

## CURRICULUM VITAE

### BIOGRAPHICAL

Name: Naoki Yoshimura

Business Address: Department of Urology  
University of Pittsburgh  
School of Medicine  
Suite 700, Kaufmann Medical Building  
3471 Fifth Avenue  
Pittsburgh, PA 15213

E-Mail Address: nyos@pitt.edu

Business Phone: 412-692-4137

Business Fax: 412-692-4380

---

### EDUCATION and TRAINING

#### UNDERGRADUATE:

|           |  |            |                 |
|-----------|--|------------|-----------------|
| 1975-1981 | School of Medicine<br>Kyoto University<br>Kyoto, Japan | M.D., 1981 | Medical Science |
|-----------|--|------------|-----------------|

#### GRADUATE:

|           |   |             |   |
|-----------|---|-------------|---|
| 1985-1989 | Graduate School<br>Kyoto University<br>Kyoto, Japan | Ph.D., 1989 | Dr. Osamu Yoshida<br>Medical Science<br>(Department of<br>Pharmacology) |
|-----------|---|-------------|---|

Thesis title: Contraction of urinary bladder by central norepinephrine originating in the locus coeruleus.

#### POSTGRADUATE:

|           |   |                      |
|-----------|---|----------------------|
| 1981-1982 | Department of Urology<br>Kyoto University<br>Kyoto, Japan | Residency in Urology |
|-----------|---|----------------------|

---

### APPOINTMENTS and POSITIONS

#### ACADEMIC:

|           |   |                 |
|-----------|---|-----------------|
| 1982-1985 | Division of Urology, Kitano<br>Hospital, Osaka, Japan | Staff Urologist |
|-----------|---|-----------------|

|              |  |                                  |
|--------------|--|----------------------------------|
| 1989-1990    | Division of Urology, Osaka<br>Saiseikai-Noe Hospital<br>Osaka, Japan                           | Chief Urologist                  |
| 1990-1996    | Department of Urology<br>Faculty of Medicine<br>Kyoto University<br>Kyoto, Japan               | Instructor                       |
| 1991-1993    | Department of Pharmacology<br>University of Pittsburgh<br>School of Medicine<br>Pittsburgh, PA | Research Associate               |
| 1994-1996    | School of Nursing<br>Kyoto University<br>Kyoto, Japan  | Lecturer (Secondary Appointment) |
| 1996-1997    | Department of Pharmacology<br>University of Pittsburgh<br>School of Medicine<br>Pittsburgh, PA | Assistant Professor (Visiting)   |
| 1996-2005    | Department of Urology<br>Kansai Medical University<br>Osaka, Japan                             | Lecturer (Adjunct)               |
| 1997-present | Department of Urology<br>Faculty of Medicine<br>Kyoto University<br>Kyoto, Japan               | Lecturer (Adjunct)               |
| 1997-1999    | Department of Pharmacology<br>University of Pittsburgh<br>School of Medicine<br>Pittsburgh, PA | Research Assistant Professor     |
| 1999-2001    | Department of Pharmacology<br>University of Pittsburgh<br>School of Medicine<br>Pittsburgh, PA | Research Associate Professor     |
| 2001-2004    | Department of Urology<br>University of Pittsburgh  | Associate Professor(Visiting)    |

|                  |  |  |
|------------------|--|--|
|                  | School of Medicine<br>Pittsburgh, PA   |  |
| 2004-2006        | Department of Urology<br>University of Pittsburgh<br>School of Medicine<br>Pittsburgh, PA      | Associate Professor<br>(Tenure probation)      |
| 2004-2008        | Department of Pharmacology<br>University of Pittsburgh<br>School of Medicine<br>Pittsburgh, PA | Associate Professor<br>(Secondary appointment) |
| 2006-2008        | Department of Urology<br>University of Pittsburgh<br>School of Medicine<br>Pittsburgh, PA      | Associate Professor<br>(with tenure)           |
| 2008-<br>Present | Department of Urology<br>University of Pittsburgh<br>School of Medicine<br>Pittsburgh, PA      | Professor<br>(with tenure)                     |
| 2008-<br>Present | Department of Pharmacology<br>University of Pittsburgh<br>School of Medicine<br>Pittsburgh, PA | Professor<br>(Secondary appointment)           |

---

### **CERTIFICATION and LICENSURE**

#### **SPECIALTY CERTIFICATION:**

Medical Board-Certified Urologist, Japan 1990

#### **MEDICAL or OTHER PROFESSIONAL LICENSURE:**

Medical Doctor License, Japan 1981

---

### **MEMBERSHIPS in PROFESSIONAL and SCIENTIFIC SOCIETIES**

|   |      |
|---|------|
| The Japanese Urological Association             | 1985 |
| The Japanese Society of Pharmacology            | 1985 |
| The Japan Medical Society of Paraplegia         | 1988 |
| The Japanese Neurogenic Bladder Society         | 1989 |
| International Continence Society                | 1990 |
| The Japanese Society of Impotence Research      | 1990 |
| The Society for Neuroscience                    | 1991 |
| International Brain Research Organization       | 1991 |
| The Society for Basic Urological Research       | 1992 |
| The American Urological Association             | 1997 |
| International Society of Autonomic Neuroscience | 2007 |
| The American Physiological Society              | 2008 |

---

## HONORS

1. 2nd Japanese Society for Neurogenic Bladder Best Research Paper Contest for Basic Research: Grand Prize Winner, A Effect of dopaminergic agonists on detrusor hyperreflexia associated with Parkinson's disease, Chiba, Japan (September 3), 1995.
2. Pittsburgh Urologic Society's Resident Prize Essay Competition: Grand Prize Winner Co-investigator (Michael Phelan) "Successful Gene Transfer of Nerve Growth Factor (NGF) Using Herpes Simplex Virus (HSV) Vectors for Diabetic Bladder Dysfunction", Pittsburgh, PA (April 12), 1999.
3. International Jack Lapidès Essay Contest on Urodynamic and Neuro-urology Research: Grand Prize Winner, "Successful Gene Transfer of Nerve Growth Factor (NGF) Using Herpes Simplex Virus (HSV) Vectors for Diabetic Bladder Dysfunction", 1999.
4. Urodynamic Society's 20th Annual Meeting Best Poster Essay Contest: Grand Prize Winner, "Nerve Growth Factor (NGF) Gene Therapy Using Replication Defective Herpes Simplex Virus (HSV) Vectors for Diabetic Bladder Dysfunction", Dallas, TX (May 1), 1999.
5. Urodynamic Society's 20th Annual Meeting Essay Contest, Basic Research Category: Grand Prize Winner Co-investigator (Teruhiko Yokoyama), "Differentiation of primary myoblast injection into the lower urinary tract; creation of detrusor cellular myoplasty. Dallas, TX (May 1), 1999.
6. 94th American Urological Association Annual Meeting Best Abstract Contest in Urinary Incontinence: Grand Prize Winner: "Nerve Growth Factor (NGF) Gene Therapy Using Replication Defective Herpes Simplex Virus (HSV) Vectors for Diabetic Bladder Dysfunction" Dallas, TX (May 3), 1999.
7. 95th American Urological Association Annual Meeting Best Abstract Contest in Urinary Incontinence: Grand Prize Winner Co-investigator (Michael Phelan): "Nerve Growth Factor (NGF) Gene Therapy Improves rat diabetic cystopathy, but does not increase pain sensation" Atlanta, GA (May 2), 2000.
8. International Jack Lapidès Essay Contest on Urodynamic and Neuro-urology Research: 2nd Prize Winner; Michael E. Franks (Mentor) "Gene therapy of visceral bladder pain and recombinant herpes simplex virus expressing preproenkephalin", Anaheim, CA (May 10) 2001.
9. International Jack Lapidès Essay Contest on Urodynamic and Neuro-urology Research: Honorable Mention Winner; Katsumi Sasaki (Mentor) "The relation between the progress of bladder dysfunction and decreased nerve growth factor (NGF) levels in the bladder and lumbosacral dorsal root ganglia in diabetic rats: A possible pathogenesis of diabetic cystopathy", Orlando, May 24, 2002.
10. International Jack Lapidès Essay Contest on Urodynamic and Neuro-urology Research: Honorable Mention Winner; Satoshi Seki (Mentor) " Suppression of nerve growth factor (NGF) in bladder afferent pathways reduces detrusor hyperreflexia and detrusor sphincter dyssynergia in spinal cord injured rats ", Orlando, May 24, 2002.

11. Society for Urodynamics and Female Urology 2002 Annual Meeting Best Basic Research Contest Grand Prize Winner; Mentor (Katsumi Sasaki): "The relation between the progress of bladder dysfunction and decreased nerve growth factor (NGF) levels in the bladder and lumbosacral dorsal root ganglia in diabetic rats", Orlando, May 24, 2002.
12. 97th American Urological Association Annual Meeting Best Poster Contest; Impotence Category; Mentor (John Kim): "Herpes simplex virus mediated gene therapy for neurogenic impotence: Proof of concept for afferent and efferent neuron transfection", Orlando, May 27, 2002.
13. International Jack Lapidès Essay Contest on Urodynamic and Neuro-urology Research: Honorable Mention Winner; Teruyuki Ogawa (Mentor) "Differential roles of peripheral and spinal endothelin receptors in the micturition reflex in rats", San Francisco, May 8, 2004.
14. 8th Japanese Society for Neurogenic Bladder Best Research Paper Contest for Basic Research: Grand Prize Winner; Satoshi Seki (Mentor): "Effects of elimination of NK1 receptor-expressing neurons in the spinal cord on detrusor overactivity in rats with spinal cord injury", Tokyo, Japan (October 14-15), 2004.
15. International Jack Lapidès Essay Contest on Urodynamic and Neuro-urology Research: Honorable Mention Winner; Hitoshi Masuda (Mentor) "Roles of bladder nicotinic receptors in the micturition reflex in rats", San Antonio, TX, May 21, 2005
16. Pitt Innovator Award, Technology Commercialization Alliance Celebration of Innovation, University of Pittsburgh, PA, September 26, 2005
17. Kawabe Award Winner (Japanese Urological Association); Teruyuki Ogawa (Mentor) "Effects of IP751, ajulemic acid, on bladder overactivity induced by bladder irritation in the rat" October 6, 2005
18. Pitt Innovator Award, Technology Commercialization Alliance Celebration of Innovation, University of Pittsburgh, PA, November 3, 2006.
19. 2006 NIDDK International Symposium: Frontiers in Painful Bladder Syndrome and Interstitial Cystitis: Best Poster Winner; Yu Zeng (Mentor) "Uroplakin III-delta4 messenger RNA as a promising marker to identify nonulcerative IC", Bethesda, MD, October 26-27, 2006.
20. 2007 International Jack Lapidès Essay Contest on Urodynamic and Neuro-urology Research: Second Place Winner; Ryuichi Kato (Mentor): Herpes simplex virus vector-mediated delivery of glial cell line derived neurotrophic factor (GDNF) rescues erectile dysfunction following cavernous nerve injury. Los Angeles, Atlanta, May 19, 2007.
21. 2008 International Jack Lapidès Essay Contest on Urodynamic and Neuro-urology Research: Honorable Mention Winner; Matthew H. Hayn (Mentor) " Functional and immunohistochemical characterization of CB1 and CB2 receptors in rat bladder", Orlando, FL, May 17, 2008.
22. 106th American Urological Association Annual Meeting Best Poster in Urodynamics/Incontinence/Female

Urology: Incontinence: Evaluation & Therapy (III): Winner; Minoru Miyazato (Mentor): "The role of serotonergic mechanisms in sneeze-induced urethral continence reflex in rats. Orlando, FL, May 17-22, 2008.

23. 15th Japanese Society for Neurogenic Bladder Best Research Paper Contest for Basic Research: Grand Prize Winner; Minoru Miyazato (Mentor): "Herpes simple virus vector-mediated gene transfer of GABA synthesizing enzyme for detrusor overactivity in rats with spinal cord injury", Tokyo, Japan (September 11-13), 2008.

24. 60th Western Section Meeting of Japan Urological Association Best Presentation Award: Winner; Minoru Miyazato (Mentor): "Effects of serotonin/norepinephrine reuptake inhibitors on sneeze-induced urinary continence reflexes in rats", Kokura, Japan (November 6-8), 2008.

25. Pitt Innovator Award, Technology Commercialization Alliance Celebration of Innovation, University of Pittsburgh, PA, October 6, 2008.

26. 2009 Winter Meeting of Society for Urodynamics and Female Urology (SUFU) Prize Essay Winner; Minoru Miyazato (Mentor): "Herpes simplex virus vector-mediated gene delivery of glutamic acid decarboxylase reduces detrusor overactivity in spinal cord injures rats", Las Vegas, Nevada (February 25-28), 2009.

27. 2009 International Jack Lapidus Essay Contest on Urodynamic and Neuro-urology Research: Grand Prize Winner; Minoru Miyazato (Mentor): Herpes simplex virus vector-mediated GABA gene therapy on neurogenic detrusor overactivity in spinal cord injury. Chicago, Illinois, April 25, 2009.

28. 2009 International Jack Lapidus Essay Contest on Urodynamic and Neuro-urology Research: Honorable Mention Prize Winner; Akira Furuta (Mentor): Suppression of  $\alpha_2$ -adrenoceptors as a new treatment of stress urinary incontinence- a pharmacological study on urethral continence reflexes during valsalva-like stress conditions in rats. Chicago, Illinois, April 25, 2009.

29. 25<sup>th</sup> European Association of Urology (EAU) Congress First Prize for the Best Abstract (Non-Oncology): Winner; Hitoshi Yokoyama (Mentor): Effects of enkephalin gene therapy using herpes simplex virus vector on bladder hyperactivity and nociception (#117). Barcelona, Spain, April 16-20, 2010.

30. 2010 International Jack Lapidus Essay Contest on Urodynamic and Neuro-urology Research: Second Prize Winner; Yoshio Sugino (Mentor): BALB/c-Fc  $\gamma$  R2b<sup>-/-</sup>-Pdc1<sup>-/-</sup> mouse expressing anti-urothelial antibody is a model of autoimmune cystitis. San Francisco, CA, May 29, 2010.

31. 2010 62<sup>nd</sup> Western Section Meeting of Japanese Urological Association: Shigematsu's Prize for the best manuscript Winner; Minoru Miyazato (Mentor): Effect of duloxetine, a norepinephrine and serotonin reuptake inhibitor, in sneeze-induced urethral continence reflex in rats. Kagoshima, Japan, November 4-6, 2010.

## PUBLICATIONS

### 1. Refereed articles

1. Sasa, M., Ohno, S., Nabatame, H., **Yoshimura, N.** and Takaori, S.: Effects of L-threo- DOPS, an L-noradrenaline precursor, on locus coeruleus-originating neurons in spinal trigeminal nucleus. *Brain Research*, 420: 157-161, 1987.
2. **Yoshimura, N.**, Sasa, M., Ohno., Y., Yoshida, O. and Takaori, S.: Contraction of urinary bladder by central norepinephrine originating in the locus coeruleus. *Journal of Urology*, 139: 423-427, 1988.
3. **Yoshimura, N.**, Sasa, M., Yoshida, O. and Takaori, S.: Mediation of micturition reflex by central norepinephrine from the locus coeruleus in the cat. *Journal of Urology*, 143: 840-843, 1990.
4. **Yoshimura, N.**, Sasa, M., Yoshida, O. and Takaori, S.:  $\alpha_1$ -Adrenergic receptor-mediated excitation from the locus coeruleus of the sacral parasympathetic preganglionic neuron. *Life Sciences*, 47: 789-797, 1990.
5. **Yoshimura, N.**, Sasa, M., Yoshida, O. and Takaori, S.: Dopamine D-1 receptor-mediated inhibition of micturition reflex by central dopamine from the substantia nigra. *Neurourology and Urodynamics*, 11: 535-545, 1992.
6. **Yoshimura, N.**, Mizuta, E., Kuno, S., Sasa, M. and Yoshida, O.: The dopamine D1 receptor agonist SKF 38393 suppresses detrusor hyperreflexia in the monkey with parkinsonism induced by 1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine (MPTP). *Neuropharmacology*, 32: 315-321, 1993.
7. **Yoshimura, N.**, White, G., Weight, FF. and de Groat, W.C.: Patch-clamp recordings from subpopulations of autonomic and afferent neurons identified by axonal tracing techniques. *Journal of the Autonomic Nervous System*, 49: 85-92, 1994.
8. Sasa, M., and **Yoshimura, N.**: Locus coeruleus noradrenergic neurons as a micturition center. *Microscopy Research and Technique*, 29: 226-230, 1994.
9. Yamamoto, S., Soma, T., Hatayama, T., Mori, H. and **Yoshimura, N.**: Neurogenic bladder induced by brain abscess. *British Journal of Urology*, 76: 227, 1995.
10. **Yoshimura, N.**, White, G., Weight, F.F. and de Groat, W.C.: Different types of  $\text{Na}^+$  and  $\text{K}^+$  currents in rat dorsal root ganglion neurons innervating the urinary bladder. *Journal of Physiology (London)*, 494: 1-16, 1996.
11. **Yoshimura, N.**, de Groat, W.C.: Characterization of voltage-sensitive  $\text{Na}^+$  and  $\text{K}^+$  currents recorded from acutely dissociated pelvic ganglion neurons of the adult rat. *Journal of Neurophysiology*, 76: 2508-2521, 1996.
12. Okada, Y., **Yoshimura, N.**, Takami, N., Kakehi, Y., Terachi, T. and Yoshida, O.: Mainz pouch with appendix-umbilical stoma using catheterizable conduit elongated with continuous cecal segment: a case report. *Acta Urologica Japonica* 42; 973-975, 1996.
13. Ueda, T., **Yoshimura, N.** and Yoshida, O.: Diabetic cystopathy: relation to autonomic neuropathy detected by sympathetic skin response. *Journal of Urology*, 157: 580-584, 1997.
14. Sugaya, K., Roppolo, J.R., **Yoshimura, N.**, Card, J.P. and de Groat, W.C.: The central neural pathways involved in micturition in the neonatal rat as revealed by the injection of pseudorabies virus into the urinary bladder. *Neuroscience Letters*, 223: 197-200, 1997.
15. **Yoshimura, N.** and de Groat, W.C.: Plasticity of  $\text{Na}^+$  channels in afferent neurones innervating rat urinary bladder following spinal cord injury *Journal of Physiology (London)*, 503: 269-276, 1997.
16. **Yoshimura, N.**, Nagahama, Y., Ueda, T. and Yoshida, O.: Paroxysmal urinary incontinence associated with multiple sclerosis. *Urologia Internationalis*, 59: 197-199, 1997.

17. **Yoshimura, N.** and de Groat, W.C.: Neural control of lower urinary tract. *International Journal of Urology*, 4: 101-115, 1997.
18. **Yoshimura, N.**, Erdman, S.L., Snider, M.W. and de Groat, W.C.: Effects of spinal cord injury on neurofilament immunoreactivity and capsaicin sensitivity in rat dorsal root ganglion neurons innervating the urinary bladder. *Neuroscience*, 83: 633-643, 1998.
19. de Groat, W.C., Araki, I., Vizzard, M.A., Yoshiyama, M., **Yoshimura, N.**, Sugaya, K., Tai, C. and Roppolo, J.R.: Developmental and injury induced plasticity in the micturition reflex pathway. *Behavioural Brain Research*, 92: 127-140, 1998.
20. **Yoshimura, N.**, Mizuta, E., Yoshida, O. and Kuno, S.: Therapeutic effects of dopamine D<sub>1</sub>/D<sub>2</sub> receptor agonists on detrusor hyperreflexia in 1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine-lesioned parkinsonian cynomolgus monkeys. *Journal of Pharmacology and Experimental Therapeutics*, 286: 228-233, 1998.
21. **Yoshimura, N.**, Takami, N., Ogawa, O., Kakehi Y., Okada, Y. and Yoshida, O.: Decision analysis for treatment of early stage prostate cancer. *Japanese Journal of Cancer Research*, 89:681-689, 1998.
22. **Yoshimura, N.** and de Groat W.C.: Increased excitability of afferent neurons innervating rat urinary bladder following chronic bladder inflammation. *Journal of Neuroscience*, 19: 4644-4653, 1999.
23. **Yoshimura, N.**: Bladder afferent pathway and spinal cord injury: possible mechanisms inducing hyperreflexia of the urinary bladder. *Progress in Neurobiology*, 57: 583-606, 1999.
24. Ozawa, H., Chancellor, M.B., Jung, S.Y., Yokoyama, T., Yu, Y.B., de Groat, W.C. and **Yoshimura, N.**: Effect of intravesical nitric oxide therapy on cyclophosphamide-induced cystitis. *Journal of Urology*, 162: 2211-2216, 1999.
25. Ueda, T., **Yoshimura, N.** and Yoshida, O.: Prognostic factors for long-term maintenance of continence in patients with urinary incontinence managed by diapers or indwelling catheters. *European Urology*, 37: 318-324, 2000.
26. Ueda, T., Kageyama, S., **Yoshimura, N.** and Yoshida, O.: Urinary incontinence among community-dwelling people aged 40 years or older: prevalence, risk factors, knowledge and self-perception. *International Journal of Urology*, 7: 95-103, 2000.
27. Chancellor, M.B., Yokoyama, T., Tirney, S., Mattes, C.E., Ozawa, H., **Yoshimura, N.**, de Groat, W.C. and Huard, J.: Preliminary results of myoblast injection into the urethra and bladder wall: a possible method for the treatment of stress urinary incontinence and impaired detrusor contractility. *Neuourology and Urodynamics*, 19: 279-287, 2000.
28. Ueda, T., Tamaki, M., Ogawa, O., Yamauchi, T. and **Yoshimura, N.**: The improvement in interstitial cystitis symptoms and problems incurred during treatment with oral IPD-1151T (suplatast tosilate). *Journal of Urology*, 164:1917-1920, 2000.
29. **Yoshimura, N.**, Smith, C.P., Chancellor, M.B. and de Groat, W.C.: Pharmacologic and potential biologic interventions to restore bladder function after spinal cord injury. *Current Opinion in Neurology*, 13: 677-681, 2000.
30. Yokoyama, T., **Yoshimura, N.**, Dhir, R., Qu, Z., Fraser, M.O., Kumon, H., de Groat, W.C., Huard, J. and Chancellor, M.B.: Persistence and survival of autologous muscle derived cells versus bovine collagen as potential treatment of stress urinary incontinence. *Journal of Urology*, 165: 271-276, 2001.
31. Chuang, Y.-C., Fraser, M.O., Yu, Y., Franks, M., Yokoyama, T., Chancellor, M.B. and de Groat, W.C. and **Yoshimura, N.**: The role of bladder afferent pathways in the bladder hyperreflexia induced by intravesical administration of nerve growth factor. *Journal of Urology*, 165: 975-979, 2001.
32. Phelan M.W., Franks, M., Somogyi, G.T., Yokoyama, T., Fraser, M.O., Lavelle, J.P., **Yoshimura, N.** and Chancellor, M.B.: Botulinum toxin urethral sphincter injection to restore bladder emptying in men and

women with voiding dysfunction. *Journal of Urology*, 165: 1107-1110, 2001.

33. Tirney, S., Mattes, C.E., **Yoshimura, N.**, Yokoyama, T., Ozawa, H., Tzeng, E., Birder, L.A., Kanai, A.J., Huard, J., de Groat, W.C. and Chancellor, M.B. Nitric oxide synthase gene therapy for erectile dysfunction: comparison of plasmid, adenovirus, and adenovirus-transduced myoblast vectors. *Molecular Urology* 5: 37-43, 2001.
34. Goins, W.F., **Yoshimura, N.**, Phelan, M.W., Ozawa, H., Yokoyama, T., Fraser, M.O., Bennett, E.N., de Groat, W.C., Glorioso, J.C., Chancellor, M.B.: Herpes simplex virus mediated nerve growth factor expression in bladder and afferent neurons: potential treatment for diabetic bladder dysfunction. *Journal of Urology*, 165: 1748-1754, 2001.
35. Yokoyama, T., Huard, J., **Yoshimura, N.**, Pruchnic, R., Qu, Z., Cao, B., de Groat, W.C., Kumon, H. and Chancellor, M.B.: Muscle derived cell transplantation and differentiation into the lower urinary tract smooth muscle. *Urology*, 57: 826-831, 2001.
36. **Yoshimura, N.**, Seki, S. and de Groat, W.C.: Nitric oxide modulates Ca<sup>2+</sup> channels in dorsal root ganglion neurons innervating rat urinary bladder. *Journal of Neurophysiology*, 86: 304-11, 2001.
37. Chuang, Y.-C., Fraser, M.O., Yu, Y., Beckel, J.M., Seki, S., Nakanishi, Y., Yokoyama, H., Chancellor, M.B., **Yoshimura, N** and de Groat, W.C.: Analysis of the afferent limb of the vesico-vascular reflex using the neurotoxin, resiniferatoxin and capsaicin. *American Journal of Physiology* 281: R1302-R1310, 2001.
38. Sculptoreanu, A., **Yoshimura, N.**, de Groat, W.C. and Somogyi, G.T.: Protein kinase C is involved in M<sub>1</sub>-muscarinic receptor-mediated facilitation of L-type Ca<sup>2+</sup> channels in neurons of the major pelvic ganglion of the adult rat. *Neurochemical Research*, 26: 933-942, 2001.
39. **Yoshimura, N.**, Seki, S., Novakovic, S.D., Tzoumaka, E., Erickson, V.L., Erickson, K.A., Chancellor, M.B. and de Groat, W.C.: The involvement of the tetrodotoxin-resistant sodium channel Na<sub>v</sub>1.8 (PN3/SNS) in a rodent of visceral pain. *Journal of Neuroscience*, 21: 8690-8696, 2001.
40. de Groat, W.C. and **Yoshimura, N.**: Pharmacology of the lower urinary tract. *Annual Reviews of Pharmacology and Toxicology*, 41: 691-721, 2001.
41. de Groat, W.C., Fraser M.O., Yoshiyama, M., Smerin, S., Tai, C., Chancellor, M.B., **Yoshimura, N.** and Roppolo, J.R.: Neural control of the urethra. *Scandinavian Journal of Urology and Nephrology* 35: Supplement 207: 35-43, 2001.
42. Yokoyama, T., Chancellor, M.B., **Yoshimura, N.**, Huard, J. and Kumon, H.: Gene therapy and tissue engineering for urological dysfunction: current outcome and future prospects. *Molecular Urology*, 5: 67-70, 2001.
43. Yokoyama, T., Pruchnic, R., Lee, J.Y., Chuang, Y.C., Kumon, H., **Yoshimura, N.**, de Groat, W.C., Huard, J., Chancellor, M.B.: Autologous primary muscle-derived cells transfer into the lower urinary tract. *Tissue Engineering* 7: 395-404, 2001.
44. Ueda, T., Tamaki, M., Ogawa, O. and **Yoshimura, N.**: Overexpression of platelet-derived endothelial cell growth factor (PD-ECGF)/thymidine phosphorylase (TP) in patients with interstitial cystitis and bladder carcinoma. *Journal of Urology*, 167: 347-351, 2002.
45. Lu, S.H., Yamagata, T., Atsuki, K., Smith, C.P., Sun, L., **Yoshimura, N.**, Chancellor, M.B. and de Groat, W.C.: Effect of KW-7158, a putative afferent nerve inhibitor, on bladder activity and the vesico-vascular reflex in rat. *Brain Research*, 946: 72-78, 2002.
46. **Yoshimura, N.**, Seki, S., Chancellor, M.B., de Groat, W.C. and Ueda, T.: Targeting afferent hyperexcitability for therapy of the painful bladder syndrome. *Urology* 59 (Supplement 5A): 61-67, 2002.
47. Sasaki, K., Chancellor, M.B., Phelan, M.W., Yokoyama, T., Fraser, M.O., Seki, S., Kubo, K., Kumon, H., de Groat, W.C. and **Yoshimura, N.**: Diabetic cystopathy correlates with long-term decrease in nerve

growth factor (NGF) levels in the bladder and lumbosacral dorsal root ganglia. *Journal of Urology* 168:1259-1264, 2002.

48. **Yoshimura, N.** and Chancellor, M.B.: Current and future pharmacological treatment of the overactive bladder. *Journal of Urology*, 168: 1897-1913, 2002.
49. Seki, S., Sasaki, K., Fraser, M.O., Igawa, Y., Nishizawa, O., Chancellor, M.B., de Groat, W.C. and **Yoshimura, N.**: Immunoneutralization of nerve growth factor in lumbosacral spinal cord reduces detrusor hyperreflexia in spinal cord injured rats. *Journal of Urology*, 168: 2269-2274, 2002.
50. Pruchnic, R. Yokoyama, T., Lee, J.Y., Smith, C.P., **Yoshimura, N.**, Qu, Z., Kumon, H., de Groat, W.C., Huard, J., Chancellor, M.B.: Muscle derived cells mediated ex-vivo gene transfer to the lower urinary tract; comparison of viral vectors. *Urological Research*, 30:310-316, 2002.
51. Black, J.A., Cummins, T.R., **Yoshimura, N.**, de Groat, W.C. and Waxman, S.G.: Tetrodotoxin-resistant sodium channels Nav1.8/SNS and Nav1.9/NaN in afferent neurons innervating urinary bladder in control and spinal cord injured rats. *Brain Research*, 963:132-138, 2003.
52. Sasaki, K., **Yoshimura, N.** and Chancellor, M.B.: Implications of diabetes mellitus in urologic field. *Urologic Clinics of North America*, 30: 1-12, 2003.
53. Fraser, M.O., Chancellor, M.B., Yokoyama, T., **Yoshimura, N.**, Huang, L., de Groat, W.C. and Chuang, Y.C.: Intravesical liposome administration- a novel treatment for the hyperactive bladder in the rat. *Urology*, 61: 656-663, 2003.
54. Chuang, Y.C., Chancellor, M.B., Seki, S., **Yoshimura, N.**, Lavelle, J.P., de Groat, W.C. and Fraser, M.O.: Intravesical protamine sulfate and potassium chlorides as a model for bladder hyperactivity. *Urology*, 61: 664-670, 2003.
55. Chancellor MB, Tirney S, Mattes CE, , Yokoyama T, Ozawa H, Tzeng E, Birder LA, Kanai AJ, Huard J, de Groat WC, **Yoshimura N**: Nitric oxide synthase (NOS) gene transfer for erectile dysfunction in a rat model: comparison of plasmid, adenovirus, and adenovirus-transduced myoblast vectors. *BJU international*, 91: 691-696, 2003.
56. **Yoshimura, N.**, Seki, S., Erickson, K.A., Erickson, V.L., Chancellor M.B. and de Groat, W.C.: Histological and electrical properties of rat dorsal root ganglion neurons innervating the lower urinary tract. *Journal of Neuroscience*, 23: 4355-4561, 2003.
57. Kamo, I., Torimoto, K., Chancellor, M.B., de Groat, W.C., **Yoshimura, N.**: Urethral closure mechanisms under sneeze-induced stress condition in rats - A new animal model for evaluation of stress urinary incontinence. *American Journal of Physiology*, 285: R356-R365, 2003.
58. **Yoshimura, N.**, Kuno, S., Chancellor, M.B., de Groat W.C., Seki S.: Dopaminergic mechanisms underlying bladder hyperactivity in rats with a unilateral 6-hydroxydopamine (6-OHDA) lesion of the nigrostriatal pathway. *British Journal of Pharmacology*, 139: 1425-1432, 2003.
59. Chuang, Y-C., Chou, A-K., Wu, P-C., Yu, T-J., Yang, L-C., **Yoshimura, N.**, Chancellor M.B.: Gene therapy of bladder pain with gene gun particle encoding pro-opiomelanocortin (POMC) cDNA. *Journal of Urology*, 170: 2044-2048, 2003.
60. Ito, T., Tomoe, H., Ueda, T., **Yoshimura, N.**, Sant, G., Hanno, P.: Clinical symptoms scale for interstitial cystitis for diagnosis and for following the course of the disease. *International Journal of Urology (Supplement)* 10: S24-26, 2003.
61. Ueda, T., Sant, G.R., Hanno, P.M., **Yoshimura, N.**: Interstitial cystitis and frequency-urgency syndrome (OAB syndrome). *International Journal of Urology (Supplement)* 10: S39-26, 2003.
62. Cannon, T.W., **Yoshimura, N.**, Chancellor, M.B.: Innovations in Pharmacotherapy for Stress Urinary Incontinence. *International Urogynecology Journal Pelvic Floor Dysfunction*, 14: 367-372, 2003.
63. Kim, J.H., Rivas D.A., Shenot, P.J., Green, B., Kennelly, M., Erickson, J.R., O'Leary, M., **Yoshimura,**

- N., Chancellor, M.B.: Intravesical resiniferatoxin for refractory detrusor hyperreflexia: A multicenter, blinded, randomized, placebo-controlled trial. *Journal of Spinal Cord Medicine*, 26: 358-363, 2003.
64. Seki, S., Sasaki, K., Igawa, Y., Nishizawa, O., Chancellor, M. B., de Groat, W.C., **Yoshimura, N.:** Suppression of detrusor-sphincter dyssynergia by immunoneutralization of nerve growth factor in lumbosacral spinal cord in spinal cord injured rats. *Journal of Urology*, 171: 478-482, 2004.
  65. Tyagi, P., Fraser, M.O., Li, Z., de Groat, W.C., Chancellor, M.B., **Yoshimura, N.**, Huang, L.: Urodynamic and immunohistochemical evaluation of intravesical capsaicin delivery using thermosensitive hydrogel and liposomes. *Journal of Urology*, 171: 483-489, 2004.
  66. Yang, E-K, Takimoto, T., Hayashi, Y., de Groat W.C., **Yoshimura, N.:** Altered expression of potassium channel subunit mRNAs and  $\alpha$ -dendrotoxin sensitivity of potassium currents in rat dorsal root ganglion neurons after axotomy. *Neuroscience* 123: 867-874, 2004.
  67. Chermansky, C.J., Cannon T.W., Torimoto, K., Fraser, M.O., **Yoshimura, N.**, de Groat, W.C., Chancellor, M.B.: A model of intrinsic sphincteric deficiency in the rat: electrocauterization. *Neurourology and Urodynamics*, 23:166-171, 2004.
  68. Chancellor, M.B., **Yoshimura N.:** Treatment of Interstitial Cystitis. *Urology* 63: (3 Suppl 1):85-92, 2004.
  69. Torimoto, K., Fraser, M.O., Hirao, Y., de Groat, W.C., Chancellor, M.B., **Yoshimura, N.:** Urethral dysfunction in diabetic rats. *Journal of Urology*, 171, 1959–1964, 2004.
  70. Tyagi, P., Li, Z., Chancellor, M.B., de Groat, W.C., **Yoshimura, N.**, Huang, L.: Sustained intravesical drug delivery using thermosensitive hydrogel. *Pharmaceutical Research*, 21: 832-837, 2004.
  71. Nishiguchi, J., Sasaki, S., Seki, S., Chancellor, M.B., Erickson, K.A., de Groat, W.C., Kumon, H., **Yoshimura, N.:** Effects of isolectin B4-conjugated saporin, a targeting cytotoxin, on bladder overactivity induced by bladder irritation. *European Journal of Neuroscience*, 20: 474-482, 2004.
  72. Sculptoreanu, A, **Yoshimura, N.**, de Groat W.C.: KW-7158 [(2S)-(+)-3,3,3-Trifluoro-2-hydroxy-2-methyl-N-(5,5,10-trioxo-4,10-dihydrothieno[3,2-c][1]benzothiepin-9-yl) propanamide] enhances A-type K<sup>+</sup> currents in neurons of the dorsal root ganglion of the adult rat. *Journal of Pharmacology and Experimental Therapeutics*. 310: 159-168, 2004.
  73. Stein, R.J., Santos, S., Nagatomi, J., Hayashi, Y., Minnery, B.S., Xavier, M., Patel, A.S., Nelson, J.B., Futrell, W.J., **Yoshimura, N.**, Chancellor, M.B., De Miguel, F.: “Cool” (TRPM8) and “hot” (TRPV1) receptors in the bladder and male genital tract. *Journal of Urology*, 172: 1175-1178, 2004.
  74. Kamo, I., Cannon, T.W., Conway, D.A., Torimoto, K., Chancellor, M.B., de Groat, W.C., **Yoshimura, N.:** The role of bladder-to-urethral reflexes in urinary continence mechanisms in rats. *American Journal of Physiology Renal Physiology*, 287: F434-441, 2004.
  75. Tamaki, M., Saito, R., Ogawa, O., **Yoshimura, N.**, Ueda, T.: Possible mechanisms inducing glomerulations in interstitial cystitis: relationship between endoscopic findings and expression of angiogenic growth factors. *Journal of Urology*, 172: 945-948, 2004.
  76. Ogawa, T., Kamo, I., Pflug, B.R., Nelson, J.B., Seki, S., Igawa, Y., Nishizawa, O., de Groat, W.C., Chancellor, M.B., **Yoshimura, N.:** Differential roles of peripheral and spinal endothelin receptors in the micturition reflex in rats. *Journal of Urology*, 172:1533-1537, 2004.
  77. Chuang, Y.C., **Yoshimura, N**, Huang, C.C., Chiang, P.H., Chancellor, M.B.: Analgesic effects of intravesical administration of botulinum toxin A on acetic acid induced bladder pain responses in rats. *Journal of Urology*, 172: 1529-1532, 2004.
  78. Sasaki, K., Chancellor, M.B., Goins, W.F., Phelan, M.W., Gloriosso, J.C., de Groat, W.C., **Yoshimura, N.:** Gene therapy using replication defective herpes simplex virus (HSV) vectors expressing nerve growth factor (NGF) in a rat model of diabetic cystopathy. *Diabetes* 53: 2723-2730, 2004.

79. Seki, S., Erickson, K.A., Seki, M., Nishizawa, O., Igawa, Y., Ogawa, T., de Groat, W.C., Chancellor, M.B., **Yoshimura, N.**: Elimination of spinal neurons expressing neurokinin 1 receptors reduces bladder overactivity and spinal c-fos expression induced by bladder irritation in rats. *American Journal of Physiology Renal Physiology*, 288: F466-473, 2005.
80. Smith, C.P., Nishiguchi, J., O'Leary, M., **Yoshimura, N.**, Chancellor, M.B.: Single-institution experience in 110 patients with botulinum toxin A injection into bladder or urethra. *Urology*, 65: 37-41, 2005.
81. Torimoto, K., Hirao, Y., Matsuyoshi, H., de Groat, W.C., Chancellor, M.B., **Yoshimura, N.**:  $\alpha_1$ -Adrenergic mechanism in diabetic urethral dysfunction in rats. *Journal of Urology*, 173: 1027-1032, 2005.
82. Chancellor, M.B., Perkin, H., **Yoshimura, N.**: Recent advances in the neurophysiology of stress urinary incontinence. *Scandinavian Journal of Urology and Nephrology*, 39: 21-24, 2005.
83. Kim, Y.T., **Yoshimura, N.**, Masuda, H., de Miguel, F., Chancellor, M.B.: Antimuscarinic agents exhibit local inhibitory effects on muscarinic receptors in bladder-afferent pathways. *Urology*, 65: 238-242, 2005.
84. **Yoshimura, N.**, Chancellor, M.B., Andersson, K.E., Christ, G.J.: Recent advances in understanding the biology of diabetes-associated bladder complications and novel therapy. *BJU International*, 95: 733-738, 2005.
85. Bennett, N.E., Kim, J.H., Wolfe, D.P., Sasaki, K., **Yoshimura, N.**, Goins, W.F., Huang, S., Nelson, J.B., de Groat, W.C., Glorioso, J.C., Chancellor, M.B.: Improvement of erectile dysfunction after neurotrophic factor gene therapy in diabetic rats. *Journal of Urology*, 173: 1820-1824, 2005.
86. Chuang, Y.C., Yang, L.C., Chiang P.O., Kang H.Y., Ma W.L., Wu P.C., DeMiguel, F., Chancellor, M.B., **Yoshimura, N.**: Gene gun particle encoding preproenkephalin (PPE) cDNA produces analgesia against capsaicin induced bladder pain in rats. *Urology*, 65:804-810, 2005.
87. Ren, X., Hayashi, Y., **Yoshimura, N.**, Takimoto, K.: Transmembrane interaction mediates complex formation between peptidase homologues and Kv4 channels. *Molecular and Cellular Neuroscience*, 29: 320-332, 2005.
88. Kwon, D., Minnery, B., Kim, Y., Kim, J.H., de Miguel, F., **Yoshimura, N.**, Chancellor, M.B.: Neurologic recovery and improved detrusor contractility using muscle-derived cells in rat model of unilateral pelvic nerve transection. *Urology* 65: 1249–1253, 2005.
89. Kamo, I., Chancellor, M.B., de Groat, W.C., **Yoshimura, N.**: Differential effects of activation of peripheral and spinal tachykinin NK3 receptors on the micturition reflex in rats. *Journal of Urology*, 174: 776-781, 2005.
90. Cannon, T.W., Sweeney, D.D., Conway, D.A., Kamo, I., **Yoshimura, N.**, Sacks, M., Chancellor, M.B.: A tissue-engineered suburethral sling in an animal model of stress urinary incontinence. *BJU International*, 96: 664-669, 2005.
91. Conway, D.A., Kamo, I., **Yoshimura, N.**, Chancellor, M.B., Cannon, T.W.: Comparison of leak point pressure methods in an animal model of stress urinary incontinence. *International Urogynecology Journal Pelvic Floor Dysfunction*, 16: 359-363, 2005.
92. Chuang, Y.C., Chiang, P.H., Huang, C.C., **Yoshimura, N.**, Chancellor, M.B.: Botulinum toxin type A improves benign prostatic hyperplasia symptoms in patients with small prostates. *Urology*, 66: 775-779, 2005.
93. Nishiguchi, J., Hayashi, Y., Chancellor, M.B., de Miguel, F., de Groat, W.C., Kumon, H., **Yoshimura, N.**: Detrusor overactivity induced by intravesical application of adenosine 5'-triphosphate (ATP) under different delivery conditions in rats. *Urology*, 66: 1332–1337, 2005.
94. Kim, Y., **Yoshimura, N.**, Masuda, H., De Miguel, F., Chancellor, M.B.: Intravesical instillation of human

urine after oral administration of trospium, tolterodine and oxybutynin in a rat model of detrusor overactivity. *BJU International*, 97: 400-403, 2006.

95. de Groat, W.C., **Yoshimura, N.**: Mechanisms underlying the recovery of lower urinary tract function following spinal cord injury. *Progress in Brain Research*, 152: 59-84, 2006.
96. Chuang, Y.C., Huang, C.C., Kang, H.Y., Chiang, P.H., de Miguel, F., **Yoshimura, N.**, Chancellor, M.B.: Novel action of botulinum toxin on the stromal and epithelial components of the prostate gland. *Journal of Urology*, 175: 1158-1163, 2006.
97. Masuda, H., Chancellor, M.B., Kihara, K., **Yoshimura, N.**: The cyclopentenone prostaglandin, 15-deoxy- $\Delta^{12,14}$ -PGJ<sub>2</sub>, attenuates the development of cyclophosphamide induced cystitis. *Urology*, 67: 435-439, 2006.
98. Masuda, H., Hayashi, Y., Chancellor, M.B., Kihara, K., de Groat, W.C., de Miguel, F., **Yoshimura, N.**: Roles of peripheral and central nicotinic receptors in the micturition reflex in rats. *Journal of Urology*, 176: 374-9, 2006.
99. Chuang, Y.C., Tu, C.H., Huang, C.C., Lin, H.J., Chiang, P.H., **Yoshimura, N.**, Chancellor, M.B.: Intraprostatic injection of botulinum toxin type-A relieves bladder outlet obstruction in human and induces prostate apoptosis in dogs. *BMC Urology*, 6: 12, 2006 (Online at: <http://www.biomedcentral.com/1471-2490/6/12>).
100. Masuda, N., Hayashi, Y., Matsuyoshi, H., Chancellor, M.B., de Groat, W.C., **Yoshimura, N.**: Characterization of hyperpolarization-activated current (I<sub>h</sub>) in dorsal root ganglion neurons innervating rat urinary bladder. *Brain Research*, 1096: 40-52, 2006.
101. Kim, Y., de Miguel, F., Usiene, I., Kwon, D., **Yoshimura, N.**, Huard, J., Chancellor, M.B.: Injection of skeletal muscle-derived cells into the penis improves erectile function. *International Journal of Impotence Research*, 18: 329-334, 2006.
102. Tyagi, P., Wu, P.C., Chancellor, M.B., **Yoshimura, N.**, Huang, L.: Recent advances in intravesical drug/gene delivery. *Molecular Pharmaceutics*, 3: 369-379, 2006.
103. Ogawa, T., Seki, S., Masuda, H., Igawa, Y., Nishizawa, O., Kuno, S., Chancellor, M.B., de Groat, W.C., **Yoshimura, N.**: Dopaminergic mechanisms controlling urethral function in rats. *Neurourology and Urodynamics*, 25: 480-489, 2006.
104. Tyagi, P., Banerjee, R.K., Basu, S., **Yoshimura, N.**, Chancellor, M.B., Huang, L.: Intravesical antisense therapy for cystitis using TAT-peptide nucleic acid conjugates. *Molecular Pharmaceutics*, 3: 398-406, 2006.
105. Tyagi, S., Tyagi, P., Van-lee, S., **Yoshimura, N.**, Chancellor, M.B., de Miguel, F.: Qualitative and quantitative expression profile of muscarinic receptors in human urothelium and detrusor. *Journal of Urology*, 176: 1673-1678, 2006.
106. Masuda, H., Kim, Y-T., Tyagi, S., de Miguel, F., **Yoshimura, N.**: Local effects of antimuscarinics. *Urologic Clinics of North America*, 33: 511-518, 2006.
107. Furuta, A., Thomas, C.A., Higaki, M., Chancellor, M.B., **Yoshimura, N.**, Yamaguchi, O.: The promise of  $\beta$ 3-adrenoceptor agonists to treat the overactive bladder. *Urologic Clinics of North America*, 33: 539-543, 2006.
108. Chuang, Y.C., Chiang, P.H., **Yoshimura, N.**, de Miguel, F., Chancellor, M.B.: Sustained beneficial effects of intraprostatic botulinum toxin type A on lower urinary tract symptoms and quality of life in men with benign prostatic hyperplasia. *BJU International*, 98: 1033-1037, 2006.
109. **Yoshimura, N.**, Bennett, N.E., Hayashi, Y., Ogawa, T., Nishizawa, O., Chancellor, M.B., de Groat, W.C., Seki, S.: Bladder overactivity and hyperexcitability of bladder afferent neurons following intrathecal

- delivery of nerve growth factor in rats. *Journal of Neuroscience*, 26: 10847-10855, 2006.
110. Matsuyoshi, H., Masuda, N., Chancellor, M.B., Erickson, V.L., Hirao, Y., de Groat, W.C., Wanaka, A., **Yoshimura, N.**: Expression of hyperpolarization-activated cyclic nucleotide-gated cation channels in rat dorsal root ganglion neurons innervating urinary bladder. *Brain Research*, 1119: 115-123, 2006.
  111. Kamo, I., Kaiho, Y., Canon, T., Chancellor, M.B., de Groat, W.C., Prantil, R.L., Vorp, D.A., **Yoshimura, N.**: Functional analysis of active urethral closure mechanisms under sneeze-induced stress condition in a rat model of birth trauma. *Journal of Urology*, 176: 2711-2715, 2006.
  112. Takimoto, K., Hayashi, Y., Ren, X., **Yoshimura, N.**: Species and tissue differences in the expression of DPPY splicing variants. *Biochemical and Biophysical Research Communications*, 348:1094-1100, 2006.
  113. Nishiguchi, J., Kwon, D.D., Kaiho, Y., Chancellor, M.B., Kumon, H., Snyder, P.B., **Yoshimura, N.**: Suppression of detrusor overactivity in rats with bladder outlet obstruction by a type 4 phosphodiesterase (PDE4) inhibitor. *BJU International*, 99: 680-686, 2007.
  114. Kaiho, Y., Kamo, I., Chancellor, M.B., Arai, Y., de Groat, W.C., **Yoshimura, N.**: Role of noradrenergic pathways in sneeze-induced urethral continence reflex in rats. *American Journal of Physiology Renal Physiology*, 292: F639-F646, 2007.
  115. Chuang, Y.C., **Yoshimura, N.**, Wu, M., Huang, C.C., Chiang, P.H., Tyagi, P., Chancellor, M.B.: Intraprostatic capsaicin injection as a novel model for nonbacterial prostatitis and effects of botulinum toxin A. *European Urology*, 51: 1119-1127, 2007.
  116. Prantil, R.L., Jankowski, R.J., Kaiho, Y., de Groat, W.C., Chancellor, M.B., **Yoshimura, N.**, Vorp, D.A.: Ex vivo biomechanical properties of the female urethra in a rat model of birth trauma. *American Journal of Physiology Renal Physiology*, 292: F1229-1237, 2007.
  117. Masuda, H., Ogawa, T., Chancellor, M.B., de Groat, W.C., **Yoshimura, N.**: Effects of anesthesia on the nitrenergic pathway during micturition reflex in rats. *BJU International*, 100: 175-180, 2007.
  118. Hiragata, S., Ogawa, T., Hayashi, Y., Tyagi, P., Seki, S., Nishizawa, O., de Miguel, F., Chancellor, M.B., **Yoshimura, N.**: Effects of IP-751, ajulemic acid, on bladder overactivity induced by bladder irritation in rats. *Urology*, 70: 202-208, 2007.
  119. Saitoh, C., Kitada, C., Uchida, W., Chancellor, M.B., de Groat, W.C., **Yoshimura, N.**: The differential contractile responses to capsaicin and anandamide in muscle strips isolated from the rat urinary bladder. *European Journal of Pharmacology*, 570: 182-187, 2007.
  120. Zeng, Y., Wu, X-X., Homma, Y., **Yoshimura, N.**, Iwaki, H., Kageyama, S., Yoshiki, T., Kakehi, Y.: Uroplakin III-delta4 messenger RNA as a promising marker to identify nonulcerative interstitial cystitis. *Journal of Urology*, 178: 1322-1327, 2007.
  121. Masuda, H., Kim, J-H, Kihara, K., Chancellor, M.B., de Groat, W.C., **Yoshimura, N.**: Inhibitory roles of peripheral nitrenergic mechanisms in capsaicin-induced detrusor overactivity in the rat. *BJU International*, 100: 912-918, 2007.
  122. Kirimoto, T., Nakano, K., Irimura, K., Hayashi, Y., Matsuura, N., Kuniwa, M., Oka, T., **Yoshimura, N.**: Beneficial effects of suplatast tosilate (IPD-1151T) in the rat cystitis model induced by intravesical hydrochloric acid. *BJU International*, 100: 935-939, 2007.
  123. Kato, R., Wolfe, D., Coyle, C.H., Huang, S., Wechuck, J.B., Goins, W.F., de Miguel, F., Tsukamoto, T., Nelson, J.B., Glorioso, J.C., Chancellor, M.B., **Yoshimura, N.**: Herpes simplex virus vector-mediated delivery of GDNF rescues erectile dysfunction following cavernous nerve injury. *Gene Therapy*, 14: 1344-1352, 2007.
  124. **Yoshimura, N.**: Lower urinary tract symptoms (LUTS) and bladder afferent activity. *Neurourology and Urodynamics*, 26 (6 Suppl): 908-913, 2007.
  125. Furuta, A., Jankowski, R.J., Pruchnic, R., **Yoshimura, N.**, Chancellor, M.B.: The potential of

- muscle-derived stem cells for stress urinary incontinence. *Expert Opinion on Biological Therapy*. 7: 1483-1486, 2007.
126. Thomas, C.A., Tyagi, S., **Yoshimura, N.**, Chancellor, M.B., Tyagi, P.: Effect of hyperforin-enriched extract on pro-ejaculatory effect of 8-hydroxy-2-(di-N-propylamino)tetralin in anesthetized rats. *Urology*, 70: 813-816, 2007.
  127. Furuta, A., Jankowski, R.J., Honda, M., Pruchnic, R., **Yoshimura, N.**, Chancellor, M.B.: State of the art of where we are at using stem cells for stress urinary incontinence. *Neurourology and Urodynamics*, 26: 966-971, 2007.
  128. Thomas, C., Kim, J.H., Torimoto, K., Kwon, D.D., Kim, Y.T., Tyagi, P., **Yoshimura, N.**, Chancellor, M.B.: Early capsaicin intervention for neurogenic bladder in a rat model of spinal cord injury. *Biomedical Research* 28: 255-259, 2007.
  129. Saitoh, C., Chancellor, M.B., de Groat W.C., **Yoshimura, N.**: Effects of intravesical instillation of resiniferatoxin on bladder function and nociceptive behavior in freely moving, conscious rats. *Journal of Urology*, 179: 359-364, 2008. (PMCID: #2655114)
  130. Tyagi, P., Chancellor, M.B., **Yoshimura, N.**, Huang, L.: Activity of different phospholipids in attenuating hyperactivity in bladder irritation. *BJU International*, 101: 627-632, 2008.
  131. Kaiho, Y., Nishiguchi, J., Kwon, D.D., Chancellor, M.B., Arai, Y., Snyder, P.B., **Yoshimura, N.**: The effects of a type 4 phosphodiesterase (PDE4) inhibitor and the muscarinic cholinergic antagonist tolterodine tartrate on detrusor overactivity in female rats with bladder outlet obstruction. *BJU International*, 101: 615-620, 2008.
  132. Miyazato, M., Sasatomi, K., Hiragata, S., Sugaya, K., Chancellor, M.B., de Groat, W.C., **Yoshimura, N.**: GABA-receptor activation in the lumbosacral spinal cord reduces detrusor overactivity in spinal cord injured rats. *Journal of Urology*, 179: 1178-1183, 2008. (PMCID: #2744108)
  133. Ogawa, T., Sasatomi, K., Hiragata, S., Seki, S., Nishizawa, O., Chermansky, C.J., Pflug, B.R., Nelson, J.B., Chancellor, M.B., **Yoshimura, N.**: Therapeutic effects of endothelin-A receptor antagonist on bladder overactivity in rats with chronic spinal cord injury. *Urology*, 71: 341-345, 2008.
  134. Tyagi, P., Chen, X., Hayashi, Y., **Yoshimura, N.**, Chancellor, de Miguel, F.: Proteomic investigation on chronic bladder irritation in the rat. *Urology*, 71: 536-540, 2008.
  135. Furuta, A., Kita, M., Suzuki, Y., Egawa, S., Chancellor, M.B., de Groat, W.C., **Yoshimura, N.**: Association of overactive bladder and stress urinary incontinence in rats with pudendal nerve ligation injury. *American Journal of Physiology Regulatory, Integrative and Comparative Physiology*, 294: R1510-1516, 2008.
  136. Masuda, H., Kihara, K., Saito, K., Matsuoka, Y., Yoshida, S., Chancellor, M.B., de Groat, W.C., **Yoshimura, N.**: Reactive oxygen species mediated detrusor overactivity via sensitization of afferent pathway in the bladder of anesthetized rats. *BJU International*, 101: 775-780, 2008.
  137. **Yoshimura, N.**, Kaiho, Y., Miyazato, M., Yunoki, T., Tai, C., Chancellor, M.B., Tyagi, P.: Therapeutic receptor targets for lower urinary tract dysfunction. *Naunyn-Schmiedeberg's Archives of Pharmacology*, 377: 437-448, 2008.
  138. Gray, M.A., Wang, E.C., Sacks, M.S., **Yoshimura, N.**, Chancellor, M.B., Nagatomi, J.: Time-dependent alterations of select genes in streptozotocin-induced diabetic rat bladder. *Urology*, 71: 1214-1219, 2008
  139. Coyle, C.H., Philips, B.J., Morrisroe, S.N., Chancellor, M.B., **Yoshimura, N.**: Antioxidant effects of green tea and its polyphenols on bladder cells. *Life Sciences*, 83: 12-18, 2008.
  140. Miyazato, M., Kaiho, Y., Kamo, I., Chancellor, M.B., Sugaya, K., de Groat, W.C., **Yoshimura, N.**: Effect of duloxetine, a norepinephrine and serotonin reuptake inhibitor, in sneeze-induced urethral continence reflex in rats. *American Journal of Physiology Renal Physiology*, 295: F264-271, 2008.

141. Miyazato, M., Sasatomi, K., Hiragata, S., Sugaya, K., Chancellor, M.B., de Groat, W.C., **Yoshimura, N.**: Suppression of detrusor-sphincter dysynergia by GABA-receptor activation in the lumbosacral spinal cord in spinal cord injured rats. *American Journal of Physiology Regulatory, Integrative and Comparative Physiology*, 295: R336-342, 2008. (PMCID: #2494799)
142. Chuang, Y.C., **Yoshimura, N.**, Huang, C.C., Wu, M., Chiang P.H., Chancellor, M.B.: Intraprostatic botulinum toxin A injection inhibits COX-2 expression and suppresses prostatic pain on capsaicin induced prostatitis model in rat. *Journal of Urology*, 180: 742-748, 2008.
143. Furuta, A., Jankowski, R.J., Pruchnic, R., Honda, M., Kim, D.K., Egawa, S., **Yoshimura, N.**, Chancellor, M.B.: Physiological effects of human muscle-derived stem cell implantation on urethral smooth muscle function. *International Urogynecology Journal Pelvic Floor Dysfunction*, 19: 1229-1234, 2008.
144. Sugino, Y., Kanematsu, A., Hayashi, Y., Haga, H., **Yoshimura, N.**, Yoshimura, K., Ogawa, O.: Voided stain on paper method for analysis of mouse urination. *Neurourology and Urodynamics*, 27: 548-552, 2008.
145. Sasatomi, K., Hiragata, S., Miyazato, M., Chancellor, M.B., Morris, S.M., **Yoshimura, N.**: Nitric oxide-mediated suppression of detrusor overactivity by arginase inhibitor in rats with chronic spinal cord injury. *Urology*, 72: 696-700, 2008.
146. Chuang, Y.C., Thomas, C.A., Tyagi, S., **Yoshimura, N.**, Tyagi, P., Chancellor, M.B.: Human urine with solifenacin intake, but not tolterodine or darifenacin intake, blocks detrusor overactivity. *International Urogynecology Journal Pelvic Floor Dysfunction*, 19:1353-1357, 2008.
147. Masuda, N., Masuda, H., Matsuyoshi, H., Chancellor, M.B., de Groat, W.C., **Yoshimura, N.**: Effects of intrathecal injection of a hyperpolarization-activated channel (Ih) inhibitor ZD7288 on bladder function in urethane-anesthetized rats. *Neurourology and Urodynamics*, 27: 838-844, 2008.
148. Hayn, M.H., Ballesteros, I., de Miguel, F., Coyle, C.H., Tyagi, S., **Yoshimura, N.**, Chancellor, M.B., Tyagi, P.: Functional and immunohistochemical characterization of CB1 and CB2 receptors in rat bladder. *Urology*, 72: 1174-1178, 2008.
149. Ueda, T., Nakagawa, M., Okamura, M., Tanoue, H., Yoshida, H., **Yoshimura, N.**: New cystoscopic diagnosis for interstitial cystitis/painful bladder syndrome using narrow-band imaging system. *International Journal of Urology*, 15: 1039-1043, 2008.
150. Kato, R., Wolfe, D., Coyle, C.H., Wechuck, J.B., Tyagi, P., Tsukamoto, T., Nelson, J.B., Glorioso, J.C., Chancellor, M.B., **Yoshimura, N.**: Herpes simplex virus vector-mediated delivery of neurturin rescues erectile dysfunction of cavernous nerve injury. *Gene Therapy*, 16: 26-33, 2009. (PMCID: #2615792)
151. Smaldone, M., Vodovotz, Y., Tyagi, V., Philips, B., Barclay, D., **Yoshimura, N.**, Chancellor, M.B., Tyagi, P.: Multiplex analysis of urinary cytokines levels in a rat model of cyclophosphamide induced cystitis. *Urology*, 73: 421-426, 2009.
152. Kim, D.Y., Jankowski, R.J., Pruchnic, R., deMiguel, F., **Yoshimura, N.**, Honda, M., Furuta, A., Chancellor, M.B.: The in vitro and in vivo effect of lidocaine on rat muscle-derived cells for treatment of stress urinary incontinence. *Urology*, 73: 437-441, 2009.
153. Furuta, A., Asano, K., Egawa, S., de Groat, W.C., Chancellor, M.B., **Yoshimura, N.**: Roles of  $\alpha_2$ -adrenoceptors and glutamate mechanisms in the external urethral sphincter continence reflex in rats. *Journal of Urology*, 181, 1467-1473, 2009.
154. Yokoyama, H., Sasaki, K., Franks, M.E., Goins, W.F., Goss, J.R., de Groat, W.C., Glorioso, J.C., Chancellor, M.B., **Yoshimura, N.**: Gene therapy for bladder overactivity and nociception with herpes simplex virus vectors expressing preproenkephalin. *Human Gene Therapy*, 20: 63-71, 2009. (PMCID: #2855255)
155. Tyagi, P., Thomas, C.A., **Yoshimura, N.**, Chancellor, M.B.: Investigations into the presence of

- functional  $\beta$ 1,  $\beta$ 2 and  $\beta$ 3-adrenoceptors in urothelium and detrusor of human bladder. *International Brazilian Journal of Urology*, 35: 76-83, 2009.
156. Wang, C.C., Nagatomi, J., Toosi, K.K., **Yoshimura, N.**, Hsieh, J.H., Chancellor, M.B., Sacks, M.S.: Diabetes induced alternations in the biomechanical properties of the urinary bladder wall in rats. *Urology*, 73: 911-915, 2009.
  157. Tyagi, V., Philips, B.J., Su, R., Smaldone, M.C., Erickson, V.L., Chancellor, M.B., **Yoshimura, N.**, Tyagi, P.: Differential expression of functional cannabinoid receptors in detrusor and urothelium of human bladder, *Journal of Urology*, 181: 1932-1938, 2009.
  158. Hayashi, Y., Takimoto, K., Chancellor, M.B., Erickson, K.A., Erickson, V.L., Kirimoto, T., Nakano, K., de Groat, W.C., **Yoshimura, N.**: Bladder hyperactivity and increased excitability of bladder afferent neurons associated with reduced expression of Kv1.4  $\alpha$ -subunit in rats with cystitis. *American Journal of Physiology Regulatory, Integrative and Comparative Physiology*, 296: R1661-1670, 2009. (PMCID: #2689836)
  159. Kim, D.K., Kaufman, J., Guan, Z., Tyagi, P., **Yoshimura, N.**, Killinger, K.A., Peters, K.M., Chancellor, M.B.: Cystometric changes in pressure-guided acute distension rat model of the underactive bladder. *Tzu Chi Medical Journal*, 21: 136–139, 2009.
  160. Goins, W.F., Goss, J.R., Chancellor, M.B., de Groat, W.C., Glorioso, J.C., **Yoshimura, N.**: Herpes simplex virus vector-mediated gene delivery for the treatment of lower urinary tract pain. *Gene Therapy*, 16: 558–569, 2009. (PMCID: #2732574)
  161. Miyazato, M., Sugaya, K., Goins, W.F., Wolfe, D., Goss, J.R., Chancellor, M.B., de Groat, W.C., Glorioso, J.C., **Yoshimura, N.**: Herpes simplex virus vector-mediated gene delivery of glutamic acid decarboxylase reduces detrusor overactivity in spinal cord injured rats. *Gene Therapy*, 16: 660-668, 2009. (NIHMSID: #205651)
  162. Chuang, Y.C., Tyagi, P., Huang, C.C., **Yoshimura, N.**, Wu, M., Kaufman, J., Chancellor, M.B.: Urodynamic and immunohistochemical evaluation of intravesical botulinum toxin a delivery using liposomes. *Journal of Urology*, 182: 786-792, 2009.
  163. Chuang, Y.C., **Yoshimura, N.**, Huang, C.C., Wu, M., Chiang, P.H., Chancellor, M.B.: Intravesical botulinum toxin A administration inhibits COX-2 and EP4 expression and suppresses bladder hyperactivity in cyclophosphamide induced cystitis in rats. *European Urology*, 56: 159-167, 2009.
  164. Philips, B.J., Coyle, C.H., Morrisroe, S.N., Chancellor, M.B., **Yoshimura, N.**: Induction of apoptosis in human bladder cancer cells by green tea catechins. *Biomedical Research*, 30: 208-215, 2009.
  165. Masuda, H., Chancellor, M.B., Kihara, K., Sakai, Y., Koga, F., Azuma, H., de Groat, W.C., **Yoshimura, N.**: Effects of cholinesterase inhibition in supraspinal and spinal neural pathways on micturition reflex in rats. *BJU International*, 104: 1163-1169, 2009.
  166. Masuda, H., Ichiyanagi, N., Yokoyama, M., Sakai, Y., Kihara, K., Chancellor, M.B., de Groat, W.C., **Yoshimura, N.**: Muscarinic receptor activation in the lumbosacral spinal cord ameliorates bladder irritation in rat cystitis models. *BJU International*, 2009 104: 1531-1537, 2009.
  167. Furuta, A., Naruoka, T., Suzuki, Y., Egawa, S., Erickson, V.L., Chancellor, M.B., **Yoshimura, N.**:  $\alpha$ <sub>2</sub>-Adrenoceptor as a new target for stress urinary incontinence. *Lower Urinary Tract Symptoms (LUTS)*, 1 (supplement 1): S26-29, 2009.
  168. Hayashi, Y., Ueda, T., Kirimoto, T., Nakano, K., Oka, T., Kiniwa, M., **Yoshimura, N.**: Interstitial cystitis and the therapeutic effect of suplatast tosilate. *Lower Urinary Tract Symptoms (LUTS)*, 1 (supplement 1): S30–32, 2009.
  169. Higaki, M., Masuda, N., Saitoh, C., Yamamoto, T., **Yoshimura, N.**, Uchida, W.: Functional role of

- $\beta$ 3-adrenoreceptors in the bladder. *Lower Urinary Tract Symptoms (LUTS)*, 1 (supplement 1): S33–35, 2009.
170. Kamo, I., Kaiho, Y., Miyazato, M., Torimoto, K., **Yoshimura, N.**: Two kinds of urinary continence reflexes during abrupt elevation of intravesical pressure in rats. *Lower Urinary Tract Symptoms (LUTS)*, 1 (supplement 1): S40–43, 2009.
  171. Kato, R., Bennett, N.E., Kim, J.H., Wolfe, D., Coyle, C.H., Huang, S., Wechuck, J.B., Goins, W.F., De Miguel, F., Tsukamoto, T., Nelson, J.B., Glorioso, J.C., Chancellor, M.B., **Yoshimura, N.**: Gene therapy for neurogenic erectile dysfunction. *Lower Urinary Tract Symptoms (LUTS)*, 1 (supplement 1): S44–47, 2009.
  172. Kim, D.K., **Yoshimura, N.**, Tyagi, P., Chancellor, M.B.: Role of sarco/endoplasmic reticulum calcium atpase in lower urinary tract smooth muscles. *Lower Urinary Tract Symptoms (LUTS)*, 1 (supplement 1): S50–52, 2009.
  173. Kim, Y-T., Chancellor, M.B., Tyagi, P., **Yoshimura, N.**, Masuda, H., Kim, D.K., Kwon, D.D., Chuang, Y.C.: Localized effects of antimuscarinics in the bladder. *Lower Urinary Tract Symptoms (LUTS)*, 1 (supplement 1): S56–58, 2009.
  174. Lu, S-H., Chancellor, M.B., Pruchnic, R., Jankowski, R., Lee, J.Y., **Yoshimura, N.**, Yokoyama, T.: Muscle-derived stem cell therapy for stress urinary incontinence. *Lower Urinary Tract Symptoms (LUTS)*, 1 (supplement 1): S62–65, 2009.
  175. Miyazato, M., **Yoshimura, N.**, Nishijima, S., Sugaya, K.: Roles of glycinergic and gamma-aminobutyric-ergic mechanisms in the micturition reflex in rats. *Lower Urinary Tract Symptoms (LUTS)*, 1 (supplement 1): S70–73, 2009. (PMCID: #2910440)
  176. Ogawa, T., Seki, S., Hiragata, S., Sasatomi, K., Kamo, I., Yokoyama, H., Nishizawa, O., **Yoshimura, N.**: Nerve growth factor, endothelin and spinal cord injury in lower urinary tract dysfunction. *Lower Urinary Tract Symptoms (LUTS)*, 1 (supplement 1): S77–79, 2009.
  177. Torimoto, K., Sasaki, K., Matsuyoshi, H., Matsumoto, Y., Hirao, Y., Chancellor, M.B., **Yoshimura, N.**: Lower urinary tract: diabetes mellitus-focused on recent experimental results. *Lower Urinary Tract Symptoms (LUTS)*, 1 (supplement 1): S87–89, 2009.
  178. Tyagi, P., Chuang, Y.C., **Yoshimura, N.**, Kaufmann, J., Chancellor, M.B.: Bladder instillation of liposomes for bladder coating and drug delivery platform. *Lower Urinary Tract Symptoms (LUTS)*, 1 (supplement 1): S90–93, 2009.
  179. Wang, C.C., Nagatomi, J., Toosi, K.K., **Yoshimura, N.**, Sacks, M.S., Chancellor, M.B.: Biomechanics of diabetic bladders. *Lower Urinary Tract Symptoms (LUTS)*, 1 (supplement 1): S94–97, 2009.
  180. Tyagi, P., Tyagi, V., **Yoshimura, N.**, Witteemer, E., Barclay, D. Loughran, P.A., Zamora, R., Vodovotz, Y.: Gender-based reciprocal expression of transforming growth factor-beta1 and the inducible nitric oxide synthase in a rat model of cyclophosphamide-induced cystitis. *Journal of Inflammation*, 6: 23, 2009 (online journal: <http://www.journal-inflammation.com/content/6/1/23>).
  181. Miyazato, M., Kaiho, Y., Kamo, I., Kitta, T., Chancellor, M.B., Sugaya, K., Arai, Y., de Groat, W.C., **Yoshimura, N.**: Role of spinal serotonergic pathways in sneeze-induced urethral continence reflex in rats. *American Journal of Physiology Renal Physiology*, 297: F1024-1031, 2009.
  182. Matsumoto, Y., Torimoto, K., Matsuyoshi, H., Hirayama, A., Fujimoto, K., **Yoshimura, N.**, Hirao, Y.: Long-term effects of diabetes mellitus on voiding function in a new model of type 2 diabetes mellitus, the Spontaneously Diabetic Torii (SDT) rat. *Biomedical Research*, 30: 331-335, 2009.
  183. Tyagi, P., Hsieh, V.C., **Yoshimura, N.**, Kaufman, J., Chancellor, M.B.: Instillation of liposomes vs dimethyl sulphoxide or pentosan polysulphate for reducing bladder hyperactivity. *BJU International*, 104: 1689-1692, 2009.

184. de Groat, W.C., **Yoshimura, N.**: Changes in afferent activity after spinal cord injury . *Neurourology and Urodynamics*, 29:63-76, 2010. (PMCID: #2891065)
185. Saitoh, C., Yokoyama, H., Chancellor, M.B., de Groat, W.C., **Yoshimura, N.**: Comparison of voiding function and nociceptive behavior in two rat models of cystitis induced by cyclophosphamide or acetone. *Neurourology and Urodynamics*, 29: 501-505, 2010. (PMCID: #2846986)
186. Matsumoto, Y., Miyazato, M., Furuta, A., Torimoto, K., Hirao, Y., Chancellor, M.B., **Yoshimura, N.**: Differential roles of M2 and M3 muscarinic receptor subtypes in modulation of bladder afferent activity in rats. *Urology*, 75: 862-867, 2010. (PMCID: #2871158)
187. Kita, M., Yunoki, T., Takimoto, K., Miyazato, M., Kita, K., de Groat, W.C., Kakizaki, H., **Yoshimura, N.**: Effects of bladder outlet obstruction on properties of Ca<sup>2+</sup>-activated K<sup>+</sup> channels in rat bladder. *American Journal of Physiology Regulatory, Integrative and Comparative Physiology*, 298: R1310–R1319, 2010. (PMCID: #2867513)
188. Kitta, T., Miyazato, M., Chancellor, M.B., de Groat, W.C., Nonomura, K., **Yoshimura, N.**:  $\alpha_2$ -Adrenergic receptor blockade potentiates the effect of duloxetine, a serotonin and norepinephrine reuptake inhibitor, on sneeze-induced urethral continence reflex in rats. *Journal of Urology*, 184: 762-768, 2010. (PMCID: #2946347)
189. Miyazato, M., Sugaya, K., Saito, S., Chancellor, M.B., Goins, W.F., Goss, J.R., de Groat, W.C., Glorioso, J.C., **Yoshimura, N.**: Suppression of detrusor-sphincter dyssynergia by herpes simplex virus vector-mediated gene delivery of glutamic acid decarboxylase in spinal cord injured rats. *Journal of Urology*, 184: 1204-1210, 2010. (PMCID: #2921014)
190. **Yoshimura, N.**, Kato, R., Chancellor, M.B., Nelson, J.B., Glorioso, J.C.: Gene therapy as future treatment of erectile dysfunction. *Expert Opinion on Biological Therapy*, 10: 1305-1314, 2010.
191. Prantil-Baun, R., de Groat, W.C., Miyazato, M., Chancellor, M.B., **Yoshimura, N.**, Vorp, D.A.: Ex vivo biomechanical, functional, and immunohistochemical alterations of adrenergic responses in the female urethra in a rat model of birth trauma. *American Journal of Physiology Renal Physiology*, 299: F316–F324, 2010.
192. Tyagi, P., Barclay, D., Zamora, R., **Yoshimura, N.**, Peters, K., Vodovotz, Y., Chancellor, M.B.: Urine cytokines suggest an inflammatory response in the overactive bladder: a pilot study. *International Urology and Nephrology*, 42: 629-635, 2010.
193. Chuang, Y.C., **Yoshimura, N.**, Huang, C.C., Wu, M., Tyagi, P., Chancellor, M.B.: Expression of E-series prostaglandin (EP) receptors and urodynamic effects of an EP receptor antagonist on cyclophosphamide-induced overactive bladder in rats. *BJU International*, in press.
194. Ochodnický, P., Cruz, C.D., **Yoshimura, N.**, Michel, M.C.: Nerve growth factor in bladder dysfunction: contributing factor, biomarker and therapeutic target. *Neurourology and Urodynamics*, in press.
195. Chuang, Y.C., Tyagi, P., Huang, H.Y., **Yoshimura, N.**, Wu, M., Kaufman, J., Chancellor, M.B.: Intravesical immune suppression by liposomal tacrolimus in cyclophosphamide-induced inflammatory cystitis. *Neurourology and Urodynamics*, in press.
196. Goss, J.R., Cascio, M., Goins, W.F., Huang, S., Krisky, D.M., Clarke, R.J., Johnson, J.W., Yokoyama, H., **Yoshimura, N.**, Gold, M.S., Glorioso, J.C.: HSV delivery of a ligand-regulated endogenous ion channel gene to sensory neurons results in pain control following channel activation. *Molecular Therapy*, in press.

## 2. Reviews, books and book chapters

1. de Groat, W.C., Booth, A.M. and **Yoshimura, N.**: Neurophysiology of micturition and its modification in animal models of human disease. In *The Autonomic Nervous System, Vol. 3, Nervous Control of the*

- Urogenital System, edited by C.A. Maggi, Switzerland: Harwood Academic Publishers, pp. 227-290 (Chapter 8), 1993.
2. de Groat, W.C., Roppolo, J.R., **Yoshimura, N.** and Sugaya, K.: Neural control of the urinary bladder and colon. In *Innervation of The Gut: Pathophysiological Implication*, edited by Y. Taché, D.L. Wingate and T.F. Burks, Florida: CRC Press, Inc., pp. 167-190 (Chapter 14), 1994.
  3. de Groat, W.C., Kruse, M.N., Vizzard, M.A., Cheng, C.-L., Araki, I and **Yoshimura, N.**: Modification of urinary bladder function after neural injury. In *Advance in Neurology, Vol. 72, Neuronal Regeneration, Reorganization and Repair*, edited by F.J. Seil, New York: Raven Press, pp. 347-364 (chapter 33), 1997.
  4. Chancellor, M.B., **Yoshimura, N.**, Pruchnic, R. and Huard, J.: Gene therapy strategies for urological dysfunction. *Trends in Molecular Medicine*, 7: 301-306, 2001.
  5. **Yoshimura, N.** and Chancellor, M.B.: Interstitial cystitis and bladder research: progress and future directions. *Reviews in Urology*, 3: 94-98, 2001.
  6. Chancellor, M.B. and **Yoshimura, N.**: Physiology and pharmacology of the bladder and urethra. In *Campbell's Urology (Eighth edition)*, edited by P.C. Walsh, W.B. Saunders Company, Volume 2, Part V, pp. 831-886 (Chapter 14), 2002.
  7. Seki, S., **Yoshimura, N.**: Lower urinary tract dysfunction after spinal cord injury. *Advances in Clinical Neuroscience*, 12: 271- 292, 2002.
  8. **Yoshimura, N.**, Chancellor M.B.: Neurophysiology of Lower Urinary Tract Function and Dysfunction. *Review in Urology* 5 (Suppl 8): S3-S10, 2003.
  9. **Yoshimura, N.** and Chancellor, M.B.: Differential diagnosis and treatment of impaired bladder emptying. *Reviews in Urology* 6 (Suppl 1), S24-S31, 2004.
  10. Chancellor, M.B. and **Yoshimura, N.**: Neurophysiology of stress urinary incontinence. *Reviews in Urology* 6 (Suppl 3), S19-S28, 2004.
  11. **Yoshimura, N.**, Seki, S. and Chancellor, M.B.: Integrated physiology of the lower urinary tract. In *Textbook of Neurogenic Bladder; Adults and Children*, edited by J. Corcos and E. Schick, London: Martin Dunitz, Taylor & Francis Group plc., pp. 73-87 (Chapter 6), 2004.
  12. Seki, S., **Yoshimura, N.** and Nishizawa, O.: Pathologies of the basal ganglia (Parkinson's disease and Huntington's disease). In *Textbook of Neurogenic Bladder; Adults and Children*, edited by J. Corcos and E. Schick, London: Martin Dunitz, Taylor & Francis Group plc., pp. 259-264 (Chapter 22), 2004.
  13. **Yoshimura, N.**, Chancellor, M.B.: Duloxetine: a viewpoint. *Drugs*. 64: 2574-2575, 2004.
  14. Griffiths, D., Kondo, A., Bauer, S., Diamant, N., Liao, L., Lose, G., Schäfer, W., **Yoshimura, N.**: Dynamic testing. In *Incontinence (Volume 1): Basics & Evaluation*, edited by P. Abrams, L. Cardozo, S., Khoury and A. Wein, Paris: Health Publication Ltd. (WHO), pp. 585-673, 2005.
  15. **Yoshimura, N.**, Birder, L.A.: Urothelial and afferent mechanisms inducing bladder pain in interstitial cystitis. *Journal of Neuropathic Pain & Symptom Palliation*, 2: 1-22, 2006.
  16. **Yoshimura, N.**, Chancellor, M.B.: Physiology and pharmacology of the bladder and urethra. In *Campbell-Walsh Urology (Ninth edition)*, edited by A.J. Wein, Saunders Elsevier, Volume 3, Section XIV, pp. 1922-1972 (Chapter 56), 2006.
  17. **Yoshimura N.**, Birder, L.A.: Interstitial cystitis and related painful bladder syndromes: pathophysiology. In: *Chronic Abdominal and Visceral Pain: Theory and Practice*, edited by P.J. Pasricha, W.D. Willis and G.F. Gebhart, New York: Informa Healthcare USA, pp. 495-520 (Section V, Chapter33), 2007.
  18. Furuta, A., Jankowski, R.J., Pruchnic, R., **Yoshimura, N.**, Chancellor, M.B.: The promise of stem cell therapy to restore urethral sphincter function. *Current Urology Reports*, 8: 373-378, 2007.

19. Furuta, A., Carr, L.K., **Yoshimura, N.**, Chancellor, M.B.: Advances in the understanding of stress urinary incontinence and the promise of stem-cell therapy. *Reviews in Urology* 9: 106-112, 2007.
20. Ogan, K., Kawai, K., Gill, I.S., Naito, S., Isaacs, W.B., Suzuki, K., Kibel, A.S., Kakehi, Y., **Yoshimura, N.**, Yokoyama, O., Chancellor, M.B., Takahashi, S.: The Second Joint Meeting of American Urological Association (AUA)/Japanese Urological Association (JUA) International Program on the 102nd Annual Meeting of American Urological Association at Anaheim 2007. *International Journal of Urology* 14: 1116-1123, 2007.
21. **Yoshimura, N.**, Chancellor, M.B., Tyagi, P.: Basic research perspectives of painful bladder syndrome/interstitial cystitis (IC/PBS). In 2<sup>nd</sup> ICICJ, International Consultation on Interstitial Cystitis, Japan, edited by T. Ueda, P. Hanno, J.Nordling and N. Yoshimura, Kyoto: Comfortable Urology Network (CUN), pp. 96-103, 2008.
22. Brawer, M.K., Makarov, D.V., Partin, A.W., Roehrborn, C.G., Nickel, J.C., Lu, S.H., **Yoshimura, N.**, Chancellor, M.B., Assimos, D.G.: Best of the 2008 AUA Annual Meeting: Highlights from the 2008 Annual Meeting of the American Urological Association. *Reviews in Urology* 10: 136-156, 2008.
23. **Yoshimura, N.**: Underlying mechanisms of interstitial cystitis/painful bladder syndrome (IC/PBS). *Nishinohon Journal of Urology*, 71(6): 243-252, 2009.
24. de Groat WC, **Yoshimura N.**: Afferent nerve regulation of bladder function in health and disease. In *Handbook of Experimental Pharmacology*, Vol. 194, Sensory Nerves, edited by B.J. Canning and D. Spina, Springer Berlin Heidelberg, pp. 91-138, 2009.
25. Brawer, M.K., Loeb, S., Partin, A.W., **Yoshimura, N.**, Chancellor, M.B., Roehrborn, C.G., Assimos, D.G., Nickel, J.C., Shuch, B., Pouliot, F., Beldegrun, A.S., Shapiro, E.: Best of the 2009 AUA Annual Meeting: Highlights from the 2009 Annual Meeting of the American Urological Association. *Reviews in Urology*, 11: 82-107, 2009.
26. Tyagi, P., Tyagi, V., **Yoshimura, N.**, Chancellor, M.B., Yamaguchi, O.:  $\beta_3$ -Adrenoceptor agonists for the treatment of overactive bladder. *Drugs of the Future*. 34: 635-640, 2009.
27. Tyagi, P., Tyagi, V., **Yoshimura, N.**, Chancellor, M.B.: Functional role of cannabinoid receptors in urinary bladder. *Indian Journal of Urology*, 26: 26-35, 2010.
28. **Yoshimura, N.**, Chancellor, M.B.: Physiology of micturition. In *Textbook of Female Urology and Urogynecology (Third Edition)*, edited by L. Cordozo and D.R. Staskin, Informa UK Ltd, Volume 1, Section 3, pp. 200-211 (Chapter 23), 2010.

#### LIST of CURRENT RESEARCH INTERESTS:

1. To understand the mechanism inducing hyperexcitability of visceral afferent pathways innervating the lower urinary tract in relation with the pathophysiological conditions such as spinal cord injury, peripheral nerve injury, inflammation and diabetes mellitus
2. To identify the role of neurotrophic factors in controlling the activity of visceral afferent neurons
3. To examine the feasibility of gene therapy for lower urinary tract pain and diabetic bladder dysfunction
4. To understand the function of central nervous system in the control of the lower urinary tract and its alterations in the central nervous system than induce bladder overactivity in the animals models of human disease such as Parkinson's disease.
5. To understand the neural mechanisms controlling urethral closure function against stress urinary incontinence