

**Current Appointments**

R. Christian B. Evensen Professor of Urology.  
Associate Professor of Urology, Surgery, and Oncology  
Director of Urologic Oncology  
The James Buchanan Brady Urological Institute.  
Johns Hopkins Hospital

**Personal Data**

Johns Hopkins Medical Institution  
The James Buchanan Brady Urological Institute  
600 N. Wolfe Street, Marburg 409  
Baltimore MD 21287  
Office 443-287-0385  
Fax 410-502-7711  
email: tbivala1@jhmi.edu

**Education/Training**

**Undergraduate**

1997 Bachelor of Science, Tulane University, Cell and Molecular Biology

**Doctoral/Graduate**

1999 – 2004 Doctor of Medicine and Doctor of Philosophy, Tulane University School of Medicine  
PhD Thesis Title: *“Role of the Vascular Endothelium in Erectile Physiology and Disease: Influence of In Vivo Gene Transfer of eNOS and EC-SOD.”*  
Advisors: Philip J. Kadowitz PhD and Wayne J.G. Hellstrom, MD

**Postdoctoral**

2004 – 2005 Johns Hopkins Medical Institution, Department of Surgery – Intern  
Chair: Julie Freischlag MD  
2005 – 2007 Johns Hopkins Medical Institution, Department of Urology – Resident  
Chair: Alan Partin MD PhD  
2007 – 2008 Johns Hopkins Medical Institution, American Urological Association Foundation Astellas  
Foundation USA Scholars, MD/PhD Fellowship  
Title: “Molecular Mechanisms of Priapism: Nitric Oxide Imbalance”  
Advisor: Arthur L. Burnett, MD  
2008 – 2009 Johns Hopkins Medical Institution, Department of Urology – Chief Resident  
Chair: Alan Partin MD PhD

**Professional Experience**

2010 – 2013 Assistant Professor of Urology and Oncology  
Johns Hopkins University  
2013 – present Associate Professor of Urology, Surgery, and Oncology  
Johns Hopkins University

**RESEARCH ACTIVITIES**

**Publications**

1. H.C. Champion, C.C. Erickson III, M.L. Simoneaux, **T.J. Bivalacqua**, W.A. Murphy, D.H. Coy and P.J. Kadowitz. Proadrenomedullin NH<sub>2</sub>-Terminal 20 Peptide has cAMP-Mediated Activity in the Mesenteric Vascular Bed of the Cat. *Peptides* 17:1379-1387, 1996.

2. H.C. Champion, J.A. Santiago, M.A. Czaplá, **T.J. Bivalacqua**, C. Ilgenfritz and P.J. Kadowitz. Comparison of Responses to T-kinin and Bradykinin in the Mesenteric Vascular Bed of the Cat. *Peptides* 18:1357-1364, 1997.
3. H.C. Champion, **T.J. Bivalacqua**, D.G. Lambert, S.M. McWilliams, J.E. Zadina, A.J. Kastin and P.J. Kadowitz. Endomorphin 1 and 2, the Endogenous  $\mu$ -Opioid Agonists, Produce Biphasic Changes in Systemic Arterial Pressure in the Cat. *Life Science* 63:PL131-PL136, 1998.
4. H.C. Champion, **T.J. Bivalacqua**, A. Rauchwarger, S.M. McWilliams, D.B. McNamara and P.J. Kadowitz. Analysis of Vasodepressor Responses of Nociceptin and Nociceptin Analogs in the Systemic Vascular Bed of the Anesthetized Rabbit *In Vivo*. *Journal of Cardiovascular Pharmacology and Therapeutics* 3:247-252, 1998.
5. **T.J. Bivalacqua**, M. Rajasekaran, H.C. Champion, R. Wang, S.C. Sikka, P.J. Kadowitz, and W.J.G. Hellstrom. The Influence of Castration on Pharmacological Induction of Penile Erection in the Cat. *Journal of Andrology* 19:551-557, 1998.
6. H.C. Champion, **T.J. Bivalacqua**, R. Wang, W.J.G. Hellstrom and P.J. Kadowitz. [Tyr<sup>1</sup>]- Nociceptin and Nociceptin have Similar Naloxone-Insensitive Erectile Activity in the Cat. *Journal of Andrology* 19:747-753, 1998.
7. H.C. Champion, **T.J. Bivalacqua**, D.E. Friedman, J.E. Zadina, A.J. Kastin, and P.J. Kadowitz. Nitric Oxide Mediates Vasodilator Response to Endomorphin 1, but Not Nociceptin/OFQ, in the Hindquarters Vascular Bed of the Rat. *Peptides* 19:1595-1602, 1998.
8. **T.J. Bivalacqua**, A. Dalal, D.G. Lambert, H.C. Champion, and P.J. Kadowitz. Effects of Candesartan and PD 123319 on Responses to Angiotensin II in the Anesthetized Mouse. *Journal of American Society of Nephrology* 10:S98-S100, 1999.
9. H.C. Champion, **T.J. Bivalacqua**, D.L. Lambert, D.B. McNamara, and P.J. Kadowitz. Analysis of the Effects of Candesartan on Responses to Angiotensin II in the Hindquarters Vascular Bed of the Cat. *Journal of American Society of Nephrology* 10:S101-S103, 1999.
10. H.C. Champion, **T.J. Bivalacqua**, D.G. Lambert, D.B. McNamara, and P.J. Kadowitz. The Influence of Candesartan and PD123319 on Responses to Angiotensin II in the Hindquarters Vascular Bed of the Rat. *Journal of American Society of Nephrology* 10:S95-S97, 1999.
11. H.C. Champion, **T.J. Bivalacqua**, R. Wang, P.J. Kadowitz, L.K. Keefer, J.E. Saavedra, Hrabie, P.C. Doherty, and W.J.G. Hellstrom. Induction of Penile Erection by Intracavernosal and Transurethral Administration of Novel Nitric Oxide Donors in the Cat. *Journal of Urology* 161:2013-2019, 1999.
12. H.C. Champion, **T.J. Bivalacqua**, F.M. D'Souza, L.A. Ortiz, J.R. Jeter, K. Toyoda, D.D. Heistad, A.L. Hyman, and P.J. Kadowitz. Gene-Transfer of Endothelial Nitric Oxide Synthase to the Lung of the Mouse *In Vivo*: Effect of Agonist-Induced and Flow-Mediated Responses. *Circulation Research* 84:1422-1432, 1999.
13. S.K. Ahuja, **T.J. Bivalacqua**, J. Case, M.J. Vincent, S.C. Sikka, and W.J.G. Hellstrom. A Pilot Study Demonstrating Clinical Benefit From Intralesional Interferon Alpha-2b in the Treatment of Peyronie's Disease. *Journal of Andrology* 20:444-448, 1999.
14. H.C. Champion, **T.J. Bivalacqua**, A.L. Hyman, L.J. Ignarro, W.J.G. Hellstrom, and P.J. Kadowitz. Gene Transfer of Endothelial Nitric Oxide Synthase to the Penis Augments Erectile Responses in the Aged Rat. *Proceedings of the National Academy of Science USA* 96:11648-11652, 1999.

15. H.C. Champion, **T.J. Bivalacqua**, D.G. Lambert, R.A. Abassi, and P.J. Kadowitz. Analysis of Vasoconstrictor Responses to Histamine in the Hindquarters Vascular Bed of the Rabbit. *American Journal of Physiology* 277:R1179-R1187, 1999.
16. **T.J. Bivalacqua**, H.C. Champion, M. Rajasekeran, S.C. Sikka, P.J. Kadowitz, P.C. Doherty, and W.J.G. Hellstrom. Potentiation of Erectile Response and cAMP Accumulation by Combination of Prostaglandin E<sub>1</sub> and Rolipram, a Selective Inhibitor of the Type 4 Phosphodiesterase (PDE 4). *Journal of Urology* 162:1848-1855, 1999.
17. **T.J. Bivalacqua**, A. Dalal, H.C. Champion, and P.J. Kadowitz. Role of AT<sub>1</sub> Receptors and Autonomic Nervous System in Mediating Acute Pressor Responses to ANG II in Anesthetized Mice. *American Journal of Physiology* 277:E838-E847, 1999.
18. H.C. Champion, **T.J. Bivalacqua**, J.E. Zadina, A.J. Kastin, and P.J. Kadowitz. Vasodilator Responses to the Endomorphin Peptides, But Not Nociceptin/OFQ, Are Mediated by Nitric Oxide Release. *Annals of the New York Academy of Sciences* 897:165-172, 1999.
19. **T.J. Bivalacqua**, H.C. Champion, R. Wang, P.J. Kadowitz, P.C. Doherty and W.J.G. Hellstrom. Feline Penile Erection Induced By Transurethral Administration of Sodium Nitroprusside. *Urological Research* 27:432-436, 1999.
20. H.C. Champion, **T.J. Bivalacqua**, K. Toyoda, D.D. Heistad, A.L. Hyman, P.J. Kadowitz. In Vivo Gene-Transfer of Prepro-Calcitonin Gene-Related Peptide to the Lung Attenuates Chronic Hypoxia-Induced Pulmonary Hypertension in the Mouse. *Circulation* 101:923-930, 2000.
21. **T.J. Bivalacqua**, E.K. Diner, T.E. Novak, Y. Vohra, S.C. Sikka, H.C. Champion, P.J. Kadowitz, and W.J.G. Hellstrom. A Rat Model of Peyronie's Disease Associated with a Decrease in Erectile Activity and an Increase in Inducible Nitric Oxide Synthase Protein Expression. *Journal of Urology* 163:1992-1998, 2000.
22. **T.J. Bivalacqua**, H.C. Champion, S.K. Purohit, W.A. Murphy, D. H. Coy, P.J. Kadowitz and W.J.G. Hellstrom. Nitric Oxide-Mediated Erectile Effects of Galantide But Not Galanin In Vivo. *Nitric Oxide: Biology and Chemistry* 4:94-102, 2000.
23. M.K. Shah, S.Y. Huggins, H.C. Champion, and **T.J. Bivalacqua**. New Therapies for Treating Hypertension: What Every Physician Should Know. *Journal of the Louisiana State Medical Society* 152:334-344, 2000.
24. **T.J. Bivalacqua**, H.C. Champion, Y. S. Mehta, A. B. Abdel-Mageed, L. J. Ignarro, P. J. Kadowitz, and W. J.G. Hellstrom. Adenoviral Gene Transfer of Endothelial Nitric Oxide Synthase (eNOS) to the Penis Improves Age-Related Erectile Dysfunction in the Rat. *International Journal of Impotence Research* 12:S8-S17, 2000.
25. M. Burger, S.C. Sikka, **T.J. Bivalacqua**, D.J. Lamb, and W.J.G. Hellstrom. The Effect of Sildenafil on Human Sperm Motion and Function From Normal and Infertile Men. *International Journal of Impotence Research* 12:229-234, 2000.
26. S. Leungwattanakij, **T.J. Bivalacqua**, J.J. Caulfield, and W.J.G. Hellstrom. Evaluation of Cadaveric Pericardium in the Rat for the Surgical Treatment of Peyronie's Disease. *Urology* 56:1075-1080, 2000.
27. G.E. Stanley, **T.J. Bivalacqua**, and W.J.G. Hellstrom. Penile Prosthetic Trends in the Era of Effective Oral Erectogenic Agents. *Southern Medical Journal* 93:1153-1156, 2000.

28. B.J. DeWitt, A.D. Kaye, I.N. Ibrahim, **T.J. Bivalacqua**, F.M. D'Souza, R.E. Banister, A. Salamarif, and B.B. Nossaman. Effects of Protein Kinase C Isozyme Inhibitors on Constrictor Responses in the Feline Pulmonary Vascular Bed. *American Journal of Physiology* 280:L50-L57, 2001.
29. P.C. Doherty, **T.J. Bivalacqua**, H.C. Champion, P.J. Kadowitz, B. Greenwood-Van Meerveld, I. Berzetei-Gurske, and W.J.G. Hellstrom. Direct Effects of Selective Type 5 Phosphodiesterase Inhibitors, Alone or in Combination with other Vasodilators, on Erectile Response in the Cat. *Journal of Urology* 165:1004-1009, 2001.
30. **T.J. Bivalacqua**, H.C. Champion, S. Leungwattanakij, Dae Yul Yang, Jae-Seog Hyun, A. B. Abdel-Mageed, S.C. Sikka, P.J. Kadowitz, and W.J.G. Hellstrom. Evaluation of Nitric Oxide Synthase and Arginase in the Induction of a Peyronie's-Like Condition in the Rat. *Journal of Andrology* 22:497-506, 2001.
31. **T.J. Bivalacqua**, W.J.G. Hellstrom, P.J. Kadowitz, and H.C. Champion. Increased Expression of Arginase II in Human Diabetic Corpus Cavernosum: Role in Diabetic-Associated Erectile Dysfunction. *Biochemical Biophysical Research Communication* 283:923-927, 2001.
32. S.C. Sikka, H.C. Champion, **T.J. Bivalacqua**, R. Wang, M. Rajasekaran, B.B. Aggarwal, and W.J.G. Hellstrom. Role of Genitourinary Inflammation in Infertility: Detrimental Effect of Lipopolysaccharide (LPS) and Interferon-gamma (IFN- $\gamma$ ) on Human Spermatozoa. *International Journal of Andrology* 24:136-141, 2001.
33. **T.J. Bivalacqua**, H.C. Champion, B.J. DeWitt, J. E. Saavedra, J. A. Hrabie, L. K. Keefer, and P. J. Kadowitz. Analysis of Vasodilator Responses to Novel Nitric Oxide Donors in the Hindquarters Vascular Bed of the Cat. *Journal of Cardiovascular Pharmacology* 38:120-129, 2001.
34. H.C. Champion, R.L. Pierce, **T.J. Bivalacqua**, W.A. Murphy, D.H. Coy, and P.J. Kadowitz. Analysis of Responses to hAmylin, hCGRP, and hADM in Isolated Resistance Arteries From the Mesenteric Vascular Bed of the Rat. *Peptides* 22:1427-1434, 2001.
35. A. Choppin, D.R. Blue, S.S. Hegde, D. Gennevois, S.A. McKinnon, A. Mokatrin, **T.J. Bivalacqua**, and W.J.G. Hellstrom. Evaluation of Oral RO-70-0004 an  $\alpha_{1A}$ -Adrenoceptor Antagonist for the Treatment of Male Erectile Dysfunction. *International Journal of Impotence Research* 13:157-161, 2001.
36. S. Leungwattanakij, **T.J. Bivalacqua**, S. Reddy, and W.J.G. Hellstrom. Long-Term Follow Up on Use of Pericardial Graft in the Surgical Management of Peyronie's Disease. *International Journal of Impotence Research* 13:183-186, 2001.
37. M.K. Shah, **T.J. Bivalacqua**, H.C. Champion, and P.J. Kadowitz. Vasodilator Responses to ATP and UTP are cAMP Dependent in the Mesenteric Vascular Bed of the Cat. *Journal of Cardiovascular Pharmacology and Therapeutics* 6:287-295, 2001.
38. **T.J. Bivalacqua**, H.C. Champion, A. Abdel-Mageed, P.J. Kadowitz, and W.J.G. Hellstrom. Gene Transfer Of Prepro-Calcitonin Gene Related Peptide Restores Erectile Function In The Aged Rat. *Biology of Reproduction* 65:1371-1377, 2001.
39. M.K. Shah, H.C. Champion, **T.J. Bivalacqua**, and P.J. Kadowitz. Differential Responses to ATPgammaS in the Mesenteric and Hindlimb Vascular Bed of the Cat. *Life Sciences* 69:2561-2571, 2001.
40. J.S. Hyun, M. Baig, D.Y. Yang, S. Leungwattanakij, K. Kim, A. Abdel-Mageed, **T.J. Bivalacqua**, and W.J.G. Hellstrom. Localization of Peripheral Dopamine D1 and D2 Receptors in Rat and Human Seminal Vesicle. *Journal of Andrology* 23:114-120, 2002.

41. H.C. Champion, **T.J. Bivalacqua**, J.E. Zadina, A.J. Kastin, A.L. Hyman, and P.J. Kadowitz. Role of Nitric Oxide in Mediating Vasodilator Responses to Opioid Peptides in the Rat. *Clinical and Experimental Pharmacology and Physiology* 29:229-232, 2002.
42. **T.J. Bivalacqua**, H.C. Champion, D.G. Lambert, and P.J. Kadowitz. Vasodilator Responses to Adenosine and Hyperemia are Mediated by A<sub>1</sub> and A<sub>2</sub> Receptors in the Cat Vascular Bed. *American Journal of Physiology* 282: R1696-R1709, 2002.
43. J.S. Hyun, **T.J. Bivalacqua**, D.Y. Yang, S. Leungwattanakij, M. Baig, A. Abdel-Mageed, K. Kim, and W.J.G. Hellstrom. Localization of Peripheral Dopamine D<sub>1</sub> and D<sub>2</sub> Receptors in Rat Corpus Cavernosum. *BJU International* 90:105-112, 2002.
44. J.S. Armstrong, **T.J. Bivalacqua**, W. Chamulitraturnamex, S.C. Sikka, and W.J.G. Hellstrom. A comparison of the NADPH oxidase in human sperm and white blood cells. *International Journal of Andrology* 25:223-229, 2002.
45. **T.J. Bivalacqua**, H.C. Champion, M. K. Shah, B.J. DeWitt, E.W. Inscho, and P.J. Kadowitz. Comparative Responses to  $\alpha$ ,  $\beta$ -methylene-ATP in Cat Pulmonary, Mesenteric, and Hindlimb Vascular Beds. *Journal of Applied Physiology* 93:1287-1295, 2002.
46. H.C. Champion, **T.J. Bivalacqua**, S.S. Greenberg, T.D. Giles, A.L. Hyman, and P.J. Kadowitz. Adenoviral Gene Transfer of Endothelial Nitric-Oxide Synthase (eNOS) Partially Restores Normal Pulmonary Arterial Pressure in eNOS-Deficient Mice. *Proceeding of the National Academy of Science USA* 99:13248-13253, 2002.
47. **T.J. Bivalacqua**, A.L. Hyman, P.J. Kadowitz, N. Paolocci, D.A. Kass, and H.C. Champion. Role of Calcitonin Gene-Related Peptide (CGRP) in Chronic Hypoxia-Induced Pulmonary Hypertension in the Mouse. Influence of Gene Transfer In Vivo. *Regulatory Peptides* 108:129-133, 2002.
48. S. Das, N. Maulik, D.K. Das, P.J. Kadowitz, and **T.J. Bivalacqua**. Cardioprotection with Sildenafil, a Selective Inhibitor of Cyclic 3',5'-monophosphate-specific Phosphodiesterase 5. *Drugs Experimental Clinical Research* 28:213-219, 2002.
49. K. Chitaley, **T.J. Bivalacqua**, H.C. Champion, M.F. Usta, W.J.G. Hellstrom, T.M. Mills, and R. Clinton-Webb. Adeno-associated viral gene transfer of dominant negative RhoA enhances erectile function in rats. *Biochemical Biophysical Research Communication* 298:427-432, 2002.
50. H.C. Champion, **T.J. Bivalacqua**, R.L. Pierce, W.A. Murphy, D.H. Coy, A.L. Hyman, and P.J. Kadowitz. Responses to Human CGRP, ADM, and PAMP in Human Thymic Arteries. *American Journal of Physiology: Regulatory Integrative Comparative Physiology* 284:R531-R537, 2003.
51. M. Passarella, M.F. Usta, **T.J. Bivalacqua**, W.J.G. Hellstrom, and R. Davis. Testicular-Sparing Surgery: A Reasonable Option in Selected Patients with Testicular Lesions. *BJU International* 91:337-340, 2003.
52. W.J.G. Hellstrom, J.S. Hyun, L. Human, J.A. Sanabria, **T.J. Bivalacqua**, and S. Leungwattanakij. Antimicrobial activity of antibiotic-soaked, Resist trade mark -coated Bioflex. *International Journal of Impotence Research* 15:18-21, 2003.
53. **T.J. Bivalacqua**, J.S. Armstrong, J. Biggerstaff, A.B. Abdel-Mageed, P.J. Kadowitz, W.J.G. Hellstrom, and H.C. Champion. Gene Transfer of Extracellular SOD to the Penis Reduces Superoxide Anion and Improves Erectile Function in Aged Rats. *American Journal of Physiology: Heart and Circulatory Physiology* 284:H1408-H1421, 2003.

54. S. Leungwattanakij, **T.J. Bivalacqua**, M.F. Usta, D.Y. Yang, J.S. Hyun, H.C. Champion, A.B. Abdel-Mageed, and W.J.G. Hellstrom. Cavernous neurotomy causes hypoxia and fibrosis in rat corpus cavernosum. *Journal of Andrology* 24:239-245, 2003.
55. **T.J. Bivalacqua**, M.F. Usta, H.C. Champion, D. Adams, D.B. McNamara, A.B. Abdel-Mageed, P.J. Kadowitz, and W.J.G. Hellstrom. Endothelial Nitric Oxide Synthase Gene Therapy Partially Restores NO Synthesis And Erectile Function In Streptozotocin Diabetic Rats. *Journal of Urology* 169:1911-1917, 2003.
56. S. Leungwattanakij, **T.J. Bivalacqua**, D.Y. Yang, J.S. Hyun, and W.J.G. Hellstrom. Comparison of Cadaveric Pericardial, Dermal, Vein and Gort-Tex Grafts for Tunica Albuginea Substitution Using A Rat Model. *BJU International* 92:119-124, 2003.
57. M.F. Usta, **T.J. Bivalacqua**, J.Sanabria, I.T. Koksai, K. Moparty, and W.J.G. Hellstrom. Patient-Partner Satisfaction and Long Term Results After Surgical Treatment for Peyronie's Disease. *Urology* 62:105-109, 2003.
58. S.R. Baber, H.C. Champion, **T.J. Bivalacqua**, A.L. Hyman, and P.J. Kadowitz. Role of Cyclooxygenase-2 in the Generation of Vasoactive Prostanoids in the Rat Pulmonary and Systemic Vascular Beds. *Circulation* 108:896-901, 2003.
59. M.F. Usta, **T.J. Bivalacqua**, D.Y. Yang, A. Ramanitharan, D.R. Sell, A. Viswanathan, V.M. Monnier, and W.J.G. Hellstrom. The Protective Effect of Aminoguanidine on Erectile Function in Streptozotocin Diabetic Rats. *Journal of Urology* 170:1437-1442, 2003.
60. W. Deng, **T.J. Bivalacqua**, N. Chattergoon, A.L. Hyman, J.R. Jeter, and P.J. Kadowitz. Adenoviral Gene Transfer of Endothelial Nitric Oxide Synthase: High Level Expression in Ex Vivo Expanded Marrow Stromal Cells. *American Journal of Physiology: Cell Physiology* 285:C1322-C1329, 2003.
61. B. D. Nossaman, P. A. Dabisch, J. T. Liles, S. R. Baber, H. C. Champion, A. D. Kaye, C.J. Feng, M. Anwar, **T. J. Bivalacqua**, J. A. Santiago, B. J. De Witt, and P. J. Kadowitz. Peroxynitrite does not impair pulmonary and systemic vascular responses. *Journal of Applied Physiology* 96:455-465, 2004.
62. M.F. Usta, **T.J. Bivalacqua**, G.W. Jabren, L. Myers, J. Sanabria, S.C. Sikka, and W.J.G. Hellstrom. Relationship Between Severity of Penile Curvature and the Presence of Co-Morbidities in Men with Peyronie's Disease. *Journal of Urology* 171:775-779, 2004.
63. G. Dang, R. Matern, **T.J. Bivalacqua**, S.C. Sikka, and W.J.G. Hellstrom. Intralesional Interferon Alpha-2B Injections for the Treatment of Peyronie's Disease. *Southern Medical Journal* 97:42-46, 2004.
64. **T.J. Bivalacqua**, M.F. Usta, H.C. Champion, S. Leungwattanakij, P.A. Dabisch, D.B. McNamara, P.J. Kadowitz, and W.J.G. Hellstrom. Effect of Combination Endothelial Nitric Oxide Synthase Gene Therapy and Sildenafil on Erectile Function In Diabetic Rats. *International Journal of Impotence Research* 16:21-29, 2004.
65. M.F. Usta, J. Sanabria, **T.J. Bivalacqua**, and W.J.G. Hellstrom. Feline Penile Erections Induced By Topical Glans Penis Application Of Combination Alprostadil And SEPA (TOPIGLAN). *International Journal of Impotence Research* 16:73-77, 2004.
66. **T.J. Bivalacqua**, W. Dang, H.C. Champion, W.J.G. Hellstrom, and P.J. Kadowitz. Gene Therapy Techniques for the Delivery of Endothelial Nitric Oxide Synthase (eNOS) to the Corpora Cavernosa for Erectile Dysfunction. *Methods in Molecular Biology* 279:173-186, 2004.
67. **T.J. Bivalacqua**, H.C. Champion, M.F. Usta, S. Cellek, K.Chitale, R.C. Webb, R.L. Lewis, T.M. Mills, W.J.G. Hellstrom, and P.J. Kadowitz. RhoA/Rho-Kinase Suppresses Endothelial Nitric Oxide Synthase in the

Penis: Mechanism for Diabetes-Associated Erectile Dysfunction. *Proceeding of the National Academy of Science USA* 101:9121-9126, 2004.

68. M.F. Usta, **T.J. Bivalacqua**, Z. Tokatli, F. Rivera, K.H. Gulkesen, S.C. Sikka, and W.J.G. Hellstrom. Stratification of Penile Vascular Pathologies in Patients with Peyronie's Disease and in Men with Erectile Dysfunction: A Comparative Study. *Journal of Urology* 172:259-262, 2004.

69. M.F. Usta, **T.J. Bivalacqua**, I.T. Koksall, B. Toptas, S. Surmen, and W.J.G. Hellstrom. The Protective Effect of Aminoguanidine on Erectile Function in Diabetic Rats is Not Related to the Timing of Treatment. *BJU International* 94:429-432, 2004.

70. W. Deng, **T.J. Bivalacqua**, N.N. Chattergoon, J.R. Jeter Jr, P.J. Kadowitz. Engineering ex vivo-expanded marrow stromal cells to secrete calcitonin gene-related peptide using adenoviral vector. *Stem Cells* 22:1279-1291, 2004.

71. H.C. Champion, **T.J. Bivalacqua**, E. Takimoto, D.A. Kass, and A.L. Burnett. Phosphodiesterase-5A Dysregulation in Penile Erectile Tissue is a Mechanism of Priapism. *Proceeding of the National Academy of Science USA* 102:1661-1666, 2005.

72. I.S. Wittstein, D.R. Thiemann, J.A.C. Lima, K.L. Baughman, S.P. Schulman, G. Gerstenblith, K.C. Wu, J.J. Rade, **T.J. Bivalacqua**, and H.C. Champion. Neurohumoral Features of Myocardial Stunning Due to Sudden Emotional Stress. *New England Journal of Medicine* 352:539-548, 2005.

73. **T.J. Bivalacqua**, M.F. Usta, M. Kendirci, L. Pradhan, X. Alvarez, H.C. Champion, P.J. Kadowitz, and W.J.G. Hellstrom. Superoxide Anion Production in the Rat Penis Impairs Erectile Function in Diabetes: Influence of In Vivo Extracellular Superoxide Dismutase Gene Therapy. *The Journal of Sexual Medicine* 2:187-198, 2005.

74. S.R. Baber, W. Deng, J. Rodriguez, R.G. Master, **T.J. Bivalacqua**, A.L. Hyman, and P.J. Kadowitz. Vasoactive Prostanoids are Generated from Arachidonic Acid by COX-1 and -2 in the Mouse. *American Journal of Physiology: Heart and Circulatory Physiology* 289:H1476-1487, 2005.

75. M. Kendirci, Z. Zsengeller, **T.J. Bivalacqua**, S. Gur, M.F. Usta, M. Chen, C. Szabo, and W.J.G. Hellstrom. Poly(Adenosine Diphosphate-Ribose) Polymerase Inhibition Preserves Erectile Function In Rats After Cavernous Nerve Injury. *Journal of Urology* 174:2054-2059, 2005.

76. M.F. Usta, M. Kendirci, S. Gur, N.A. Foxwell, **T.J. Bivalacqua**, S. Celtek, and W.J.G. Hellstrom. The Breakdown of Preformed Advanced Glycation End Products Reverses Erectile Dysfunction in Streptozotocin-Induced Diabetic Rats: Preventive Versus Curative Treatment. *Journal of Sexual Medicine* 3:242-252, 2006.

77. L. Jin, T. Liu, G.A. Lagoda, H.C. Champion, **T.J. Bivalacqua**, and A.L. Burnett. Elevated RhoA/Rho-kinase Activity in Aged Rat Penis: Mechanism for Age-Associated Erectile Dysfunction. *FASEB Journal* 20:536-538, 2006.

78. A.L. Burnett, **T.J. Bivalacqua**, H.C. Champion, and B. Musicki. Long-Term Oral Phosphodiesterase 5 Inhibitor Therapy Alleviates Recurrent Priapism. *Urology* 67:1043-1048, 2006.

79. A.L. Burnett, **T.J. Bivalacqua**, H.C. Champion, and B. Musicki. Feasibility of the Use of Phosphodiesterase Type 5 Inhibitors in a Pharmacologic Prevention Program for Recurrent Priapism. *Journal of Sexual Medicine* 3:1077-1084, 2006.

80. **T.J. Bivalacqua**, W. Deng, M. Kendirci, M.F. Usta, C. Robinson, B.K. Taylor, S.N. Murthy, H.C. Champion, W.J.G. Hellstrom, and P.J. Kadowitz. Mesenchymal Stem Cells Alone or Ex Vivo Gene-Modified

with Endothelial Nitric Oxide Synthase Reverse Age-Associated Erectile Dysfunction. *American Journal of Physiology: Heart and Circulatory Physiology* 292:H1278-1290, 2007.

81. **T.J. Bivalacqua**, A.L. Burnett, W.J.G. Hellstrom, and H.C. Champion. Overexpression of Arginase in the Aged Mouse Penis Impairs Erectile Function and Decreases NOS3 Activity: Influence of In Vivo Gene Therapy of Anti-Arginase. *American Journal of Physiology: Heart and Circulatory Physiology* 292:H1340-1351, 2007.

82. L.L. Hsu, H.C. Champion, S.A. Campbell-Lee, **T.J. Bivalacqua**, E.A. Mancini, B.A. Diwan, D.M. Schimel, A.E. Cochard, X. Wang, A.N. Schechter, C.T. Noguchi, and M.T. Gladwin. Hemolysis In Sickle Cell Mice Causes Pulmonary Hypertension Due To Global Impairment In Nitric Oxide Bioavailability. *Blood* 109:3088-3098, 2007.

83. **T.J. Bivalacqua**, H.C. Champion, T. Liu, and A.L. Burnett. Endothelial Nitric Oxide Synthase Keeps Erection Regulatory Function Balance in the Penis. *European Urology* 51:1732-1740, 2007.

84. **T.J. Bivalacqua**, M. Kendirci, H.C. Champion, W.J.G. Hellstrom, K.E. Andersson, and P. Hedlund. Dysregulation of cGMP-Dependent Protein Kinase (PKG) Impairs Erectile Function in Diabetes: Influence of In Vivo Gene Therapy of PKG1 $\alpha$ . *BJU International* 99:1488-1494, 2007.

85. B.D. Nossaman, **T.J. Bivalacqua**, H.C. Champion, S.R. Baber and P.J. Kadowitz. Analysis of Vasodilator Responses to Peroxynitrite in the Hindlimb Vascular Bed of the Cat. *Journal of Cardiovascular Pharmacology* 50:358-366, 2007.

86. **T.J. Bivalacqua**, E.M. Schaeffer, L. Mettee, A. Wagner, L.M. Su, and C.P. Pavlovich. Intraperitoneal Effects of Extraperitoneal Laparoscopic Radical Prostatectomy. *Urology* 72:273-277, 2008.

87. **T.J. Bivalacqua**, T.J. Guzzo, E.M. Schaeffer, M.A. Gebaska, H.C. Champion, A.L. Burnett, and M.L. Gonzalgo. Application of Evecel to Cavernous Nerves of the Rat Does Not Influence Erectile Function In Vivo. *Urology* 72:1169-1173, 2008.

88. T.J. Guzzo, C.G. Rogers, C.Y. Deng, **T.J. Bivalacqua**, G.S. Palapattu, P.J. Bastian, M.A. Eisenberger, M.P. Schoenberg and M.L. Gonzalgo. Outcomes of Patients After Aborted Radical Cystectomy for Intraoperative Findings of Metastatic Disease. *BJU International* 102:1539-1543, 2008.

89. A.L. Burnett, M.E. Allaf, and **T.J. Bivalacqua**. Erythropoietin Promotes Erection Recovery after Nerve Sparing Radical Retropubic Prostatectomy: A Retrospective Analysis. *Journal of Sexual Medicine* 5:2392-2398, 2008.

90. A.L. Burnett, T.D. Strong, B.J. Trock, L. Jin, **T.J. Bivalacqua**, and B. Musicki. Serum Biomarker Measurements of Endothelial Function and Oxidative Stress after Daily Dosing of Sildenafil in Type 2 Diabetic Men with Erectile Dysfunction. *Journal of Urology* 181:245-251, 2009.

91. **T.J. Bivalacqua**, T.E. Sussan, T.D. Strong, D.E. Berkowitz, S.S. Biswal, A.L. Burnett, and H.C. Champion. Sildenafil Inhibits Superoxide Formation And Prevents Endothelial Dysfunction In A Mouse Model Of Second-Hand Cigarette Smoke Induced Erectile Dysfunction. *Journal of Urology* 181:899-906, 2009.

92. B. Musicki, A.E. Ross, H.C. Champion, A.L. Burnett, and **T.J. Bivalacqua**. Post-Translation Modification of Constitutive Nitric Oxide Synthase in the Penis. *Journal of Andrology* 30:352-362, 2009.

93. **T.J. Bivalacqua**, B. Musicki, L.L. Hsu, M.T. Gladwin, A.L. Burnett, and H.C. Champion. Establishment of a Transgenic Sickle Cell Mouse Model to Study the Pathophysiology of Priapism. *Journal of Sexual Medicine* 6:2494-2504, 2009.

94. T.J. Guzzo, **T.J. Bivalacqua**, P.M. Pierorazio, E.M. Schaeffer, D.Y. Chan, and M.E. Allaf. Xanthogranulomatous Pyelonephritis: Presentation and Management in the Laparoscopic Era. *BJU International* 104:1265-1268, 2009.
95. T.J. Guzzo, **T.J. Bivalacqua**, A. Magheli, M.E. Nielsen, F.J. Attenello, M.P. Schoenberg, and M.L. Gonzalgo. Pathologic Upstaging at the Time of Radical Cystectomy is Associated with Worse Recurrence Free Survival in Patients with BCG Refractory Bladder Cancer. *Urology* 74:1276-1280, 2009.
96. J.H. Kim, L. Bugaj, **T.J. Bivalacqua**, S. Ryoo, Y.J. Oh, A. Camara, G. Sikka, D. Nyhan, A. Shoukas, H. C. Champion, and D.E. Berkowitz. Arginase Inhibition Restores NOS Coupling and Reverses Endothelial Dysfunction and Vascular Stiffness in Old Rats. *Journal of Applied Physiology* 107:1249-1257, 2009.
97. T.J. Guzzo, B.K. McNeil, **T.J. Bivalacqua**, L.J. Sokoll and M.P. Schoenberg. Circulating Tumor Cells do not Predict Extravesical Disease in Bladder Cancer Patients Prior to Radical Cystectomy. *Urologic Oncology* (in press), 2010.
98. Musicki B, Liu T, Strong TD, Lagoda GA, **Bivalacqua TJ**, Burnett AL. Post-translational Regulation of Endothelial Nitric Oxide Synthase (eNOS) by Estrogens in the Rat Vagina. *Journal of Sexual Medicine* 7:1768-1777, 2010.
99. Broderick GA, Kadioglu A, **Bivalacqua TJ**, Ghanem H, Nehra A, Shamloul R. Priapism: pathogenesis, epidemiology, and management. *Journal of Sexual Medicine*. 7: 476-500, 2010.
100. Deng W, **Bivalacqua TJ**, Champion HC, Hellstrom WJ, Murthy SN, Kadowitz PJ. Gene therapy techniques for the delivery of endothelial nitric oxide synthase to the lung for pulmonary hypertension. *Methods Mol Biol*. 610:309-321, 2010.
101. Deng W, **Bivalacqua TJ**, Champion HC, Hellstrom WJ, Murthy SN, Kadowitz PJ. Superoxide dismutase - a target for gene therapeutic approach to reduce oxidative stress in erectile dysfunction. *Methods Mol Biol*. 610: 213-227, 2010.
102. **Bivalacqua TJ**, Ross AE, Strong TD, Gebaska MA, Musicki B, Champion HC, Burnett AL. Attenuated RhoA/Rho-Kinase Signaling in the Penis of Transgenic Sickle Cell Mice. *Urology* 76:510-516, 2010.
103. Gratzke C, Strong TD, Gebaska MA, Champion HC, Stief CG, Burnett AL, **Bivalacqua TJ**. Activated RhoA/Rho-kinase Impairs Erectile function after Cavernous Nerve Injury in Rats. *Journal of Urology* 184: 2197-2204, 2010.
104. Pierorazio PM, Guzzo TJ, Han M, **Bivalacqua TJ**, Epstein JI, Schaeffer EM, Schoenberg M, Walsh PC, Partin AW. Long term survival after radical prostatectomy for men with high gleason sum in pathologic specimen. *Urology* 76:715-721, 2010.
105. Han M, Trock BJ, Partin AW, Humphreys EB, **Bivalacqua TJ**, Guzzo TJ, Walsh PC. The impact of preoperative erectile dysfunction on survival after radical prostatectomy. *BJU International* 106:1612-1617, 2010.
106. Cervellione RM, Husmann DA, **Bivalacqua TJ**, Sponseller PD, Gearhart JP. Penile ischemic injury in the exstrophy/epispadias spectrum: New insights and possible mechanisms. *Journal of Pediatric Urology* 6:450-456, 2010
107. **Bivalacqua TJ**, Loeb S, Pierorazio PM, Schoenberg MP, Partin AW, Guzzo TJ. Is Prostate Specific Antigen Surveillance Necessary in Men with Benign Prostate Pathology Following Radical Cystoprostatectomy for Bladder Cancer. *Urologia Internationalis* 85:466-469, 2010.

108. Musicki B, Champion HC, Hsu LL, **Bivalacqua TJ**, Burnett AL. Post-translational inactivation of endothelial nitric oxide synthase in the transgenic sickle cell mouse penis. *Journal of Sexual Medicine* 8:419-426, 2011.
109. Johnson JM, **Bivalacqua TJ**, Lagoda GA, Burnett AL, Musicki B. eNOS-uncoupling in age-related erectile dysfunction. *International Journal of Impotence Research* 23:43-49, 2011.
110. Musicki B, Champion HC, Hsu LL, **Bivalacqua TJ**, Burnett AL. Post-translational inactivation of endothelial nitric oxide synthase in transgenic sickle cell mouse penis. *Journal of Sexual Medicine* 8:419-426, 2011.
111. Gebska MA, Stevenson BK, Hemnes AR, **Bivalacqua TJ**, Haile A, Hesketh CG, Murray CL, Zaiman AL, Halushka MK, Krongkaew N, Strong TD, Cooke CA, El-Haddad H, Tudor RM, Berkowitz DE, Champion HC. Phosphodiesterase-5A (PDE5A) is localized to the endothelial caveolae and modulates NOS3 activity. *Cardiovascular Pharmacology* 90:353-363, 2011.
112. Burnett AL, **Bivalacqua TJ**. Priapism: new concepts in medical and surgical management. *Urologic Clinics of North America* 38:185-194, 2011.
113. Gupta AD, Bandari J, Ross AE, McCall CM, Tufaro A, **Bivalacqua TJ**. Management of Primary Squamous Cell Carcinoma at the Mucocutaneous Junction of an Ileal Conduit. *Urology* 78:1229-31, 2011.
114. Guzzo TJ, Hockenberry MS, Mucksavage P, **Bivalacqua TJ**, Schoenberg MP. Smoking knowledge assessment and cessation trends in patients with bladder cancer presenting to a tertiary referral center. *Urology* 79:166-171, 2012.
115. Kutlu O, Ross AE, Schaeffer EM, Gratzke C, Stief CG, Strong TD, Burnett AL, Hedlund P, **Bivalacqua TJ**. Increased expression of Nestin, a neural stem cell marker, in the major pelvic ganglion following cavernous nerve injury. *International Journal of Impotence Research* 24:84-90, 2012.
116. Mullins JM, Guzzo TJ, Pierorazio PM, Eifler J, Ball M, Schoenberg MP, **Bivalacqua TJ**. Stented versus Nonstented Ureteroenteric Anastomosis of Continent and Non-Continent Urinary Diversion after Cystectomy: Effect on Post-operative Morbidity and Stricture Rate. *Urologia Internationalis* 88:66-70, 2011.
117. Kavalukas SL, Uzgaré AR, **Bivalacqua TJ**, Barbul A. Arginase inhibition promotes wound healing in mice. *Surgery* 151:287-295, 2012.
118. Guzzo TJ, Resnick MJ, Canter DJ, **Bivalacqua TJ**, Rosen MA, Bergey MR, Magerfleisch L, Tomazewski JE, Wein AJ, Malkowicz SB. Endorectal T2-weighted MRI does not differentiate between favorable and adverse pathologic features in men with prostate cancer who would qualify for active surveillance. *Urologic Oncology* 30:301-5, 2012.
119. Calenda G, Strong TD, Pavlovich CP, Schaeffer EM, Burnett AL, Yu W, Davies KP, **Bivalacqua TJ**. Whole genome microarray of the major pelvic ganglion after cavernous nerve injury: new insights into molecular profile changes after nerve injury. *BJU International* 109:1552-64, 2012.
120. Gur S, Kadowitz PJ, Sikka SC, **Bivalacqua TJ**, Hellstrom WJ. Inhibition of sympathetic neuroeffector transmission in human corpus cavernosum. *BJU International* 110:856-62, 2012.
121. Segal R, Hannan JL, Liu X, Kutlu O, Burnett AL, Champion HC, Kim JH, Stepan J, Berkowitz DE, **Bivalacqua TJ**. Chronic Oral Administration of the Arginase Inhibitor 2(S)-amino-6-boronohexanoic acid (ABH) Improves Erectile Function in Aged Rats. *Journal of Andrology* 33:1169-1175, 2012.

122. Segal R, **Bivalacqua TJ**, Burnett AL. Irbesartan promotes erection recovery after nerve-sparing radical retropubic prostatectomy: a retrospective long-term analysis. *BJU International* 110:1782-1786, 2012.
123. Castiglione F, Bergamini A, Bettiga A, **Bivalacqua TJ**, Benigni F, Strittmatter F, Gandaglia G, Rigatti P, Montorsi F, Hedlund P. Perioperative betamethasone treatment reduces signs of bladder dysfunction in a rat model for neuropraxia in female urogenital surgery. *European Urology* 62:1076-85, 2012.
124. Celtek S, **Bivalacqua TJ**, Burnett AL, Chitale K, Lin CS. Common Pitfalls in Some of the Experimental Studies in Erectile Function and Dysfunction: A Consensus Article. *Journal of Sexual Medicine* 9:2770-84, 2012.
125. Pierorazio PM, Mullins JK, Eifler JB, Voth K, Hyams ES, Han M, Pavlovich CP, Partin AP, **Bivalacqua TJ**, Allaf ME, Schaeffer EM. Contemporaneous comparison of open versus minimally-invasive radical prostatectomy for high risk prostate cancer. *BJU International* 112:751-777, 2013.
126. Pierorazio PM, Mullins JK, Hyams ES, Partin AW, Han M, Walsh PC, Schaeffer EM, Pavlovich CP, Allaf ME, **Bivalacqua TJ**. Trends in Immediate Perioperative Morbidity and Delay in Discharge Following Radical Prostatectomy: A 20-year Institutional Experience. *BJU International* 112:45-53, 2013.
127. Segal R, Readal N, Pierorazio PM, Burnett AL, **Bivalacqua TJ**. Corporal "Snake" Maneuver for the Treatment of Ischemic Priapism: Long Term Followup. *Journal of Urology* 189:1025-1029, 2013.
128. Mulhall JP, **Bivalacqua TJ**, Becher E. Standard Operating Procedures for the Preservation of Erectile Function Outcomes after radical prostatectomy. *Journal of Sexual Medicine* 10:195-203, 2013.
129. Hannan JL, Albersen M, Kutlu O, Gratzke C, Stief CG, Burnett AL, Lysiak JJ, Hedlund P, **Bivalacqua TJ**. Inhibition of Rho-kinase Improves Erectile Function, Increases Nitric Oxide Signaling and Decreases Penile Apoptosis in a Rat Model of Cavernous Nerve Injury. *Journal of Urology* 189:1155-1161, 2013.
130. Castiglione F, Hedlund P, Van der Aa F, **Bivalacqua TJ**, Rigatti P, Van Poppel H, Montorsi F, De Ridder D, Albersen M. Intratunical Injection of Human Adipose Tissue-derived Stem Cells Prevents Fibrosis and Is Associated with Improved Erectile Function in a Rat Model of Peyronie's Disease. *European Urology* 63:551-560, 2013.
131. Rubio-Aurioles E, **Bivalacqua TJ**. Standard Operational Procedures for Low Sexual Desire in Men. *Journal of Sexual Medicine* 10:94-107, 2013.
132. Segal RL, Readal N, Pierorazio PM, Kutlu O, Schoenberg M, **Bivalacqua TJ**. Radical Cystectomy in Patients with Preexisting Three-Piece Inflatable Penile Prosthesis. *Journal of Sexual Medicine* 10:595-598, 2013.
133. Massanyi EZ, Gupta A, Goel S, Gearhart JP, Burnett AL, **Bivalacqua TJ**, Redett RJ. Radial Forearm Free Flap Phalloplasty for Penile Inadequacy in Exstrophy Patients. *Journal of Urology* 190(suppl 4): 1577-1582, 2013.
134. Segal RL, Cabrini MR, Harris ED, Mostwin JL, **Bivalacqua TJ**, Burnett AL. Combined Inflatable Penile Prosthesis-Artificial Urinary Sphincter Implantation: No Increased Risk of Adverse Events Compared to Single or Staged Device Implantation.. *Journal of Urology* 190:2183-2188, 2013.
135. Pierorazio PM, Gorin MA, Ross AE, Feng Z, Trock BJ, Schaeffer EM, Han M, Epstein JI, Partin AW, Walsh PC, **Bivalacqua TJ**. Pathological and Oncologic Outcomes for Men with Positive Lymph Nodes at Radical Prostatectomy: The Johns Hopkins Hospital 30-year Experience. *Prostate* 73:1673-1680, 2013.

136. **Bivalacqua TJ**, Pierorazio PM, Ross AE, Allaf ME, Carter BE, Walsh PC. Anatomical Extent of Lymph Node Dissection: Impact on Men with Positive Lymph Nodes at Time of Radical Prostatectomy. *Urology* 82:653-659, 2013.
137. Kaye DR, Hyndman E, Segal RL, Mettee LZ, Trock BJ, Feng Z, Su LM, **Bivalacqua TJ**, Pavlovich CP. Urinary outcomes are significantly affected by nerve-sparing quality during radical prostatectomy. *Urology* 82:1348-1358, 2013.
138. Gonzalez-Roibon N, Han JS, Lee S, Feng Z, Arslankoz S, Smith N, Pierorazio PM, Humphreys E, Dewese TL, Partin AW, **Bivalacqua TJ**, Han M, Trock B, Netto GJ. Comparison of Biochemical Recurrence Free Survival Between Periprostatic and Pelvic Lymph Node Metastases of Prostate Cancer. *International Journal of Surgical Pathology* 21:352-7, 2013.
139. Pavlovich CP, Levinson AW, Su LM, Mettee LZ, Feng Z, **Bivalacqua TJ**, Trock BJ. Nightly vs. on-demand sildenafil for penile rehabilitation after minimally-invasive nerve-sparing radical prostatectomy: Results of a randomized double-blind trial with placebo. *BJU International* 112:844-851, 2013.
140. **Bivalacqua TJ**, Musicki B, Hsu LL, Berkowitz DE, Champion HC, Burnett AL. Sildenafil citrate-restored eNOS and PDE5 regulation in sickle cell mouse penis prevents priapism via control of oxidative/nitrosative stress. *PLoS one* 2;8:e68028, 2013.
141. Kinde I, Munari E, Faraj SF, Hruban RH, Schoenberg M, **Bivalacqua TJ**, Allaf M, Springer S, Wang Y, Diaz LA Jr, Kinzler KW, Vogelstein B, Papadopoulos N, Netto GJ. TERT Promoter Mutations Occur Early in Urothelial Neoplasia and Are Biomarkers of Early Disease and Disease Recurrence in Urine. *Cancer Research* 73:7162-7167, 2013.
142. Albersen M, Berkers J, Dekoninck P, Deprest J, Lue TF, Hedlund P, Lin CS, **Bivalacqua TJ**, Van Poppel H, De Ridder D, Van der Aa F. Expression of a Distinct Set of Chemokine Receptors in Adipose Tissue-Derived Stem Cells is Responsible for In Vitro Migration Toward Chemokines Appearing in the Major Pelvic Ganglion Following Cavernous Nerve Injury. *Sexual Medicine* 1:3-15, 2013.
143. Gorin MA, Kates M, Mullins JK, Pierorazio PM, Schoenberg MP, **Bivalacqua TJ**. Impact of Hospital Volume on Perioperative Outcomes and Costs of Radical Cystectomy: Analysis of the Maryland Health Services Cost Review Commission Database. *Canadian Journal of Urology* 21:102-107, 2014.
144. Kates M, Gorin MA, Deibert CM, Pierorazio PM, Schoenberg MP, McKiernan JM, **Bivalacqua TJ**. In-Hospital Death and Hospital Acquired Conditions Among Patients Undergoing Partial Cystectomy for Bladder Cancer in the United States. *Urologic Oncology* 32:53, 2014.
145. Sundi D, Wang VM, Pierorazio PM, Han M, **Bivalacqua TJ**, Ball MW, Antonarakis ES, Partin AW, Schaeffer EM, Ross AE. Very-high-risk localized prostate cancer: definition and outcomes. *Prostate Cancer Prostatic Diseases* 17:57-63, 2014.
146. Musicki B, **Bivalacqua TJ**, Champion HC, Burnett AL. Sildenafil Promotes eNOS Activation and Inhibits NADPH Oxidase in the Transgenic Sickle Cell Mouse Penis. *J Sexual Medicine* 11:424-430, 2014.
147. Sundi D, Wang V, Pierorazio PM, Han M, Partin AW, Tran PT, Ross AE, **Bivalacqua TJ**. Identification of men with the highest risk of early disease recurrence after radical prostatectomy. *Prostate* 74:628-636, 2014.
148. Hannan JL, Kutlu O, Stopak BL, Liu X, Castiglione F, Hedlund P, Burnett AL, **Bivalacqua TJ**. Valproic Acid Prevents Penile Fibrosis and Erectile Dysfunction in Cavernous Nerve-Injured Rats. *Journal of Sexual Medicine*. 11:1442-1451, 2014.

149. Hayashi M, Bernert H, Kagohara LT, Maldonado L, Brait M, Schoenberg M, **Bivalacqua TJ**, Netto GJ, Koch W, Sidransky D, Hoque MO. Epigenetic inactivation of VGF associated with Urothelial Cell Carcinoma and its potential as a non-invasive biomarker using urine. *Oncotarget*. 5:3350-3361, 2014.
150. Moningi S, Armour EP, Terezakis SA, Efron JE, Gearhart SL, **Bivalacqua TJ**, Kumar R, Le Y, Kien Ng S, Wolfgang CL, Zellars RC, Ellsworth SG, Ahuja N, Herman JM. High-dose-rate intraoperative radiation therapy: the nuts and bolts of starting a program. *Journal of Contemporary Brachytherapy*. 6:99-105, 2014.
151. Gonzalez-Roibon N, Kim JJ, Faraj SF, Chaux A, Bezerra SM, Munari E, Ellis C, Sharma R, Keizman D, **Bivalacqua TJ**, Schoenberg M, Eisenberger M, Carducci M, Netto GJ. Insulin-like Growth Factor-1 Receptor Overexpression Is Associated With Outcome in Invasive Urothelial Carcinoma of Urinary Bladder: A Retrospective Study of Patients Treated Using Radical Cystectomy. *Urology*. 83:1444, 2014.
152. Segal RL, Cabrini MR, **Bivalacqua TJ**, Burnett AL. Penile straightening maneuvers employed during penile prosthesis surgery: technical options and outcomes. *International Journal of Impotence Research* 26:182-5, 2014.
153. Segal RL, Massanyi EZ, Gupta AD, Gearhart JP, Redett RJ, **Bivalacqua TJ**, Burnett AL. Inflatable penile prosthesis technique and outcomes after radial forearm free flap neophalloplasty. *International Journal of Impotence Research* (in press). 2014
154. Faisal FA, Sundi D, Pierorazio PM, Ball MW, Humphreys EB, Han M, Epstein JI, Partin AW, Carter HB, **Bivalacqua TJ**, Schaeffer EM, Ross AE. Outcomes of men with an elevated PSA as their sole preoperative intermediate or high risk feature. *BJU International* 114:E120-9, 2014.
155. Bezerra SM, Lotan TL, Faraj SF, Karram S, Sharma R, Schoenberg M, **Bivalacqua TJ**, Netto GJ. GATA3 expression in small cell carcinoma of bladder and prostate and its potential role in determining primary tumor origin. *Human Pathology* 45:1682-7, 2014.
156. Weyne E, Albersen M, Hannan JL, Castiglione F, Hedlund P, Verbist G, De Ridder D, **Bivalacqua TJ**, Van der Aa F. Increased Expression of the Neuroregenerative Peptide Galanin in the Major Pelvic Ganglion Following Cavernous Nerve Injury. *Journal of Sexual Medicine* 11:1685-93, 2014.
157. Maldonado L, Brait M, Michailidi C, Munari E, Driscoll T, Schultz L, **Bivalacqua TJ**, Schoenberg M, Sidransky D, Netto GJ, Hoque MO. An epigenetic marker panel for recurrence risk prediction of low grade papillary urothelial cell carcinoma (LGPUC) and its potential use for surveillance after transurethral resection using urine. *Oncotarget*. 2014 5:5218-33, 2014.
158. Reese AC, Ball MW, Gandhi N, Gorin MA, Netto GJ, **Bivalacqua TJ**, Schoenberg MP. The utility of an extensive postchemotherapy staging evaluation in patients receiving neoadjuvant chemotherapy for bladder cancer. *Urology*. 84:358-63, 2014.
159. Gordetsky J, **Bivalacqua TJ**, Schoenberg M, Epstein JI. Ureteral and urethral frozen sections during radical cystectomy or cystoprostatectomy: an analysis of denudation and atypia. *Urology*. 84:619-23, 2014.
160. Faraj SF, Chaux A, Gonzalez-Roibon N, Munari E, Ellis C, Driscoll T, Schoenberg MP, **Bivalacqua TJ**, Shih IeM, Netto GJ. ARID1A immunohistochemistry improves outcome prediction in invasive urothelial carcinoma of urinary bladder. *Human Pathology* 45:2233-9, 2014.
161. Zargar H, Espiritu PN, Fairey AS, Mertens LS, Dinney CP, Mir MC, Krabbe LM, Cookson MS, Jacobsen NE, Gandhi NM, Griffin J, Montgomery JS, Vasdev N, Yu EY, Youssef D, Xylinas E, Campain NJ, Kassouf W, Dall'Era MA, Seah JA, Ercole CE, Horenblas S, Sridhar SS, McGrath JS, Aning J, Shariat SF, Wright JL, Thorpe AC, Morgan TM, Holzbeierlein JM, **Bivalacqua TJ**, North S, Barocas DA, Lotan Y, Garcia JA, Stephenson AJ,

- Shah JB, van Rhijn BW, Daneshmand S, Spiess PE, Black PC. Multicenter Assessment of Neoadjuvant Chemotherapy for Muscle-invasive Bladder Cancer. *European Urology* 67:241-49, 2015.
162. Munari E, Chauv A, Maldonado L, Comp rat E, Varinot J, **Bivalacqua TJ**, Hoque MO, Netto GJ. Cyclin A1 expression predicts progression in pT1 urothelial carcinoma of bladder: a tissue microarray study of 149 patients treated by transurethral resection. *Histopathology*. 66:262-9, 2015.
163. Tian W, Guner G, Miyamoto H, Cimino-Mathews A, Gonzalez-Roibon N, Argani P, Li X, Sharma R, Subhawong AP, Rezaei K, **Bivalacqua TJ**, Epstein JI, Bishop JA, Netto GJ. Utility of uroplakin II expression as a marker of urothelial carcinoma. *Human Pathology*. 46:58-64, 2015.
164. Michailidi C, Hayashi M, Datta S, Sen T, Zenner K, Oladeru O, Brait M, Izumchenko E, Baras A, VandenBussche C, Argos M, **Bivalacqua TJ**, Ahsan H, Hahn NM, Netto GJ, Sidransky D, Hoque MO. Involvement of epigenetics and EMT related miRNA in arsenic induced neoplastic transformation and their potential clinical use. *Cancer Preventative Research (Phila)*. 8:208-21, 2015.
165. Bezerra SM, Chauv A, Ball MW, Faraj SF, Munari E, Gonzalez-Roibon N, Sharma R, Bivalacqua TJ, Burnett AL, Netto GJ. Human papillomavirus infection and immunohistochemical p16(INK4a) expression as predictors of outcome in penile squamous cell carcinomas. *Human Pathology*. 46:532-40, 2015.
166. Hannan JL, Albersen M, Stopak B, Liu X, Burnett AL, Hoke M, **Bivalacqua TJ**. Temporal changes in neurotrophic factors and neurite outgrowth in the major pelvic ganglion following cavernous nerve injury. *Journal of Neuroscience Research* 93:954-63, 2015.
167. Gandhi NM, Baras A, Munari E, Faraj S, Reis LO, Liu JJ, Kates M, Hoque M, Berman D, Hahn NM, Eisenberger M, Netto GJ, Schoenberg MP, **Bivalacqua TJ**. Gemcitabine and cisplatin neoadjuvant chemotherapy for muscle-invasive urothelial carcinoma: Predicting response and assessing outcomes. *Urologic Oncology* 33:204.e1-7, 2015.
168. Faraj SF, Munari E, Guner G, Taube J, Anders R, Hicks J, Meeker A, Schoenberg M, **Bivalacqua TJ**, Drake C, Netto GJ. Assessment of tumoral PD-L1 expression and intratumoral CD8+ T cells in urothelial carcinoma. *Urology* 85:703.e1-6, 2015.
169. Ball MW, Sundi D, Reese AC, Meyer CF, Terezakis SA, Efron JE, Schoenberg MP, Epstein JI, Ahuja N, **Bivalacqua TJ**. Multimodal Therapy in the Treatment of Prostate Sarcoma: The Johns Hopkins Experience. *Clinical Genitourinary Cancer*. 13:435-40, 2015.
170. Rowe SP, Gage KL, Faraj SF, Macura KJ, Cornish TC, Gonzalez-Roibon N, Guner G, Munari E, Partin AW, Pavlovich CP, Han M, Carter HB, **Bivalacqua TJ**, Blackford A, Holt D, Dannals RF, Netto GJ, Lodge MA, Mease RC, Pomper MG, Cho SY. <sup>18</sup>F-DCFBPET/CT for PSMA-Based Detection and Characterization of Primary Prostate Cancer. *Journal of Nuclear Medicine*. 56:1003-10, 2015.
171. Dean JD, McMahon CG, Guay AT, Morgentaler A, Althof SE, Becher EF, **Bivalacqua TJ**, Burnett AL, Buvat J, El Meliegy A, Hellstrom WJ, Jannini EA, Maggi M, McCullough A, Torres LO, Zitzmann M. The International Society for Sexual Medicine's Process of Care for the Assessment and Management of Testosterone Deficiency in Adult Men. *Journal of Sexual Medicine* 12:1660-86, 2015.
172. Lerner SP, Dinney C, Kamat A, **Bivalacqua TJ**, Nielsen M, O'Donnell M, Schoenberg MP, Steinberg G. Clarification of bladder cancer disease states following treatment of patients with intravesical BCG. *Bladder Cancer* 1:29-20, 2015.
173. Joice GA, Kates M, Sopko NA, Hannan JL, **Bivalacqua TJ**. Sickle Cell Disease in Priapism: Disparity in Care? *Urology*. 86:72-7, 2015.

174. Lascano D, Pak JS, Kates M, Finkelstein JB, Silva M, Hagen E, Roy Choudhury A, **Bivalacqua TJ**, DeCastro GJ, Benson MC, McKiernan JM. Validation of a frailty index in patients undergoing curative surgery for urologic malignancy and comparison with other risk stratification tools. *Urologic Oncology*. 33:426.e1-426.e12, 2015.
175. Castiglione F, Bergamini A, Albersen M, Hannan JL, **Bivalacqua TJ**, Bettiga A, Benigni F, Salonia A, Montorsi F, Hedlund P. Pelvic nerve injury negatively impacts female genital blood flow and induces vaginal fibrosis-implications for human nerve-sparing radical hysterectomy. *BJOG*. 122:1457-65, 2015.
176. Baras AS, Gandhi N, Munari E, Faraj S, Shultz L, Marchionni L, Schoenberg M, Hahn N, Hoque O, Berman D, **Bivalacqua TJ**, Netto G. Correction: Identification and Validation of Protein Biomarkers of Response to Neoadjuvant Platinum Chemotherapy in Muscle Invasive Urothelial Carcinoma. *PLoS One*.;10:e0143990, 2015.
177. Sokoll LJ, Zhang Z, Chan DW, Reese AC, **Bivalacqua TJ**, Partin AW, Walsh PC. Do Ultrasensitive Prostate Specific Antigen Measurements Have a Role in Predicting Long-Term Biochemical Recurrence-Free Survival in Men after Radical Prostatectomy? *Journal of Urology*, 5 (2):330-6, 2015
178. Sopko NA, Matsui H, Hannan JL, Berkowitz D, Champion HC, Hsu LL, Musicki B, Burnett AL, **Bivalacqua TJ**. Subacute Hemolysis in Sick Cell Mice Causes Priapism Secondary to NO Imbalance and PDE5 Dysregulation. *Journal of Sexual Medicine*. 12:1878-85, 2015.
179. Reis LO, Taheri D, Chaux A, Guner G, Mendoza Rodriguez MA, **Bivalacqua TJ**, Schoenberg MP, Epstein JI, Netto GJ. Significance of a minor high-grade component in a low-grade noninvasive papillary urothelial carcinoma of bladder. *Human Pathology*. 47:20-25, 2016.
180. Park JC, Gandhi NM, Carducci MA, Eisenberger MA, Baras AS, Netto GJ, Liu JJ, Drake CG, Schoenberg MP, **Bivalacqua TJ**, Hahn NM. A Retrospective Analysis of the Effect of Time from Diagnosis to Cystectomy on Survival in Patients with Muscle-Invasive Bladder Cancer Receiving Neoadjuvant Chemotherapy. *Journal of Urology* 195:880-885, 2016.
181. Baras A, Drake C, Liu JJ, Gandhi N, Kates M, Hoque MO, Meeker A, Hahn N, Taube JM, Schoenberg MP, Netto G, **Bivalacqua TJ**. The ratio of CD8 to Treg Tumor Infiltrating Lymphocytes is Associated with Response to Cisplatin Based Neoadjuvant Chemotherapy in Patients with Muscle Invasive Urothelial Carcinoma of the Bladder. *OncImmunology* 5(5):e1134412, 2016.
182. Chappidi MR, Kates M, Patel HD, Tosoian JT, Kaye DR, Sopko N, Lascano D, Liu JJ, McKiernan J, **Bivalacqua TJ**. Frailty as a Marker of Adverse Outcomes In Bladder Cancer Patients Undergoing Radical Cystectomy. *Urologic Oncology* 34:256.e1-6, 2016.
183. Hyndman ME, **Bivalacqua TJ**, Mettee LZ, Su LM, Trock BJ, Pavlovich CP. Nightly sildenafil use after radical prostatectomy has adverse effects on urinary convalescence: Results from a randomized trial of nightly vs on-demand dosing regimens. *Canadian Urologic Association Journal* 9:414-419, 2015.
184. Althumairi AA, Canner JK, Gorin MA, Fang SH, Gearhart SL, Wick EC, Safar B, **Bivalacqua TJ**, Efron JE. Reduction of Costs for Pelvic Exenteration Performed by High Volume Surgeons: Analysis of the Maryland Health Service Cost Review Commission Database. *American Surgery* 82:46-52, 2016.
185. Ball MW, Bezerra SM, Chaux A, Faraj SF, Gonzalez-Roibon N, Munari E, Sharma R, **Bivalacqua TJ**, Netto GJ, Burnett AL. Overexpression of Insulin-like Growth Factor-1 Receptor is Associated with Penile Cancer Progression. *Urology* 92:51-56, 2016.

186. Zargar H, Zargar-Shoshtari K, Lotan Y, Shah JB, van Rhijn BW, Daneshmand S, Spiess PE, Black P; Collaborators. Final Pathological Stage after Neoadjuvant Chemotherapy and Radical Cystectomy for Bladder Cancer-Does pT0 Predict Better Survival than pTa/Tis/T1? *Journal of Urology* 195:886-893, 2016.
187. Kaye DR, Canner JK, Kates M, Schoenberg MP, **Bivalacqua TJ**. Do African American patients treated with radical cystectomy for bladder cancer have worse overall survival?: Accounting for pathologic staging and patient demographics beyond race makes a difference. *Bladder Cancer* 27;2:225-234, 2016.
188. Chalfin HJ, Liu JJ, Johnson D, Gandhi G, Feng Z, Netto GJ, Drake CG, Hahn NH, Schoenberg MP, Trock BJ, Scott AV, Frank S, **Bivalacqua TJ**. Blood transfusion is associated with increased perioperative morbidity and adverse oncologic outcomes in bladder cancer patients receiving neoadjuvant chemotherapy and radical cystectomy. *Annals of Surgical Oncology* 23:2715-2722, 2016.
189. Chung E, Ralph D, Kagioglu A, Garaffa G, Shamsodini A, **Bivalacqua T**, Glina S, Hakim L, Sadeghi-Nejad H, Broderick G. Evidence-Based Management Guidelines on Peyronie's Disease. *Journal of Sexual Medicine* 13:905-23, 2016.
190. Castiglione F, Dewulf K, Hakim L, Weyne E, Montorsi F, Russo A, Boeri L, **Bivalacqua TJ**, De Ridder D, Joniau S, Albersen M, Hedlund P. Adipose-derived Stem Cells Counteract Urethral Stricture Formation in Rats. *European Urology* (in press), 2016.
191. Musicki B, Hannan JL, Lagoda G, **Bivalacqua TJ**, Burnett AL. Mechanistic link between erectile dysfunction and systemic endothelial dysfunction in type 2 diabetic rats. *Andrology*. 4: 977-983, 2016.
192. Cowan ML, Springer S, Nguyen D, Taheri D, Guner G, Mendoza Rodriguez MA, Wang Y, Kinde I, Del Carmen Rodriguez Pena M, VandenBussche CJ, Olson MT, Cunha I, Fujita K, Ertoy D, Kinzler K, **Bivalacqua T**, Papadopoulos N, Vogelstein B, Netto GJ. Detection of TERT promoter mutations in primary adenocarcinoma of the urinary bladder. *Human Pathology* 53:8-13, 2016.
193. Cowan M, Springer S, Nguyen D, Taheri D, Guner G, Rodriguez MA, Wang Y, Kinde I, VandenBussche CJ, Olson MT, Cunha I, Fujita K, Ertoy D, **Bivalacqua TJ**, Kinzler K, Vogelstein B, Netto GJ, Papadopoulos N. High prevalence of TERT promoter mutations in primary squamous cell carcinoma of the urinary bladder. *Modern Pathology*. 29:511-5, 2016.
194. Liu JJ, Mullane P, Kates M, Gandhi N, Schoenberg MP, Drake C, Hahn NM, Frank S, **Bivalacqua TJ**. Infectious complications in transfused patients after radical cystectomy. *Canadian Journal of Urology*. 23:8342-8347, 2016.
195. Stepan J, Tran HT, Bead VR, Oh YJ, Sikka G, **Bivalacqua TJ**, Burnett AL, Berkowitz DE, Santhanam L. Arginase Inhibition Reverses Endothelial Dysfunction, Pulmonary Hypertension, and Vascular Stiffness in Transgenic Sickle Cell Mice. *Anesthesia Analgesia*. 123:652-658, 2016.
196. Kamat AM, Agarwal P, **Bivalacqua TJ**, Chisolm S, Daneshmand S, Doroshov JH, Efstathiou JA, Galsky M, Iyer G, Kassouf W, Shah J, Taylor J, Williams SB, Quale DZ, Rosenberg JE. Collaborating to Move Research Forward: Proceedings of the 10<sup>th</sup> Annual Bladder Cancer Think Tank. *Bladder Cancer*. 2:203-213, 2016.
197. Hannan JL, Matsui H, Sopko NA, Liu X, Weyne E, Albersen M, Watson JW, Hoke A, Burnett AL, **Bivalacqua TJ**. Caspase-3 dependent nitrergic neuronal apoptosis following cavernous nerve injury is mediated via RhoA and ROCK activation in major pelvic ganglion. *Scientific Reports* 6:29416, 2016.
198. Nguyen D, Taheri D, Springer S, Cowan M, Guner G, Rodriguez MA, Wang Y, Kinde I, VandenBussche CJ, Olson MT, Ricardo BF, Cunha I, Fujita K, Ertoy D, Kinzler KW, **Bivalacqua TJ**, Papadopoulos N,

Vogelstein B, Netto GJ. High prevalence of TERT promoter mutations in micropapillary urothelial carcinoma. *Virchows Arch.* (in press), 2016.

199. Giuliano K, Nagarajan N, Canner JK, Wolfgang CL, **Bivalacqua TJ**, Terezakis S, Herman J, Schneider EB, Ahuja N. Predictors of improved survival for patients with retroperitoneal sarcoma. *Surgery.* (in press), 2016.

200. Chappidi MR, Kates M, Johnson MH, Hahn NM, **Bivalacqua TJ**, Pierorazio PM. Lymph node yield and tumor location in patients with upper tract urothelial carcinoma undergoing nephroureterectomy affects survival: A U.S. population-based analysis (2004-2012). *Urologic Oncology* (in press), 2016.

201. Chappidi MR, Kates M, Stimson CJ, **Bivalacqua TJ**, Pierorazio PM. Quantifying Non-Index Hospital Readmissions and Care Fragmentation Following Major Urologic Oncology Surgeries in a Nationally Representative Sample. *Journal of Urology* (in press), 2016

202. Silva FH, Karakus S, Musicki B, Matsui H, **Bivalacqua TJ**, Dos Santos JL, Costa FF, Burnett AL. Beneficial effect of the nitric oxide donor compound 3-(1,3-dioxoisindolin-2-yl)benzyl nitrate on dysregulated phosphodiesterase 5, NADPH oxidase and nitrosative stress in the sickle cell mouse penis: implication for priapism treatment. *Journal of Pharmacology and Experimental Therapeutics* (in press). 2016

203. Sopko NA, Matsui H, Lough DM, Miller D, Harris K, Kates M, Liu X, Billups K, Redett R, Burnett AL, Brandacher G, **Bivalacqua TJ**. Ex Vivo Model of Human Penile Transplantation and Rejection: Implications for Erectile Tissue Physiology. *European Urology* (in press), 2016.

204. Kates M, Ball MW, Chappidi MR, Baras AS, Gordetsky J, Sopko NA, Brant A, Pierorazio PM, Epstein JJ, Schoenberg MP, **Bivalacqua TJ**. Accuracy of urethral frozen section during radical cystectomy for bladder cancer. *Urologic Oncology* (in press), 2016.

205. Chappidi MR, Kates M, Stimson CJ, Johnson MH, Pierorazio PM, **Bivalacqua TJ**. Causes, Timing, Hospital Costs, and Perioperative Outcomes Of Index vs. Non-Index Hospital Readmissions Following Radical Cystectomy: Implications For Regionalization of Care. *Journal of Urology* (in press), 2016.

206. Ball MW, Schwen ZR, Ko JS, Meyer A, Netto G, Burnett AL, **Bivalacqua TJ**. Lymph node density predicts recurrence and death after inguinal lymph node dissection for penile cancer. *World Journal of Urology* (in press), 2016.

## **Inventions, Patents, Copyright**

“Compositions and Methods of Treating Endothelial Disorders”, Patent Pending - US Provisional 60/110,  
Inventors: Hunter C. Champion, Dan Berkowitz, and **Trinity J. Bivalacqua**

“Methods to achieve enhanced delivery to the bladder”, Patent Pending.  
Inventors: Laura Ensign, Max Kates, Abhijit Date, Justin Hanes, and **Trinity J. Bivalacqua**

“Scaffold Design and process for developing tissue-engineered organs with hollow structures”, Patent Pending.  
Inventors: Anirudha Singh, Nikolai Sopko, and **Trinity J. Bivalacqua**.

## **Sponsorship** (current, pending, previous)

### Current Grants

8/1/2011 – 7/1/2017. Title: Roles of RhoA/Rho-kinase Signaling in Cavernous Neurons following Axonal Injury. National Institute of Health (NIH) K08. Principal Investigator – Trinity J. Bivalacqua MD PhD, Role – Investigator, 75% Effort.

7/1/2013 – 6/30/2017. Title: eNOS Regulatory Mechanisms in Penile Vascular Function. R01DK067223, National Institute of Health (NIH)/NIDDK. Principal Investigator – Arthur L. Burnett, MD Role – Co-Investigator, 2% effort.

8/1/13-7/1/16. Title: Cavernous Nerve Regeneration in response to RhoA/Rho-kinase signaling. American Urological Association (AUA) Foundation Rising Star in Urology Research Award. Principal Investigator – Trinity J. Bivalacqua MD PhD, 15% effort.

9/1/2014 – 9/1/2016. Title: Nanomedicine Approaches for Improving Intravesical Delivery of Chemotherapeutic Agents. The Johns Hopkins Greenberg Bladder Cancer Institute. Principal Investigator: Trinity J. Bivalacqua MD PhD, 5% effort.

09/20/14-03/31/16. Title: Phase II Clinical Chemoprevention Trial of Weekly Erlotinib Before Bladder Cancer Surgery. University of Wisconsin and National Cancer Institute (NCI) sponsored. Principal Investigator: Trinity J. Bivalacqua MD PhD, 5% Effort.

11/01/14-10/31/17. Title: A Phase 1/2, Placebo-Controlled, Randomized Study to Evaluate the Safety, Immune Response, and Clinical Activity of HS-410 in Patients with Non-Muscle Invasive Bladder Cancer post TURBT. Heat Biologics, Inc. Principal Investigator: Trinity J. Bivalacqua MD PhD, 10% Effort.

#### Previous Grants

3/1/14 – 4/1/16. Title: TNF-alpha activation of Rho-kinase in cavernous nerve injury. National Institute of Health (NIH) R03 (1R03DK101701-01). Principal Investigator – Trinity J. Bivalacqua MD PhD, Role – Investigator, 25% Effort.

01/01/13 – 07/01/15. FKD Therapies - A Phase II, Randomized, Open Label, Parallel Arm Study to Evaluate the Safety and Efficacy of R Ad-IFN/Syn3 Following Intravesical Administration in Subjects with High Grade, BCG refractory or Relapsed Non-Muscle Invasive Bladder Cancer (NMIBC). Role: PI

6/20/10-7/1/15. Title: A Phase I Open Label Single Center Exploratory Study of an Autologous NUC in Subjects Requiring Incontinent Urinary Diversion following Cystectomy. Tengion, Inc. Principal Investigator – Trinity J. Bivalacqua MD PhD, 10% Effort.

4/1/2011 – 4/1/2013. Patrick C. Walsh Prostate Cancer Fund. Title: Cardiovascular Effects of Androgen Deprivation: Implications for Prostate Cancer Treatment. Principal Investigator – Trinity Bivalacqua MD PhD, 15% Effort (no salary support).

8/1/2011 – 8/1/2013. Title: The impact of peripheral pelvic nerve injury from multiparity and vaginal trauma on sexual function in young and old rats. Canadian Institutes of Health Research. Principal Investigator – Johanna Hannan Ph.D.; Role – Mentor (no salary support).

8/1/10 – 4/30/13. Title: A Phase 3, Double-blinded, Randomized, Placebo-Controlled Study of the Safety and Effectiveness of AA4500 Administered Twice per Treatment Cycle for Up to Four Cycles (2x4) in Men with Peyronie's Disease. Principal Investigator – Arthur L. Burnett, MD Role – Co-Investigator (no salary support).

American Urological Association Foundation - Astellas Foundation USA Scholars, MD/PhD Fellowship – Molecular Mechanisms of Priapism: Nitric Oxide Imbalance: 2007-2008, \$60,000. 7/1/2007 – 7/1/2008

National Kidney Foundation of Maryland - Role of Arginase in Age-Associated Erectile Dysfunction: Influence of In Vivo Gene Transfer of Anti-Arginase: 2005-06, \$8,225.

Glenn/AFAR Scholarship for Research in the Biology of Aging - Role of Superoxide Anion in the Pathophysiology of Age-Related Erectile Dysfunction: Influence of In Vivo Gene Transfer of Superoxide Dismutase: 2002-03, \$4,500.

Southern Medical Association Research Grant - Potential Role for Reactive Oxygen Species in the Pathophysiology of Erectile Dysfunction: 2001-02, \$4,000.

American Medical Association (AMA) Research Seed Grant for Medical Students - Gene Therapy for the Treatment of Diabetic Erectile Dysfunction: 2001, \$2,500.

International Society Of Impotence Research Young Investigator Grant - Gene Transfer of eNOS and nNOS for the Treatment of Erectile Dysfunction Using an Animal Model: 2000-02, \$10,000.

American Foundation for Urologic Disease (AFUD) Fellow - The Effects of Milrinone, Rolipram and Zaprinast in the Feline Erection Model: 1998, \$2,500.

### **Research Program Building / Leadership**

1/10 – present. Director of Research Bivalacqua Laboratory

1/11 – present. Member, Residency Curriculum Committee Department of Urology.

6/11 – present. Course Director, Indications Conference Department of Urology.

7/12 – present Associate Program Director, Sexual Medicine Fellowship

6/12 – present. Associate Program Director, Urologic Oncology Fellowship

1/12 – present. Co-Director, Bladder Cancer Multidisciplinary Clinic, Sidney Kimmel Comprehensive Cancer Center

2/14 – present. Director of Urologic Oncology, Brady Urological Institute.

2/14 – present. Clinical director, Medical student clerkship.

2/16 – present. R. Christian B. Evensen Professor of Urology and Oncology, Brady Urological Institute.

7/16 – present. American Urologic Association (AUA) Leadership Program.

### **EDUCATIONAL ACTIVITIES**

Educational Publications

#### **Review Articles**

1. W.J.G. Hellstrom and **T.J. Bivalacqua**. Peyronie's Disease: Etiology, Medical, and Surgical Therapy. *Journal of Andrology* 21:347-354, 2000.

2. **T.J. Bivalacqua**, H.C. Champion, W.J.G. Hellstrom, and P.J. Kadowitz. Pharmacotherapy for Erectile Dysfunction. *Trends in Pharmacological Sciences* 21:484-489, 2000.

3. **T.J. Bivalacqua**, S.K. Purohit, and W.J.G. Hellstrom. Peyronie's Disease: Advances in Basic Science and Pathophysiology. *Current Urology Reports* 1:297-301, 2000.

4. **T.J. Bivalacqua** and W.J.G. Hellstrom. Potential Application of Gene Therapy in the Treatment of Erectile Dysfunction. *Journal of Andrology* 22:183-190, 2001.

5. **T.J. Bivalacqua**, H.C. Champion, and W.J.G. Hellstrom. Implications of Nitric Oxide Synthase Isoforms in the Pathophysiology of Peyronie's Disease. *International Journal of Impotence Research* 14:345-352, 2002.

6. **T.J. Bivalacqua**, H.C. Champion, M.F. Usta, P.J. Kadowitz, and W.J.G. Hellstrom. Endothelial Dysfunction in Erectile Dysfunction: Role of the Endothelium in Erectile Physiology and Disease. *Journal of Andrology* 24:S17-S37, 2003.

7. M. Kendirci, **T.J. Bivalacqua**, and W.J.G. Hellstrom. Vardenafil: A Novel Type 5 Phosphodiesterase Inhibitor for the Treatment of Erectile Dysfunction. *Expert Opinion in Pharmacotherapy* 5:923-932, 2004.

8. B.A. Bunnell, W. Deng, C.M. Robinson, P.R. Waldron, **T.J. Bivalacqua**, S.R. Baber, P.J. Kadowitz. Potential Application of Mesenchymal Stem Cells for Treatment of Cardiovascular Diseases. *Canadian Journal of Physiology and Pharmacology* 83:529-539, 2005.
9. **T.J. Bivalacqua**, B. Musicki, M.F. Usta, H.C. Champion, P.J. Kadowitz, A.L. Burnett, W.J.G. Hellstrom. Endothelial Nitric Oxide Synthase Gene Therapy for Erectile Dysfunction. *Current Pharmaceutical Design* 11:4059-4067, 2005.
10. W. Deng, **T.J. Bivalacqua**, W.J.G. Hellstrom, and P.J. Kadowitz. Gene and Stem Cell Therapy for Erectile Dysfunction. *International Journal of Impotence Research* 17:S57-S63, 2005
11. A.L. Burnett, B. Musicki, L. Jin, and **T.J. Bivalacqua**. Nitric Oxide/Redox-Based Signaling a Therapeutic Target for Penile Disorders. *Expert Opinion in Therapeutic Targets* 10:445-457, 2006.
12. **T.J. Bivalacqua** and A.L. Burnett. Priapism: New Concepts in the Pathophysiology and New Treatment Strategies. *Current Urology Reports* 7:497-502, 2006.
13. M. Kendirci, P.C. Teloken, H.C. Champion, W.J.G. Hellstrom, and **T.J. Bivalacqua**. Gene Therapy for Erectile Dysfunction: Fact or Fiction? *European Urology* 50:1208-1222, 2006.
14. A.L. Burnett and **T.J. Bivalacqua**. Priapism: Current Principles and Practice. *Urologic Clinics of North America* 34:631-642, 2007.
15. T.D. Strong, M.A. Gebaska, A.L. Burnett, H.C. Champion, and **T.J. Bivalacqua**. Endothelium-specific gene and stem cell-based therapy for erectile dysfunction. *Asian Journal of Andrology* 10:14-22, 2008.
16. **T.J. Bivalacqua** and T.D. Strong. The Use of Gene Transfer Technology to Study the Pathophysiology of Erectile Dysfunction. *Journal of Sexual Medicine* 5:268-275, 2008.
17. T. D. Strong, H.C. Champion, A.L. Burnett and **T.J. Bivalacqua**. Stem and Endothelial Progenitor Cells in Erectile Biology. *Internal Journal of Impotence Research* 20:243-254, 2008.
18. T.J. Guzzo, **T.J. Bivalacqua**, and M.P. Schoenberg. Bladder Cancer and the Aluminum Industry: A Review of the Literature. *BJU International* 102:1058-1060, 2008.
19. B. Musicki B, T. Liu, G.A. Lagoda, **T.J. Bivalacqua**, T.D. Strong, and A.L. Burnett. Endothelial Nitric Oxide Synthase Regulation in Female Genital Tract Structures. *Journal of Sexual Medicine* 6:247-253, 2009.
20. **T.J. Bivalacqua**, P.M. Pierorazio, and L.M. Su. Open, Laparoscopic, and Robotic Radical Prostatectomy: Optimizing the Surgical Approach. *Surgical Oncology* 18:233-241, 2009.
21. Levey HR, Kutlu O, **Bivalacqua TJ**. Medical Management of Ischemic Stuttering Priapism: A contemporary review of the literature. *Asian Journal of Andrology* 14:156-163, 2012.
22. **Bivalacqua TJ**, Musicki B, Kutlu O, Burnett AL. New insights into the pathophysiology of sickle cell disease-associated priapism. *Journal of Sexual Medicine* 9:79-87, 2012.
23. **Bivalacqua TJ**. Metabolomics and Urologic Oncology. *Urologic Oncology* 29:550, 2011.
24. Hyndman ME, Mullins J, **Bivalacqua TJ**. Metabolomics and Bladder Cancer. *Urologic Oncology* 29:558-561, 2011.

25. Hyndman ME, Kaye D, Field NC, Lawson KA, Smith ND, Steinberg GD, Schoenberg MP, **Bivalacqua TJ**. The use of regenerative medicine in the management of invasive bladder cancer. *Advances in Urology* (in press). 2012.
26. Hakim L, Van der Aa F, **Bivalacqua TJ**, Hedlund P, Albersen M. Emerging tools for erectile dysfunction: a role for regenerative medicine. *Nature Reviews in Urology* 9:520-536, 2012.
27. Albersen M, **Bivalacqua TJ**. Sexual dysfunction: First EAU priapism treatment guidelines published. *Nature Reviews in Urology*. 11:132-1134, 2014.
28. Sopko NA, Hannan JL, **Bivalacqua TJ**. Understanding and targeting the Rho-kinase pathway in erectile dysfunction. *Nature Reviews in Urology*. 11:622-628, 2014.
29. Levey HR, Segal RL, **Bivalacqua TJ**. Management of priapism: an update for clinicians. *Therapeutic Advances in Urology* 6:230-44, 2014.
30. Kaye DR, Mullins JK, Carter HB, **Bivalacqua TJ**. Robotic surgery in urological oncology: patient care or market share? *Nature Reviews in Urology*. 12:55-60, 2015.
31. Sundi D, Svatek RS, Nielsen ME, Schoenberg MP, **Bivalacqua TJ**. Extent of pelvic lymph node dissection during radical cystectomy: is bigger better? *Reviews in Urology*. 16:159-66, 2014.
32. Kates M, Singh A, Matsui H, Steinberg GD, Smith ND, Schoenberg MP, **Bivalacqua TJ**. Tissue-engineered urinary conduits. *Current Urology Reports*. 16:8-16, 2015.
33. Weyne E, Castiglione F, Van der Aa F, **Bivalacqua TJ**, Albersen M. Landmarks in erectile function recovery after radical prostatectomy. *Nature Reviews in Urology*. 12:289-97, 2015.
33. Matsui H, Sopko NA, Hannan JL, **Bivalacqua TJ**. Mini Review: Pathophysiology of Erectile Dysfunction. *Current Drug Targets*. 16:411-9, 2015.
34. Sopko NA, Kates M, **Bivalacqua TJ**. Use of regenerative tissue for urinary diversion. *Current Opinions in Urology*. 25:578-85, 2015.
35. Kates M, Sopko NA, Matsui H, Drake CG, Hahn NM, **Bivalacqua TJ**. Immune checkpoint inhibitors: a new frontier in bladder cancer. *World Journal of Urology*. 49-55, 2016.
36. Musicki B, Bella AJ, **Bivalacqua TJ**, Davies KP, DiSanto ME, Gonzalez-Cadavid NF, Hannan JL, Kim NN, Podlasek CA, Wingard CJ, Burnett AL. Basic Science Evidence for the Link Between Erectile Dysfunction and Cardiometabolic Dysfunction. *Journal of Sexual Medicine* 12:2233-55, 2015.
37. Ghasemzadeh A, **Bivalacqua TJ**, Hahn NM, Drake CG. New Strategies in Bladder Cancer: A Second Coming for Immunotherapy. *Clinical Cancer Research* 22:793-801, 2016.
38. Podlasek CA, Mulhall J, Davies K, Wingard CJ, Hannan JL, **Bivalacqua TJ**, Musicki B, Khera M, González-Cadavid NF, Burnett AL 2nd. Translational Perspective on the Role of Testosterone in Sexual Function and Dysfunction. *Journal of Sexual Medicine* 13:1183-1198, 2016.

### **Editorials**

1. M.F. Usta, **T.J. Bivalacqua**, and W.J.G. Hellstrom. Re: optimizing treatment for diabetes mellitus induced erectile dysfunction. *Journal of Urology* 171:1638-1639, 2004.

2. T.D. Strong, H.C. Champion, P.J. Kadowitz, and **T.J. Bivalacqua**. Re: Potential Differentiation of Human Mesenchymal Stem Cell Transplanted In Rat Corpus Cavernosum Toward Endothelial Or Smooth Muscle Cells. *International Journal of Impotence Research* 19:530, 2007.
3. Chow NH, Knowles M, **Bivalacqua TJ**. Urothelial carcinoma. *Advances in Urology* 12:461370, 2012.
4. Reply: Anatomic Extent of Pelvic Lymph Node Dissection: Impact on Long-term Cancer-specific Outcomes in Men With Positive Lymph Nodes at Time of Radical Prostatectomy. *Urology*. 2013 Sep;82:659.
5. Reply: Castiglione F, Hedlund P, Van der Aa F, **Bivalacqua TJ**, Rigatti P, Van Poppel H, Montorsi F, De Ridder D, Albersen M. Reply from Authors re: Ching-Shwun Lin, Tom F. Lue. Adipose-derived Stem Cells for the Treatment of Peyronie's Disease? *European Urology* 2013;63:561-2.
6. Reply: Reese AC, **Bivalacqua TJ**, Schoenberg MP. The utility of an extensive postchemotherapy staging evaluation in patients receiving neoadjuvant chemotherapy for bladder cancer. *Urology*.2014;84:364.
7. Tran PT, **Bivalacqua TJ**, Dicker AP. Adjuvant radiation for node-positive disease after prostatectomy: more good news, but who will listen? *Journal of Clinical Oncology* 10;32:3917-9, 2014.
8. Weyne E, **Bivalacqua TJ**, Albersen M. Immunosympathectomy for Preservation of Erectile Function Following Cavernous Nerve Injury. *European Urology*. 67:727-8, 2015.
9. Reply: Joice GA, Kates M, **Bivalacqua TJ**. Reply: Sickle Cell Disease in Priapism: Disparity in Care? *Urology*. 86:78-9, 2015.
10. Albersen M, **Bivalacqua TJ**. Regenerative Medicine for Erectile Dysfunction Following Radical Prostatectomy: Are we Ready? *EBioMedicine*. 19;5:28-9, 2016.
11. Drake CG, **Bivalacqua TJ**, Hahn NM. Programmed Cell Death Ligand-1 Blockade in Urothelial Bladder Cancer: To Select or Not to Select. *Journal of Clinical Oncology* (in press). 2016

### Case Reports

1. **T.J. Bivalacqua**, H. Alphas, E.M. Schaeffer, and M.P. Schoenberg. Paraneoplastic Polyarthritits from Non-Small Cell Lung Cancer Metastatic to the Bladder. *Journal of Clinical Oncology* 25:2621-2623, 2007.
2. H.H. Alphas, J. Miles-Thomas, F. Attenollo, J.M. Taube, G. Fonseca, M.P. Schoenberg, and **T.J. Bivalacqua**. Presentation and management of a patient with subcutaneous metastatic transitional cell carcinoma of the bladder. *Nature Clinical Practice Urology* 5:691-694, 2008.
3. A.L. Burnett and **T.J. Bivalacqua**. Glucose-6-Phosphate Dehydrogenase Deficiency: An Etiology for Idiopathic Priapism? *Journal of Sexual Medicine* 5:237-240, 2008.
4. E.M. Schaeffer, **T.J. Bivalacqua**, S. Hortopan, C. Weiss, S. Mitchell, and M.E. Allaf. Cystoscopic Management of an Extruded Coil from Arteriovenous Fistula Embolization Using Arthroscopic Instruments. *Journal of Endourology* 22:1527-1529, 2008.
5. **T.J. Bivalacqua**, H.S. Bagga, K. Patil, A. Magheli, J. Taube, T.J. Guzzo, and M.L. Gonzalzo. Carcinosarcoma of the Urethra from a Primary Bladder Carcinosarcomatous Lesion: Analysis of Clinicopathologic Features. *Canadian Journal of Urology* 16:4345-4348, 2009.
6. Pierorazio PM, **Bivalacqua TJ**, Burnett AL. Daily phosphodiesterase type 5 inhibitor therapy as rescue for recurrent ischemic priapism after failed androgen ablation: A case report. *Journal of Andrology* 32:371-374, 2011.

7. Reese AC, Ball MW, Efron JE, Chang A, Meyer C, **Bivalacqua TJ**. Favorable Response to Neoadjuvant Chemotherapy and Radiation in Patient with Prostatic Stromal Sarcoma. *Journal of Clinical Oncology* 30:353-355, 2012.
8. Chalfin HJ, Gurda GT, Hammers HJ, Netto GJ, **Bivalacqua TJ**. Renal cell carcinoma presenting with brain metastasis from a 1.6 cm primary tumor. *Canadian Journal of Urology* 20:6965-7, 2013.
- 9 Ko JS, Di Carlo HN, Gupta AD, Ross AE, Eckhauser FE, **Bivalacqua TJ**. Adenocarcinoma of the Ileal Conduit in a Patient Born With Classic Bladder Exstrophy. *Urology Case Reports*. 1:5-6, 2013.
10. Truong H, Sundi D, Sopko N, Xing D, Lipson EJ, **Bivalacqua TJ**. A Case Report of Primary Recurrent Malignant Melanoma of the Urinary Bladder. *Urology Case Reports*. 1:2-4, 2013.
11. Cooper JL, Sopko NA, **Bivalacqua TJ**. Evaluation and treatment of an unusual urachal mass: a case report. *Springerplus*. 4:18, 2015.
10. Alam R, Johnson MH, Caldwell T, Pavlovich CP, **Bivalacqua TJ**, Tosoian JJ. Diagnosing and Treating Inflammatory Myofibroblastic Tumor of the Bladder. *Case Reports in Urology*. 2016:5724020, 2016.

#### **Book Chapters**

1. W.J.G. Hellstrom, **T.J. Bivalacqua**, P.J. Kadowitz and P.C. Doherty. Type 3, 4 and 5 Phosphodiesterase Inhibitors Influence Penile Erection in the Cat. In: *8<sup>th</sup> World Meeting on Impotence Research*, Meuleman, E., Nijehot, G.L., and Vanderschueren, D. (eds.), pgs. 219-224, 1998.
2. **T.J. Bivalacqua**, H.C. Champion, P.J. Kadowitz, P.C. Doherty and W.J.G. Hellstrom. Potentiation of Erectile Response by Combination of Prostaglandin E<sub>1</sub> and Rolipram in the Cat. In: *8<sup>th</sup> World Meeting on Impotence Research*. Meuleman, E., Nijehot, G.L., and Vanderschueren, D. (eds.), pgs. 225-229, 1998.
3. H.C. Champion, D.G. Lambert, **T.J. Bivalacqua**, D.B. McNamara, and P.J. Kadowitz. Comparison of the Inhibitory Actions of Angiotensin AT1 Receptor Antagonists in the Peripheral Vascular Bed. In: *Angiotensin II Receptor Blockade Physiological and Clinical Implications*, Dhalla N.S., Zahradka P., Dixon I.M.C., Beamish R.E. (eds.), pgs. 65-86, 1998.
4. **T.J. Bivalacqua**, H.C. Champion, P.J. Kadowitz, and W.J.G. Hellstrom. Nitric Oxide Effect on Penile Blood Flow and Lower Genitourinary Tract Function. In: *Nitric Oxide and the Regulation of the Peripheral Circulation*. Kadowitz, P.J. and McNamara, D.B. (eds.), New York: Springer-Verlag NY, Inc., pgs. 286-301, 2000.
5. P.J. Kadowitz, A.L. Hyman, B.D. Nossaman, **T. J. Bivalacqua**, W.A. Murphy, D.H. Coy, D.B. McNamara, and H.C. Champion. Cardiovascular Actions of Adrenomedullin. In: *The CGRP Family: Calcitonin Gene-Related Peptide, Amylin, and Adrenomedullin*. Poyner D., Marshall, I, and Brain, S. (eds), Georgetown: Landes BioScience, pgs. 115-122, 2000.
6. H.C. Champion, R.L. Pierce, **T.J. Bivalacqua**, W.A. Murphy, D.H. Coy, and P.J. Kadowitz. Analysis of Responses to hAmylin and hCGRP in Isolated Resistance Arteries from the Mesenteric Vascular Bed of the Rat. In: *The CGRP Family: Calcitonin Gene-Related Peptide, Amylin, and Adrenomedullin*. Poyner D., Marshall, I, and Brain, S. (eds), Georgetown: Landes BioScience, pgs. 189-190, 2000.
7. H.C. Champion, **T.J. Bivalacqua**, R. Wang, W.J.G. Hellstrom, W.A. Murphy, D.H. Coy, and P.J. Kadowitz. Effects of ADM and CGRP on Erectile Activity in the Cat. In: *The CGRP Family: Calcitonin Gene-Related*

*Peptide, Amylin, and Adrenomedullin*. Poyner D., Marshall, I, and Brain, S. (eds), Georgetown: Landes BioScience, pgs. 199-201, 2000.

8. T.E. Novak, **T.J. Bivalacqua**, R. Davis, and W.J.G. Hellstrom. Management of Erectile Dysfunction following Radical Prostatectomy. *In: Male Sexual Function: A Guide to Clinical Management*. J.J. Mulcahy (ed), The Humana Press, Inc. pgs. 109-122, 2001.

9. **T.J. Bivalacqua**, M.F. Usta, and R. Wang. Animal models for the study of erectile dysfunction. *In: Sexual Dysfunctions*. C. Teloken, C. Teodosio Da Ros, M. Tannhauser (eds), Brazile publisher, pgs. 34-38, 2004.

10. M.F. Usta, **T.J. Bivalacqua**, and W.J.G. Hellstrom. Peyronie's Disease. *In: Sexual Dysfunctions*. C. Teloken, C. Teodosio Da Ros, M. Tannhauser (eds), Brazile publisher, pgs. 214-221, 2004.

11. K. McKenna, **T.J. Bivalacqua**, M. Baum, L. Coolen, P. Hedlund, K. Park, E. Pescatori, J. Rajfer, and Y. Sato. Experimental Studies of Sexual Functions and Dysfunctions Including Brain Imaging Studies. *In: Erectile Dysfunction* T.F. Lue, R. Basson, F. Giuliano, F. Montorsi, R. Rosen (eds), World Health Organization, Paris, France, 2004.

12. **T.J. Bivalacqua** and M. Allaf. Erectile Dysfunction and Peyronie's Disease. *In: The Brady Urology Manual*, J.K. Parsons, E.J. Wright (eds), pgs. 51-62, 2006.

13. M. Allaf and **T.J. Bivalacqua**. Priapism. *In: The Brady Urology Manual*, J.K. Parsons, E.J. Wright (eds), pgs. 273-278, 2006.

14. **T.J. Bivalacqua**, T.D. Strong, H.C. Champion, and A.L. Burnett. Stem and Endothelial Progenitor Cells in Erectile Biology: Future Therapeutic Applications and Potential Biomarker for ED. *In: Textbook of Erectile Dysfunction, 2<sup>nd</sup> Edition*; Carson, Kirby, Goldstein, Wyllie (eds), pgs 314-322, 2009.

15. **T.J. Bivalacqua**, B. Musicki, H.C. Champion, and A.L. Burnett. Phosphodiesterase Type 5 Inhibitor Therapy for Priapism. *In: Textbook of Erectile Dysfunction, 2<sup>nd</sup> Edition*; Carson, Kirby, Goldstein, Wyllie (eds), pgs 428-433, 2009.

16. **T.J. Bivalacqua**, and A.L. Burnett. Operations for Priapism. *In: Hinman's Atlas of Urologic Surgery, 3<sup>rd</sup> Edition*; Resnick, McGuire, Howards, Preminger, Smith (eds), (in press), 2011.

17. **T.J. Bivalacqua**, and A.L. Burnett. Priapism. *In: Glenn's Urologic Surgery, 7<sup>th</sup> Edition*; Graham and Keane (eds), pgs 487-492, 2010.

18. A. Schaeffer, and **T.J. Bivalacqua**. Erectile Dysfunction. *In: 5 Minute Urology Consult*; Gomella (ed), pgs 118-119, 2010.

19. A. Schaeffer, and **T.J. Bivalacqua**. Peyronie's Disease. *In: 5 Minute Urology Consult*; Gomella (ed), pgs 256-257, 2010.

20. A. Schaeffer, and **T.J. Bivalacqua**. Urinary Tract Infection in Men. *In: 5 Minute Urology Consult*; Gomella (ed), pgs 508-509, 2010.

21. T. Lally, Burnett AL, and **T.J. Bivalacqua**. Scleroderma and Erectile Dysfunction. *In: Scleroderma: From Pathogenesis to Comprehensive Management*; Varga, Denton, Wigley (eds), 2012.

## Teaching

## Mentoring

## Advisees

2007 – 2008	Travis D. Strong BS, Lab Technician and Graduate Student
2010 – 2011	Omer Kutlu MD, Post-Doctoral Fellow
2011 – 2015	Johanna Hannan PhD, Post-Doctoral Fellow
2014 – 2016	Hotaka Matsui MD, Post-Doctoral Fellow
2014 – 2015	Helen Levey DO, MPH, Post-Doctoral Fellow
2014 – present	Nikolai Sopko MD PhD, Post-Doctoral Fellow.
2014 – present	Max Kates MD, Post-Doctoral Fellow
2015 – present	Takahiro Yoshida MD PhD, Post-Doctoral Fellow.

## Medical Students and Residents

2010 – 2013	Philip Pierorazio MD, Urology Resident
2009 – 2010	Helen Levey DO, MPH, Medical Student
2013 – present	Max Kates MD, Urology Resident.
2013 – present	Nikoli Sopko MD PhD, Urology Resident.
2013	Vinson Wang MD Candidate, Persky Medical Student Scholar
2013	Ben Stopak BS, Undergraduate Student (SURE Student)
2014	Joseph Watson BS, Undergraduate Student (SURE Student)
2015	Allison Reinhardt BS, Undergraduate Student (SURE Student)
2015 – present	Meera Chappidi MD MPH, Medical Student, MPH student
2016 – present	Niv Milbar MD Candidate, Persky Medical Student Scholar

## Fellows

2009-2011	Matthew E. Hyndman MD PhD, Urologic Oncology Fellow
2011 – 2013	Adam Reese MD, Urologic Oncology Fellow
2011 – 2013	Robert Segal MD, Sexual Medicine Fellow
2013 – 2015	Jen-Jane Liu MD, Urologic Oncology Fellow.
2014 – 2016	Michal Johnson MD, Urologic Oncology Fellow.
2015 – present	C.J. Stimson MD JD, Urologic Oncology Fellow.
2016 – present	Alice Semerjian MD, Urologic Oncology Fellow.

## Lectures

2011 – present	Johns Hopkins Hospital Medical School Lecture to Second Year Students: “Sexual Dysfunction”
2011 – present	Johns Hopkins Hospital Obstetrics/Gynecology Residents: “Pelvic Anatomy and Urologic Complications of Pelvic Surgery.”

## Clinical Activities

### Certification

#### Medical

2009 – present	Maryland License #D0069964
2007	daVinci® Robotic Surgical System Certification (Intuitive Surgical, Inc.)
2006	Greenlight (PVP) LASER certificate

#### Boards

USMLE Step 1, 2002, Passed
USMLE Step 2 CK, 2004, Passed
USMLE Step 3, 2009, Passed
Urology Written Boards, 2010, Passed
Board Certified - American Board of Urology (ABU), 2012

### Clinical (Service) Responsibilities

2010- present	Urology clinic, attending, 1.5 day/ week
2010- present	Urology Operating room 2-3 day/week

## **ORGANIZATIONAL ACTIVITIES**

### **Editorial Activities**

#### **Journal Editorship**

2008 – present Journal of Sexual Medicine, Editorial Board  
2009 – 2010 UroToday International Journal, Editorial Board  
2011 Urologic Oncology, Guest Editor – Metabolomic in Urologic Oncology  
2011 – present Asian Journal of Andrology, Editorial Board  
2011 – present Frontiers in Integrative and Regenerative Pharmacology, Associate Editor  
2012 Advances in Urology, Guest Editor - Urothelial Carcinoma.  
2012 – 2015 Journal of Sexual Medicine – Associate Editor  
2014 – present Bladder Cancer, Editorial Board

#### **Journal Reviewer**

Journal of Andrology  
Journal of Urology  
International Journal of Impotence Research  
Asian Journal of Andrology  
American Journal of Physiology: Heart Circulatory Physiology  
Nitric Oxide: Biology and Chemistry  
Urology  
Current Pharmaceutical Design  
International Journal of Andrology  
Diabetes  
BMC Pharmacology  
Biology of Reproduction  
Nature Clinical Practice Urology  
Current Gene Therapy  
Circulation  
Advances in Urology  
Experimental Biology and Medicine  
Proceeding of the National Academy of Science  
British Journal of Pharmacology  
BJU International  
Current Urology  
Gene Therapy  
PlosOne  
Proceedings of the National Academy of Science  
Journal of Clinical Investigation  
Stem Cells.  
Tissue Engineering  
Nature Medicine.  
Science  
Cancer Research.

#### **Advisory Committees**

2002 Abstract Committee, International Society of Sexual and Impotence Research International Meeting, Montreal, Canada  
2003 Committee Delegate, “Experimental Studies of Sexual Functions and Dysfunction Including Brain Imaging Studies”, 2<sup>nd</sup> International Consultation of Erectile and Sexual Dysfunctions in Association with the World Health Organization (WHO), Paris France.  
2004-07 Web-Site Committee, Sexual Medicine Society of North America.

- 2004 Abstract Committee, International Society for Sexual and Impotence Research International Meeting, Buenos Aires, Argentina.
- 2004 Abstract Committee, European Society of Sexual Medicine Annual Meeting, London, England.
- 2007-09 Scientific Committee, International Society of Sexual Medicine.
- 2007-09 Membership Committee, North America Society of Sexual Medicine
- 2007-08 House Staff Council, Department representative. Johns Hopkins Medical Institution
- 2007-10 American Urological Association, Core Curriculum Committee – Sexual Medicine: Erectile Dysfunction, Peyronie’s disease and Priapism
- 2008 Abstract Committee, Sexual Medicine Society of North America Annual Meeting, Toronto, Canada
- 2008 Abstract Committee, International Society of Sexual Medicine and European Society of Sexual Medicine Meeting, Brussels, Belgium.
- 2009 - present Abstract Committee, American Urological Association Annual Meeting, Sexual Dysfunction: Surgical and Non-Surgical Management.
- 2009 Committee Delegate: “*Priapism*”, 3<sup>rd</sup> International Consultation on Erectile and Sexual Dysfunctions in association with the World Health Organization (WHO), Paris France.
- 2009 Abstract Committee, European Association of Urology: Basic Science Erectile Dysfunction, Stockholm, Sweden.
- 2010 Abstract Committee, Sexual Medicine Society of North America: Epidemiology of Erectile Dysfunction, Miami, USA
- 2010 Abstract Committee, European Association of Urology: Basic Science Erectile Dysfunction, Barcelona, Spain.
- 2010 - 2013 Member, Medical Staff Conference Committee, Johns Hopkins Hospital.
- 2011- 2014 Member, Young Clinicians Committee, Sexual Medicine Society of North America, Inc.
- 2011 – 2014 Member, Basic Science Committee, Sexual Medicine Society of North America, Inc.
- 2011 – present Member, Strategic Planning Committee, Sexual Medicine Society of North America, Inc.
- 2011 – 2013 Member, Standards Committee, International Society of Sexual Medicine.
- 2012 – 2014 Member, Medical School Admissions Committee, Johns Hopkins Medical School.
- 2013 – 2014 Scientific Reviewer, Bladder Cancer Advocacy Networks (BCAN) Young Investigator Grant
- 2013 Scientific Reviewer, Sidney Kimmel Comprehensive Cancer Center (SKCCC) Rango’s Grant Program
- 2013 – 2015 Chairman, Research and Awards Committee Sexual Medicine Society of North America.
- 2015 Committee Delegate: “*Peyronie’s Disease*”, 4<sup>th</sup> International Consultation on Erectile and Sexual Dysfunctions in association with the World Health Organization (WHO), Madrid, Spain.
- 2014 – present Chairman, Basic Science Committee Sexual Medicine Society of North America.

### Professional Societies

- 1998 Member, American Society of Andrology (ASA)
- 1998 Member, Sexual Medicine Society of North America (SMSNA), Inc.
- 1998 Member, International Society of Sexual Medicine (ISSM)
- 2004 Member, American Urologic Association (AUA)
- 2007 Member, Alpha Omega Alpha (AOA)
- 2009 Member, Society for Basic Urologic Research (SBUR)
- 2010 Member, Society of Urologic Oncology (SUO)
- 2013 Member, Eastern Cooperative Oncology Group (ECOG)
- 2013 Member, American Society of Clinical Oncology (ASCO)

### Conference Organizer, Session Chair

- 2004 Session co-chair, Erectile Dysfunction: Basic Science, International Society for Sexual and Impotence Research, 11<sup>th</sup> World Congress, Buenos Aires, Argentina.
- 2005 Session co-chair, Erectile Dysfunction – Pathophysiology and Pharmacology, 1<sup>st</sup> International Conference on Urogenital Disorders – from Genes to Clinic, Malmo, Sweden.
- 2009 Session co-chair, Penile Rehabilitation after Radical Retropubic Prostatectomy: Basic Science, American Urological Association (AUA) Annual Meeting, Chicago, IL.

- 2010 Session co-chair, Male Erectile Dysfunction: Basic Science, International Society for Sexual and Impotence Research, 14<sup>th</sup> World Congress, Seoul, Korea.
- 2011 Session co-chair, Radiologic Imaging. American Urological Association (AUA) Annual Meeting, Washington D.C.
- 2011 Session chair, Basic Sciences Plenary Session. Sexual Medicine Society of North America Annual Meeting, Las Vegas.
- 2012 Session chair, Bladder Cancer: Non-Invasive Bladder Cancer. American Urological Association (AUA) Annual Meeting, Atlanta, GA.
- 2012 Session co-chair, Prostate Cancer. European Society of Sexual Medicine (ESSM) Annual Meeting, Amsterdam, Netherlands.
- 2013 Session co-chair, Treatment of LUTS/BPH – What Fits Best for Whom. International Symposium on Prostate, Androgens and Men’s Sexual Health. Berlin, Germany
- 2013 Session co-chair, Evidence based Medicine Treatment of Patients with Prostate and Sexual Problems – Tricky Cases from the Expert’s Practice. International Symposium on Prostate, Androgens and Men’s Sexual Health. Berlin, Germany
- 2014 Session co-chair, Basic Science. World Meeting on Sexual Medicine, International Society of Sexual Medicine. San Paulo, Brazil.
- 2015 Session chair, Basic science. Sexual Medicine Society of North America (SMSNA) annual meeting. Las Vegas, Nevada.
- 2015 Session chair, Bladder Cancer Advocacy Network (BCNA) Think Tank. Panel: Data Sharing, Privacy Issues, and Social Media. Charlotte, North Carolina.

## RECOGNITION

### Awards, Honors

- 1999 Thomas S.K. Change Trainee Award – American Society of Andrology
- 2000 1<sup>st</sup> Prize Essay Contest: Society for the Study of Impotence
- 2001 3<sup>rd</sup> Prize Montague Boyd Essay Contest: Southeastern Section AUA
- 2001-02 Basic Research Award in Integrated Biology: Tulane Health Research Day
- 2001 Jorgen U. Schlegel Award for Excellence in Research, Tulane School of Medicine
- 2002 Jean François Ginestie Prize: Best Paper on Basic Science of Sexual Medicine
- 2003 Best Basic Science Abstract: Sexual Medicine Society of North America, Inc.
- 2004 American Federation for Medical Research Student Recognition Award
- 2004 John T. Halsey Award, Tulane School of Medicine
- 2004 Joseph Hume Memorial Award, Tulane School of Medicine
- 2004 AUA/Yamanouchi Best Abstract Prize: Impotence
- 2004 Outstanding Surgical Intern, Johns Hopkins University, Department of Surgery
- 2004 Arnold M Seligman Award for Most Outstanding Surgical Resident, Sinai Hospital of Baltimore
- 2005 Best Basic Science Abstract: Sexual Medicine Society of North America, Inc.
- 2006 Zorngiotti-Newman Prize (Co-author): Best Clinical Research in Sexual Medicine
- 2007 Alpha Omega Alpha, Johns Hopkins University, Elected as House Officer
- 2007 1<sup>st</sup> Prize Resident Essay Contest: Laboratory Science, Mid-Atlantic Section AUA
- 2007 Best Basic Science Abstract: Sexual Medicine Society of North America, Inc.
- 2007-08 American Urological Association Foundation Astellas USA Foundation MD/PhD Fellowship
- 2008 Jack Lapidès Neurourology Essay Contest Grand Prize Winner
- 2008 2<sup>nd</sup> Prize Resident Essay Contest: Laboratory Science, American Urological Association
- 2008 Cook Urology Travel Award from American Society of Andrology
- 2008 American Society of Andrology Trainee Award
- 2008 Outstanding Graduate: AUA Foundation
- 2008 Young Investigator Award AUA Research Forum
- 2010 Young Investigator Award Society of Basic Urologic Research (SBUR)
- 2011 Best Poster, Sexual Dysfunction: Basic Science; American Urological Association (AUA) Annual Meeting
- 2012 American Urological Association (AUA) Foundation Rising Star in Urology Research Award

- 2013 Best Poster, Basic Science ED; American Urological Association (AUA) Annual Meeting.  
 2014 Best Poster, Bladder Cancer: Invasive; American Urological Association (AUA) Annual Meeting.  
 2014 1<sup>st</sup> Prize Best Abstract Non-Oncology, European Association of Urology (EAU) Annual Meeting.

### **Invited Talks, Panels**

- 2003 Speaker, American Society of Andrology, Post-Graduate Course, “Endothelial Dysfunction: Relevance to Erectile Dysfunction?” Phoenix, AZ.
- 2003 Speaker, Duke Medical Center, Urology Grand Rounds, Title: “Future Treatments for Erectile Dysfunction: Beyond Oral Therapy” Raleigh, NC.
- 2004 Speaker, International Society for Sexual and Impotence Research, 11<sup>th</sup> World Congress, “Future Trends in the Treatment of Erectile Dysfunction” Buenos Aires, Argentina.
- 2004 Speaker, European Society for Sexual Medicine Annual Meeting, “New Avenues for the Treatment of Erectile dysfunction”, London, England.
- 2005 Speaker, 1<sup>st</sup> International Conference on Urogenital Disorders – from Genes to Clinic “Gene Therapy – From Basics to Clinical Application”, Malmo, Sweden.
- 2005 Speaker, European Society for Sexual Medicine Annual Meeting, “Point-Counterpoint Session: Gene Therapy – An Experimental Tool or a Future Treatment Option for Erectile Dysfunction”, Copenhagen, Denmark.
- 2007 Speaker, Mid-Atlantic Section of the American Urological Association, “PDE5i are Efficacious for Erectile Function Rehabilitation after Radical Prostatectomy, Pro – Basic Science” South Hampton, Bermuda.
- 2008 Speaker, Duke Medical Center, Urology Grand Rounds, “Emerging Concepts in the Treatment of Post-Radical Prostatectomy ED”, Raleigh, NC.
- 2008 Speaker, American Society of Andrology, Post-Graduate Course, “Molecular Mechanisms of Erection”, Albuquerque, NM.
- 2008 Speaker, American Urological Association Research Forum at the AUA Annual Meeting, “Inhibition of Rho-kinase as an Emerging Treatment Option for the Treatment of Post-Radical Prostatectomy Erectile Dysfunction” Orlando, FL.
- 2008 Speaker, American Urological Association Foundation Breakfast at the AUA Annual Meeting, “Molecular Mechanisms of Priapism: Nitric Oxide Imbalance” Orlando, FL.
- 2008 Speaker, 4<sup>th</sup> International Congress on the History of Urology, “Impotence and Priapism in the Ancient Times” Linthicum, MD.
- 2009 Speaker, Cardiac Anesthesia Grand Rounds, Johns Hopkins Hospital, “Vascular Endothelial Dysfunction: Role in Penile Vascular Disease”, Baltimore, MD.
- 2009 Speaker, Urologic Complications of Obesity and Diabetes, National Institute of Diabetic and Digestive and Kidney Diseases, “Biomarkers and Diabetic Erectile Dysfunction – Clinical Trials”, Baltimore, MD.
- 2009 Speaker, European Association of Urology (EAU) Annual Meeting, “Priapism: Pathophysiology and Management”, Stockholm, Sweden.
- 2010 Speaker, International Society of Sexual Medicine (ISSM) Meeting, “Medical Management of Stuttering Priapism”, Seoul, Korea.
- 2011 Speaker, National Institute of Health (NIH), National Heart, Lung, and Blood Institute, “Nitric Oxide Imbalance and Sickle Cell Disease-Associated Priapism”, Bethesda, MD.
- 2011 Speaker, 5<sup>th</sup> Annual Sickle Cell Disease Research and Educational Symposium, Annual National Sickle Cell Disease Scientific Meeting, “Priapism and Sickle Cell Disease: New Basic Science Insights and Urology Guidelines for Management”, Hollywood, FL.
- 2011 Speaker, Highlights Session: Sexual Dysfunction. American Urological Association (AUA) Annual Meeting, Washington D.C.
- 2011 Speaker, American Urological Association Foundation Young Investigator Forum. American Urological Association (AUA) Annual Meeting, Washington D.C.
- 2012 Speaker, Maryland Urologic Annual Meeting, Prostate Cancer and Management of Post-prostatectomy Erectile Dysfunction. Sinai Hospital, Baltimore, MD.
- 2012 Visiting Professor, Urological Research Institute, San Raffaele Hospital, Vita-Salute University, Milan Italy Management of Advanced Bladder Cancer. Milan, Italy.

- 2012 Speaker, The First Latin American Men's Health Forum, Prostate Cancer and Testosterone Replacement Therapy. International Society of Sexual Medicine (ISSM) sponsored, Cancun, Mexico.
- 2012 Speaker, American Society of Andrology (ASA), Gene Therapy, Stem Cells, and Regenerative Medicine for Erectile Dysfunction: Past, Present and Future. Tuscon, Arizona.
- 2012 Speaker, Bladder Cancer Advocacy Network (BCAN), Non-Muscle Invasive Bladder Cancer, Arlington, Virginia.
- 2012 Speaker, American Urological Association (AUA), Sexual Medicine Society of North America (SMSNA), "Testosterone Therapy: Does Science Supports its Use? Cardiovascular Health Effects." Atlanta, GA.
- 2013 Speaker, International Symposium on Prostate, Androgens and Men's Sexual Health, "Management of Prostate Cancer – What's Best for Our Sex Life?" Berlin, Germany.
- 2013 Speaker, 2<sup>nd</sup> Latin American Men's Health Forum. "Surgical-related ED: Evidence, issues and options." Cancun, Mexico.
- 2013 Speaker, Society of Latin America Medicine Sexual (SLAMS). "Basic Science of Peyronie's Disease." Cancun, Mexico.
- 2013 Speaker, Society of Latin America Medicine Sexual (SLAMS). "Pathophysiology of Erectile Dysfunction." Cancun, Mexico.
- 2013 Speaker, Sexual Medicine Society of North America (SMNSA) Annual Meeting, "Stem Cells and Erectile Dysfunction." New Orleans, LA.
- 2013 Speaker, Johns Hopkins Medicine Advance Robotic Surgery for the Urological Oncology Patient, "Point/Counterpoint: Extended Lymph Node Dissection is Associated with Improved Outcomes", Baltimore, MD.
- 2013 Speaker, American Urological Association (AUA) Annual Meeting, "Research Update: Priapism." San Diego, CA.
- 2013 Speaker, American Urological Association (AUA) Annual Meeting, "Shunt surgery for priapism: techniques and results." San Diego, CA.
- 2013 Speaker, Johns Hopkins Medicine Advance Robotic Surgery for the Urological Oncology Patient, "Future Directions in Bladder Cancer Treatment", Baltimore, MD.
- 2014 Speaker, American Urological Association (AUA) Annual Meeting, Sexual Medicine Society of North America (SMSNA) and Society of Urologic Prosthetic Surgeons (SUPS). "Case Presentations and Panel Discussion: Bladder Cancer, Penile Cancer, Colorectal Cancer." Orlando, FL.
- 2014 Speaker, American Urological Association (AUA) Annual Meeting, AUA Research Forum "Perspectives from an Early Career Investigator." Orlando, FL.
- 2014 Speaker, American Urological Association (AUA) Annual Meeting, "Rising Start Report: Regenerative Medicine in Urology." Orlando, FL.
- 2014 Speaker, American Urological Association (AUA) Annual Meeting, "Future Targets for Erectile Dysfunction." Orlando, FL.
- 2014 Speaker, Sexual Medicine Society of North America (SMSNA), "ESWL for Erectile Dysfunction: Is it Realistic?" Miami, FL.
- 2014 Speaker, Bladder Cancer Advocacy Network (BCAN) Annual Meeting, "Landscape of Immunotherapy for Urothelial Carcinoma". San Diego, CA.
- 2014 Speaker, Tissue Engineering and Regenerative Medicine International Society (TERMIS) Annual Meeting, "Applications and Limitations of Science in Regulatory Decision Making", Washington, DC.
- 2014 Speaker, Mid-Atlantic AUA Annual Meeting, "Point/Counterpoint: BCG Refractory Superficial Bladder Cancer: Early Cystectomy vs. Salvage Intravesical Therapy", Baltimore, MD.
- 2014 Speaker, World Meeting on Sexual Medicine, International Society of Sexual Medicine, "Future Targets for Erectile Dysfunction: Non-Rx, non-Sx treatment of ED". San Paulo, Brazil.
- 2014 Speaker, World Meeting on Sexual Medicine, International Society of Sexual Medicine, "Art of Writing an Attractive Manuscript in Sexual Medicine". San Paulo, Brazil.
- 2014 Speaker, World Meeting on Sexual Medicine, International Society of Sexual Medicine, "Take Home Message: Basic Science". San Paulo, Brazil.
- 2014 Speaker, 1<sup>st</sup> Asia-Pacific Men's Health Forum, The Grand Hyatt Taipei, "Orthotopic bladder substitutions: Strategies for optimal outcomes." Taipei, Taiwan.

- 2014 Speaker, 1<sup>st</sup> Asia-Pacific Men's Health Forum, The Grand Hyatt Taipei, "Robotic-Assisted radical prostatectomy: past, present, and future." Taipei, Taiwan.
- 2014 Speaker, III LA Men's Health Forum and LUTS Forum, "Surgical Related Erectile Dysfunction." Costa Rica, Central America.
- 2014 Speaker, III LA Men's Health Forum and LUTS Forum, "Erectile Dysfunction and its connection with cardiovascular disease: what urologists should know." Costa Rica, Central America.
- 2014 Speaker, 16<sup>th</sup> Congress of the European Society of Sexual Medicine (ESSM), "Aging Risk Factors for Erectile Dysfunction." Istanbul, Turkey.
- 2015 Speaker, American Urological Association (AUA), Society of Urologic Oncology Section meeting. "Liquid Biopsy Circulating Tumor Cells As Biomarkers for Advanced Urothelial Carcinoma." New Orleans, Louisiana.
- 2015 Speaker, 35<sup>th</sup> Congress of the Societe of Internationale d'Urologie (SIU), SIU Innovations Symposium: "Tissue Engineering will make the ileal loop obsolete?" Melbourne, Australia.
- 2015 Speaker, Society for Basic Urologic Research (SBUR) Fall Symposium, "Sickle Cell Disease associated priapism and lower urinary tract dysfunction." Fort Lauderdale, Florida.
- 2015 Speaker, 21<sup>st</sup> annual Sexual Medicine Society of North America Fall symposium: 2<sup>nd</sup> Annual Robert Krane Lecture: Neuroplasticity: Implications for Erectile Dysfunction and Molecular Pathways in ED: Where are we going? Stem Cells and Cytokines. Las Vegas, Nevada.
- 2015 Speaker, Clinical Society of Genitourinary Surgery (CSGUS) Annual Meeting, "Tissue engineered neo-urinary conduits: initial results and future directions." Baltimore, Maryland.
- 2015 Speaker, 13<sup>th</sup> Meeting of the International Bladder Cancer Network (IBCN), "Markers of response to neoadjuvant chemotherapy in context of PDL-1 status and related immunological factors." Athens, Greece.
- 2015 Speaker, Mid-Atlantic and Northeast Section meeting of the American Urological Association, "Panel I: Robotic vs Open Cystectomy debate; Con-side". Paradise Island, Bahamas.
- 2015 Speaker, International Society of Sexual Medicine (ISSM) The New Sexual Medicine: Integrating Pharmacotherapy, sexual therapy and surgery. "Best possible practice: an integrative model for management of ED." Panama City, Panama.
- 2015 Speaker, AUA Early Career Investigators Workshop, "Career Development: "Lessons learned from residency to rising star" Linthicum, Maryland.
- 2015 Speaker, Uro-Track CME Course Johns Hopkins and Massachusetts General Hospital. Bladder Cancer: New approaches to treating non-muscle invasive bladder cancer. Boston, Massachusetts.
- 2015 Speaker, 40<sup>th</sup> Annual Conference of the American Society of Andrology (ASA). "Erectile dysfunction and radical prostatectomy: where is the next breakthrough?" Salt Lake City, Utah.
- 2015 Speaker, 17<sup>th</sup> Congress of the European Society of Sexual Medicine (ESSM). "Penile rehabilitation: the fall of a myth?". Copenhagen, Denmark.
- 2015 Speaker, National Cancer Institute (NCI) Novel therapeutics for non-muscle invasive bladder cancer clinical trials planning meeting. Group panel – Proposals, logistical issues, discussion for proposed NCTN group trials. Bethesda, Maryland.
- 2015 Speaker, Urology Grand Rounds University of Pennsylvania. "What's new in the treatment of Urothelial Carcinoma: From immunotherapy to tissue engineering." Philadelphia, Pennsylvania.
- 2016 Speaker, Urology Grand Rounds Albert Einstein College of Medicine. "Tissue Engineered Urinary Conduits." Bronx, New York.
- 2016 Visiting Professor, University of Rochester. "Immunotherapy and Tissue Engineering". Rochester, New York.
- 2016 Speaker, 18<sup>th</sup> Congress of the European Society for Sexual Medicine. "ESWT: a critical viewpoint". Madrid, Spain.
- 2016 Speaker, 3<sup>rd</sup> Asia-Pacific Men's Health Forum. "Stem cell therapy in the treatment of ED". Kuala Lumpur, Malaysia.
- 2016 Speaker, 3<sup>rd</sup> Asia-Pacific Men's Health Forum. "Management of post-prostatectomy complications". Kuala Lumpur, Malaysia

- 2016 Panel Discussion, 3<sup>rd</sup> Asia-Pacific Men's Health Forum. "Management of LUTS/BPH". Kuala Lumpur, Malaysia
- 2016 Speaker, Fundamentals in Urology Course sponsored by the American Urological Association. "Basic Science of Bladder Cancer." Charlottesville, Virginia.