.

September-December 2013 Computational Neuroscience Course, FSU.

October 2011 Immunohistochemical Techniques in Neuroscience, Workshop at SFN

November 2010 Spike 2 Training, Workshop at SFN.

June 16-21, 2007 NIA Summer Training Course in Experimental Aging Research offered

by The Sam and Ann Barshop Institute for Longevity and Aging Studies.

San Antonio, TX.

# **Reviewer or Panelist for Grant Applications**

Medical Research Council (MRC), UK (2012). Health Research Board (HRB), Ireland (2008).

#### **CONSULTATION**

Psychological and Brain Sciences, Dartmouth University. I was invited by Prof. Ann S. Clark and Assistant Prof. Siobhan Robinson to teach surgery for pelvic neurectomy to their team (June 2009).

## **PUBLICATIONS**

## **Refereed Journal Articles**

Full list is available in My Bibiography on NCBI website: <a href="http://www.ncbi.nlm.nih.gov/myncbi/collections/bibliography/40309221/">http://www.ncbi.nlm.nih.gov/myncbi/collections/bibliography/40309221/</a>

**Dmitrieva, N.,** Suess, G. Shirley R. (2014). RvD1 and 17(R)-RvD1 alleviate signs of inflammation in a rat model of endometriosis. *Fertility&Sterility*. 1191-6. Retrieved from <a href="http://www.ncbi.nlm.nih.gov/pubmed/25123641">http://www.ncbi.nlm.nih.gov/pubmed/25123641</a>

**Dmitrieva, N.,** Faircloth, E. K., Pyatok, S., Sacher, F., & Patchev, V. K. (2012). Telemetric assessment of referred vaginal hyperalgesia and the effect of Indomethacin in a rat model of endometriosis, Frontiers in Pharmacology. *Frontiers in Pharmacology, 3*, 158. Retrieved from <a href="http://www.ncbi.nlm.nih.gov/pubmed/22969722">http://www.ncbi.nlm.nih.gov/pubmed/22969722</a>

McAllister, S. M., **Dmitrieva, N.,** & Berkley, K. J. (2012). Sprouted Innervation into uterine transplants contributes to the development of hyperalgesia in a rat model of endometriosis. *PLOS One*, *7*(2), e31758. Retrieved from <a href="http://www.ncbi.nlm.nih.gov/pubmed/22363725">http://www.ncbi.nlm.nih.gov/pubmed/22363725</a>

- **Dmitrieva, N.,** Nagabukuro, H., Resuehr, D., Zhang, G. H., McAllister, S. M., McGinty, K., Mackie, K., & Berkley, K. J. (2010). Endocannabinoid involvement in endometriosis. *Pain*, *151(3)*, 703-10. Retrieved from <a href="http://www.ncbi.nlm.nih.gov/pubmed/20833475">http://www.ncbi.nlm.nih.gov/pubmed/20833475</a>
- Zhang, G., **Dmitrieva, N.,** Liu, Y., McGinty, K., & Berkley, K. J. (2010). Endometriosis as a neurovascular condition: estrous variation in innervation, vascularization, and growth factor content of ectopic endometrial cysts in the rat. *Am J Physiol Regul Integr Comp Physiol*, 294, R162-R171.Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/17942489
- **Dmitrieva, N.,** Zhang, G., & Nagabukuro, H. (2008). Increased alpha1D adrenergic receptor activity and protein expression in the urinary bladder of aged rats. *World J Urol*, *26*, 649-655. Retrieved from <a href="http://www.ncbi.nlm.nih.gov/pubmed/18581117">http://www.ncbi.nlm.nih.gov/pubmed/18581117</a>
- **Dmitrieva, N.** (2007). Increased α-adrenergic activity the rat bladder by depletion of ovarian hormones. *J Urology*, *178*, 2677-82. Retrieved from <a href="http://www.ncbi.nlm.nih.gov/pubmed/17945282">http://www.ncbi.nlm.nih.gov/pubmed/17945282</a>
- Morrison, T. C., **Dmitrieva, N.,** Winnard, K. P., & Berkley, K. J. (2006). Opposing viscerovisceral effects of surgically induced endometriosis and a control abdominal surgery on the rat bladder. *Fertil Steril, 86 Suppl 4*, 1067-73. Retrieved from <a href="http://www.ncbi.nlm.nih.gov/pubmed/16962120">http://www.ncbi.nlm.nih.gov/pubmed/16962120</a>
- Winnard, K. P., **Dmitrieva, N.,** & Berkley, K. J. (2006). Cross-organ interactions between reproductive, gastrointestinal, and urinary tracts: modulation by estrous stage and involvement of the hypogastric nerve. *Am J Physiol Regul Integr Comp Physiol, 291*, R1592-R1601. Retrieved from <a href="http://www.ncbi.nlm.nih.gov/pubmed/16946082">http://www.ncbi.nlm.nih.gov/pubmed/16946082</a>
- **Dmitrieva, N.**, Berkley, K.J. (2005). Influence of estradiol on micturition thresholds in the rat: involvement of the hypogastric nerve. *Am J Physiol Regul Integr Comp Physiol*. 289(6):R1724-8. Retrieved from <a href="http://www.ncbi.nlm.nih.gov/pubmed/16123225">http://www.ncbi.nlm.nih.gov/pubmed/16123225</a>
- Berkley, K. J., **Dmitrieva, N.,** Curtis, K. S., & Papka, R. E. (2004). Innervation of ectopic endometrium in a rat model of endometriosis. *Proc Natl Acad Sci U S A*, *101(30)*, 11094-8. Retrieved from <a href="http://www.ncbi.nlm.nih.gov/pubmed/15256593">http://www.ncbi.nlm.nih.gov/pubmed/15256593</a>
- **Dmitrieva, N.**, & Berkley, K. J. (2002). Contrasting effects of WIN 55212-2 on motility of the rat bladder and uterus. *Journal of Neuroscience*, *22(16)*, 7147-53. Retrieved from <a href="http://www.ncbi.nlm.nih.gov/pubmed/12177210">http://www.ncbi.nlm.nih.gov/pubmed/12177210</a>
- **Dmitrieva, N.,** Johnson, O. L., & Berkley, K. J. (2001). Bladder inflammation and hypogastric neurectomy influence uterine motility in the rat. *Neuroscience Letters*, *313(1-2)*, 49-52. Retrieved from <a href="http://www.ncbi.nlm.nih.gov/pubmed/11684337">http://www.ncbi.nlm.nih.gov/pubmed/11684337</a>
- Dmitrieva, N., Shelton, D., Rice, A. S., & MaMahon, S. B. (1997). The role of nerve growth factor in a model of visceral inflammation. *Neuroscience*, 78, 449-59. Retrieved from <a href="http://www.ncbi.nlm.nih.gov/pubmed/9145801">http://www.ncbi.nlm.nih.gov/pubmed/9145801</a>
- Bennett, D. L. H., **Dmitrieva**, **N**., Priestley, J. V., Clary, D., & McMahon, S. B. (1996). TrkA, CGRP and IB4 expression in retrogradely labeled cutaneous and visceral primary sensory neurones in the

- rat. *Neuroscience Letters*, *206*, 33-6. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/8848275
- **Dmitrieva**, N., & McMahon, S. B. (1996). Sensitisation of visceral afferents by nerve growth factor in the adult rat. *Pain*, *66*, 87-97. Retrieved from <a href="http://www.ncbi.nlm.nih.gov/pubmed/7577247">http://www.ncbi.nlm.nih.gov/pubmed/7577247</a>
- Andreev, N. Y., **Dmitrieva**, **N**., Koltzenburg, M., & McMahon, S. B. (1995). Peripheral administration of nerve growth factor in the adult rat produces a thermal hyperalgesia that requires the presence of sympathetic post-ganglionic neurones. *Pain*, *63*, 109-15. Retrieved from <a href="http://www.ncbi.nlm.nih.gov/pubmed/8577480">http://www.ncbi.nlm.nih.gov/pubmed/8577480</a>
- Hernandez, N., **Dmitrieva**, **N**., & Vanegas, H. (1994). Medullary on-cell activity during tail flick inhibition produced by heterotopic noxious stimulation. *Pain*, *58*, 393-401. Retrieved from <a href="http://www.ncbi.nlm.nih.gov/pubmed/7838589">http://www.ncbi.nlm.nih.gov/pubmed/7838589</a>

### **Invited Reviews**

McMahon, S. B., Dmitrieva, N., & Koltzenburg, M. (1995). Visceral pain. *British Journal of Anesthesia*, 45, 132-44. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/7577247

# **Invited Book Chapters**

- Berkley, K. J., & **Dmitrieva**, N. (2013). Gynecological Pain, Neural Mechanisms. In Schmidt RF., & Gebhart G. (Eds.), *Encyclopedia of Pain, 2nd edition*. Heidelberg, Springer-Verlag.
- Berkley, K. J., & **Dmitrieva**, N. (2013). Pain mechanisms in endometriosis. In Schmidt RF., & Gebhart G. (Eds.), *Encyclopedia of Pain. 2nd edition*. Heidelberg, Springer-Verlag.
- Berkley, K. J., & **Dmitrieva**, N. (2006). Gynecological pain, Neural Mechanisms. In Schmidt RF., & Willis WD. (Eds.), *Encyclopedia of Pain* (pp. 841-5). Heidelberg, Springer-Verlag.

### **Development of Tests, Instruments, or Assessment Measures**

Dmitrieva, N., Faircloth, E. K., Pyatok, S., Sacher, F., & Patchev, V. K. (2013). *Telemetric assessment of referred pelvic hyperalgesia in rats*. Frontiers in Pharmacology, 3:158.

#### **PRESENTATIONS**

## Nonrefereed posters and talks at Conferences

- **Dmitrieva N.,** Garcia-Pascual C.M., Suess G. and Shirley R. RvD1 and Chemerin alleviated inflammatory signs associated with endometriosis in rats. *44<sup>th</sup> Annual Meeting of Society for Neuroscience*, Washington, DC, November 2014.
- **Dmitrieva N.** and Berkley K.J. Endometriosis in the rat: Spinal activation of c-fos and Erk1/2. 43<sup>d</sup> Annual Meeting of Society for Neuroscience, San Diego, CA, October 2013.
- **Dmitrieva N.,** Faircloth E.K., Sacher F., Berkley K.J. The effect of the anti-estrogen drug ZK0186619 on vaginal hyperalgesia in a rat model of endometriosis: involvement of

- cyst innervation. *42<sup>st</sup> Annual Meeting of Society for Neuroscience*, New Orleans, LA, October 2012.
- Giourgas B.K., Herzog A.J., McAllister S.L., **Dmitrieva N.,** Eckel L.A., Berkley K.J. Estrous influences on the severity of vaginal hyperalgesia in a rat model of endometriosis (ENDO): a pilot study of spinal cord estrogen receptors (ER). *42*<sup>st</sup> *Annual Meeting of Society for Neuroscience*, New Orleans, LA, October 2012.
- Pyatok S., McAllister S.L., **Dmitrieva N.**, Giourgas B.K., Faircloth E.K., Berkley K.J. Mechanisms of endometriosis-associated hyperalgesia in a rat model: Sensory-sympathetic coupling. *42*<sup>st</sup> *Annual Meeting of Society for Neuroscience*, New Orleans, LA, October 2012.
- **Dmitrieva N.**, Sacher F., Faircloth E. K., McAllister S.L., Berkley K.J. Endometriosis (ENDO) in the rat: Telemetric assessment of ENDO-induced referred vaginal hyperalgesia and the effect of Indomethacin. *41*<sup>st</sup> *Annual Meeting of Society for Neuroscience*, Washington, DC, November 2011.
- McAllister S.M., Herzog A.J., Feircloth E.K., **Dmitrieva N.**, Berkley K.J. Endometriosis-induced vaginal hyperalgesia in the rat: Potential contribution of sensory-sympathetic coupling in the ectopic growths. *41*<sup>st</sup> *Annual Meeting of Society for Neuroscience*, Washington, DC, November 2011.
- Herzog A.J., McGinty K.A., McAllister S.L., **Dmitrieva N.**, Berkley K.J. Endometriosis (ENDO) in the rat: upregulation of ERα in spinal cord but not afferent fibers innervating the ectopic growths contribute to estrous differences in the severity of ENDO-induced vaginal hyperalgesia. *40<sup>th</sup> Annual Meeting of Society for Neuroscience*, San Diego, CA, November 2010.
- **Dmitrieva N.**, Herzog A.J., McGinty K.A., McAllister S.L., Berkley K.J. Endometriosis (ENDO)-induced hyperalgesia in the rat: contribution of nerve growth factor (NGF) and trkA in dorsal root ganglion (DRG) neurons innervating the ectopic growths. *40<sup>th</sup> Annual Meeting of Society for Neuroscience*, San Diego, CA, November 2010.
- McAllister S.L., McGinty K.A., Herzog A.J., **Dmitrieva N.**, Berkley K.J. Endometriosis (ENDO) in the rat: individual differences in sensory innervation of the ectopic growths correlates with individual differences in the severity of hyperalgesia. *40<sup>th</sup> Annual Meeting of Society for Neuroscience*, San Diego, CA, November 2010.
- Berkley K.J., McAllister S.L., McGinty K.A., Herzog A.J., **Dmitrieva N**. Endometriosis (ENDO) in the rat: sympathetic and sensitized sensory innervation of the ectopic growths develops in parallel with ENDO-induced vaginal hyperalgesia. *40<sup>th</sup> Annual Meeting of Society for Neuroscience*, San Diego, CA, November 2010.
- **Dmitrieva** N., Nikonov A., Berkley K.J. Endometriosis (ENDO) in the rat: Sensitization of afferent fibers that innervate the ectopic growths. *39*<sup>st</sup> *Annual Meeting of Society for Neuroscience*, Chicago IL, October 2009.
- Resuehr D., **Dmitrieva** N., Mackie K., Berkley K.J. D. Endometriosis (ENDO) in the rat: Involvement of the endocannabinoid system. *39<sup>st</sup> Annual Meeting of Society for Neuroscience*, Chicago IL, October 2009.
- McGinty K.A., ., Zhang G., McAllister S.L., Herzog A.J., Crampton A.J., **Dmitrieva** N., Berkley

K.J. Endometriosis (ENDO) and co-morbidity with bladder dysfunction in the rat: Influence of ENDO and shamENDO on spinal c-Fos expression induced by distention of the uninflamed and inflamed bladder. *39<sup>st</sup> Annual Meeting of Society for Neuroscience*, Chicago IL, October 2009.

- **Dmitrieva** N., Resuehr D., Berkley K.J. Endometriosis in the rat: development of the ectopic growths' sensory and sympathetic nerve supply. 38<sup>th</sup> Annual Meeting of Society for Neuroscience, Washington, DC, November 2008.
- Resuehr D., Zhang G., **Dmitrieva** N., McGinty K.A., Mackie K., Berkley K.J. Endometriosis in the rat: involvement of the endocannabinoid system. 38<sup>th</sup> Annual Meeting of Society for Neuroscience, Washington, DC, November 2008.
- **Dmitrieva N.**, Zhang G., Nagabukuro H. Aging increases alpha 1D-adrenoreceptor activity and expression in the rat urinary bladder. 37<sup>th</sup> Annual Meeting of Society for Neuroscience, San Diego, CA, November 2007.
- McAllister S.M., **Dmitrieva N**., Zhang G., Liu Y., McGinty K.L., Resuerh D., Mackie K. and Berkley K.J. Endometriosis in the rat: potential involvement of the endocannabinoid system. *37<sup>th</sup> Annual Meeting of Society for Neuroscience*, San Diego, CA November 2007.
- Resuerh D., **Dmitrieva N**., Zhang G., Liu Y., McGinty K.L., McAllister S.M., Mackie K. and Berkley K.J. Endometriosis in the rat: differences in estrous-dependent effects of longterm treatment with WIN 55212-2 on CB1 receptors and the growth factors VEGF and NGF. *37*<sup>th</sup> Annual Meeting of Society for Neuroscience, San Diego, CA, November 2007.
- Zhang G., **Dmitrieva N**., McGinty K.L., McAllister S.M., Resuerh D., and Berkley K.J. Endometriosis in the rat: a neurovascular condition? *37<sup>th</sup> Annual Meeting of Society for Neuroscience*, San Diego, CA, November 2007.
- McGinty K.L., Zhang G., **Dmitrieva N**., Liu Y., McAllister S.M., Resuerh D., and Berkley K.J. Endometriosis in the rat: contribution of sympathetic innervation and VEGF and NGF levels in the ectopic growths to endometriosis-induced vaginal hyperalgesia. 37<sup>th</sup> Annual Meeting of Society for Neuroscience, San Diego, CA, November 2007.
- **Dmitrieva N**. and Zhang G. Aging-related neuronal and urothelial changes in the rat urinary bladder. South East Neuro Net (SENN), Vakulla Springs, FL, March 2007.
- **Dmitrieva N.**, Liu Y., Zhang G., Mackie K. and Berkley K.J. Endometriosis in the rat: estrous differences in effects of WIN 55212-2 (WN2) on growth factors, cytokine, and chemokines in the ectopic growths. *36<sup>th</sup> Annual Meeting of Society for Neuroscience*, Atlanta, GA, October 2006.
- Zhang G., Liu Y., **Dmitrieva N**., and Berkley K.J. Endometriosis in the rat: estrous changes in the content of cytokines, chemokines, and growth factors in the ectopic growths. *36*<sup>th</sup> *Annual Meeting of Society for Neuroscience*, Atlanta, GA, October 2006.
- Winnard K.P., Zhang G., **Dmitrieva N**., and Berkley K.J. Endometriosis in the rat: influence on spinal c-Fos expression induced by distention of the uninflamed and inflamed bladder. 36<sup>th</sup> Annual Meeting of Society for Neuroscience, Atlanta, USA October 2006.

McGinty K.L., **Dmitrieva N.**, Liu Y., McAlister S.A., Accius B.E., Mackie K. and Berkley K.J. Endometriosis in the rat: estrous changes in size, vascularization, and innervation of the ectopic growths. *36<sup>th</sup> Annual Meeting of Society for Neuroscience*, Atlanta, GA, October 2006.

- **Dmitrieva N**. Effect of aging and ovarian hormone depletion on a-adrenergic activity in the female rat bladder. 35<sup>st</sup> Annual Meeting of Society for Neuroscience, Washington DC, October 2005.
- Liu Y., **Dmitrieva N**., Mackie K. and Berkley K.J. Potential involvement of endocannabinoids in endometriosis. *35<sup>th</sup> Annual Meeting of Society for Neuroscience*, Washington DC, October 2005.
- Winnard K. P., Morrison T.C., **Dmitrieva N.,** Stephan F., and Berkley K.J. Cross system viscero-visceral interactions: influence of acute inflammation of uterus and colon on the bladder via the hypogastric nerve. *35<sup>th</sup> Annual Meeting of Society for Neuroscience*, Washington DC, October 2005.
- Morrison T.C., **Dmitrieva N.** and Berkley K.J. Cross-system viscero-visceral interactions: influence of chronic endometriosis on bladder motility. *Annual Meeting of Society for Neuroscience*, Washington DC, October 2005.
- **Dmitrieva N.**, Papka R.E., Curtis K.S., and Berkley K.J. Inneration of ectopic endometrium in a rat mmodel of endometriosis. *34<sup>th</sup> Annual Meeting of Society for Neuroscience*, San Diego, CA, November 2004.
- Morrison T.C., **Dmitrieva N**., Berkley K.J. Cross-system viscero-visceral interactions: influence of chronic endometriosis on bladder motility. 34<sup>th</sup> Annual Meeting of Society for Neuroscience, San Diego, CA, November 2004.
- Winnard K.P., Morrison T.C., **Dmitrieva N.**, Stephan F.K.. Cross-system viscero-visceral interactions: influence of acute inflammation of uterus or colon on colon on the bladder via the hypogastric nerve. *34<sup>th</sup> Annual Meeting of Society for Neuroscience*, San Diego, CA, November 2004.
- **Dmitrieva N.**, Berkley K.J. Influence of ovariectomy, estrogen replacement and adrenergic innervation on bladder inflammation-induced hyper-reflexia in the rat. 33<sup>d</sup> Annual Meeting of Society for Neuroscience, New Orleans, LA, November 2003.
- **Dmitrieva N.**, Berkley K.J. Cross-system viscero-visceral modifications of the effect of WIN55,212-2 (WIN2) on bladder and uterine motility. *33<sup>d</sup> Annual Meeting of Society for Neuroscience*, New Orleans, LA, November 2003.
- **Dmitrieva N.**, Berkley K.J. Reduction of bladder reflexes by the cannabinoid agonist WIN 55,212-2 (WN2) varies with estrous stage. 32<sup>nd</sup> Annual Meeting of Society for Neuroscience, Orlando, FL November 2002.
- Peng W., **Dmitrieva N**., Berkley K.J. Responses of gracile nucleus neurons to bladder distention and contraction before and after bladder inflammation in female rats. *IASP* 10<sup>th</sup> World Congress in Pain, San Diego, CA, August 2002.
- Rodriguez A.J., **Dmitrieva N**., Perez Lu J., Hernandez L. Differential release of neurotransmitters in spinal cord induced by acute and chronic noxious stimulation of the

- rat paw, 31<sup>st</sup> Annual Meeting of Society for Neuroscience, San Diego, CA. November 2001.
- **Dmitrieva N.**, Johnson O., Berkley K.J., Viscero-visceral interactions between the lower urinary and reproductive tracts, 31<sup>st</sup> Annual Meeting of Society for Neuroscience, San Diego, CA. November 2001.
- Kohut B.; Johnson O., **Dmitrieva N**., Elam J.S., Berkley K.J., Influence of reproductive status on bladder capacity of the inflamed and uninflamed bladder in the female rat, 31<sup>st</sup>

  Annual Meeting of Society for Neuroscience, San Diego, CA. November 2001.
- **Dmitrieva N.**, Berkley K.J. Inhibition of the contrasting effects of WIN55,212-2 on the rat bladder and uterus by CB1 receptor antagonist SR141716A, 30<sup>th</sup> Annual Meeting of Society for Neuroscience, New Orleans, LA. November 2000.
- **Dmitrieva N.,** Berkley K.J. Rapid inhibition of bladder but not uterine motility by CB1 receptor agonist WIN 55,212-2 in rats. 29<sup>th</sup> Annual Meeting of Society for Neuroscience, Miami, FL. October 1999.
- **Dmitrieva N.,** Burnstock G., McMahon S.B. ATP and 2-methyl thio ATP activate bladder reflexes and induce discharge of bladder sensory neurons. 28<sup>th</sup> Annual Meeting of Society for Neuroscience, Los Angeles, CA, November 1998.
- **Dmitrieva N.,** Iqbal R., Shelton D., McMahon S.B. C-fos induction in a rat model of cystitis: role of NGF. 26<sup>th</sup> Annual Meeting of Society for Neuroscience, Washington DC, November 1996.
- **Dmitrieva N.,** Rice A.S.C., Shelton D., McMahon S.B. The role of NGF in a model of persistent visceral pain. *25<sup>th</sup> Annual Meeting of Society for Neuroscience*, San Diego, CA, November 1995.
- Andreev N.Y., **Dmitrieva N.**, Rice A.S.C., McMahon S.B. Peripheral administration of morphine reduces the consequences of inflammation produced by turpentine in adult rat urinary bladder, *25<sup>th</sup> Annual Meeting of Society for Neuroscience*, San Diego, CA, November 1995.
- **Dmitrieva N.** and McMahon S.B. NGF acutely sensitizes sensory primary neurones, 24<sup>th</sup> Annual Meeting of Society for Neuroscience, Miami, FL, November 1994.