

Patents and Publications, Dr. Robert Carey

Patents in Robotics and Urology

Carey R. Drug Delivery System for Treatment of Transitional Cell Carcinoma. Application number: 11/829,680. Publication number: US 2008/0044452 A1. Filing date: Jul 27, 2007. Inventor: Robert I. Carey. U.S. Classification 424423000; 424246100; 514002000; 514410000.

Carey R. Preparation of Reagents for Robotic Peptide Synthesizers: N^αBpoc Amino Acid Pentafluorophenyl (Pfp) Esters and 3,4-Dihydro-4-Oxo-1,2,3-Benzotriazin-3-yl (ODhbt) Esters. 1998. US#08891676. Patent number: 5952497. Filing date: Jul 10, 1997. Issue date: Sep 14, 1999. Inventor: Robert I. Carey. Assignee: University of Georgia Research Foundation. U.S. Classification 544/183; 560/19. International Classification C07D25308; C07C22900.

Carey R. Preparation of Reagents for Robotic Peptide Synthesizers: N^α-α,α-Dimethyl-3,5-Dimethoxybenzylcarbonyl Amino Acid 3,4-Dihydro-3-Hydroxy-4-Oxo-1,2,3-Benzotriazin-3-yl and Pentafluorophenyl Esters. 1998. US#08891134. Patent number: 6075141. Filing date: Jul 10, 1997. Issue date: Jun 13, 2000. Inventor: Robert I. Carey. Assignees: University of Georgia Research Foundation, Inc. U.S. Classification 544/180; 544/183; 530/333; 530/334; 530/335; 530/337; 530/338; 564/161; 564/170; 560/19. International Classification C07K 100; C07D25100.

Urology Publications

Carey RI, Bird VG, Leveillee RJ. Upper Tract Urothelial Carcinoma. Expert Reviews in Anti-cancer Therapy. In press for June 2009.

Bird VG, Carey RI, Ayyathurai R, Bird VY. Management of Renal Masses with Laparoscopic-Guided Radiofrequency Ablation versus Laparoscopic Partial Nephrectomy. Journal of Endourology. January 1, 2009, 23(1): 81-88.

Kyle CC, Wingo MS, Carey RI, Leveillee RJ, Bird VG. Diagnostic Yield of Renal Biopsy Immediately Prior to Laparoscopic Radiofrequency Ablation: A Multicenter Study. Journal of Endourology. October 1, 2008, 22(10): 2291-2294.

Carey RI, Kyle CC, Carey DL, Leveillee RJ. Preparation of Artificial Kidney Stones of Reproducible Size, Shape, and Mass by Precision Injection Molding. J Endourol. 2008 Jan;22(1):127-32.

Carey RI and Leveillee RJ Direct, First Prize: Real-time Temperature Monitoring for Laparoscopic and CT-guided Radiofrequency Ablation of Renal Tumors between 3 and 5 Centimeters. J Endourol. 2007 Aug;21(8):807-10.

Carey RI, Siddiq F, Leveillee RJ, Bird VG. Successful Conservative Management of a Splenic Injury Related to Percutaneous Nephrostolithotomy. JSL. 2006 Oct-Dec;10(4):504-6.

Carey RI, Gomez, C, Maurici G, Lynne CM, Leveillee RJ, Bird VG, Frequency of Ureteroscope Damage Seen in a Tertiary Care Center. Journal of Urology, 2006; 176(2), August.

Leveillee RJ and Carey RI. Extracorporeal Shock Wave Lithotripsy. Why Newer May Not Be Better? Nature Clinical Practice Urology, 2006; 3: 76-78.

Carey RI, Bird VG, Endoscopic Management of Ten Separate Fibroepithelial Polyps arising in a Single Ureter. Urology, 2006; 67: 413-415.

Isoyama T, Thwaites D, Selzer MG, Carey RI, Barbucci R, Lokeshwar VB. Differential Selectivity of Hyaluronidase Inhibitors towards Acidic and Basic Hyaluronidases. *Glycobiology*. 2006; 16: 11-21.

Dandekar DS, Lopez M, Carey RI, Lokeshwar BL. Cyclooxygenase-2 Inhibitor Celecoxib Augments Chemotherapeutic Drug-induced Apoptosis by Enhancing Activation of Caspase-3 and -9 in Prostate Cancer Cells. *Int J Cancer*. 2005 Jun 20;115(3):484-92.

Lokeshwar V, Schroeder G, Carey RI, Soloway M, Iida N. Regulation of Hyaluronidase Activity by Alternative mRNA Splicing. *J. Biol Chem* 2002; 277: 33654-33663.

Urology Book Chapters

Carey RI and Leveillee RJ Positioning and Room Configuration for Robotic-assisted Laparoscopic Surgery. In *Robotic Urologic Surgery*, ed. Patel, V. (2006) Springer, p. 61-67.

Carey RI and Leveillee RJ Robotic-assisted Transperitoneal Laparoscopic Pyeloplasty. In *Robotic Urologic Surgery*, ed. Patel, V. (2006) Springer, p. 152-161.

Urology Abstracts and Presentations

Carey RI & Hakky T. High Volume, Fellowship-trained Single Surgeon Robotic-assisted Laparoscopic Radical Prostatectomy Experience: 220 cases in 2 years. *World Congress of Endourology, Shanghai, China, November 30, 2008.*

Carey, RI, Hakky T. Laparoscopic, ultrasound-guided microwave thermal ablation (MWA) with direct, real-time temperature monitoring of a 3.4 cm renal tumor in an anti-coagulated patient. *World Congress of Endourology, Shanghai, China, November 30, 2008.*

Carey RI, Bird, VG, Leveillee, RJ, Hakky T, Shields, J. Multi-institutional Treatment of Renal Tumors with CT-guided and laparoscopic, ultrasound guided microwave thermal ablation (MWA) with direct, real-time, temperature monitoring. *World Congress of Endourology, Shanghai, China, November 30, 2008.*

Leveillee RJ, Carey RI, Bird VG, Moore CR, Salas, N. Cancer-free and metastasis-free survival for patients with 48 month follow-up after laparoscopic, ultrasound-guided or CT-guided radiofrequency ablation for biopsy proven renal cell carcinoma. *World Congress of Endourology, Shanghai, China, November 30, 2008.*

Leveillee RJ, Carey RI, Bird VG, Moore CR, Salas, N. Radiofrequency Ablation for T1b Biopsy Proven Renal cancers with active temperature monitoring: Intermediate Results. *World Congress of Endourology, Shanghai, China, November 30, 2008.*

Carey RI, Leveillee RJ, Bird VG, Hakky T, Shields J, Salas N, Moore CR. Multi-institutional Treatment of Renal Tumors with CT-guided and laparoscopic, ultrasound guided microwave thermal ablation (MWA) with direct, real-time, temperature monitoring. *World Congress of Endourology, Shanghai, China, November 30, 2008.*

Kyle CC, Wingo MS, Carey RI, Ekwenna OO, Leveillee RJ, and Bird VG. Diagnostic Yield of Renal Biopsy Immediately prior to Laparoscopic Radiofrequency Ablation. *Engineering and Urology Society Meeting, May 2008.*

Kyle CC, Carey RI, Ibrahim E, Leveillee RJ. Comparison of Systemic Responses of Radiofrequency Ablation, Cryoablation, and Partial Nephrectomy in a Porcine Kidney. Engineering and Urology Society Meeting, May 2008.

Carey RI & Hakky T. Management of an Intravesical Adenoma During Robotic-Assisted Laparoscopic Radical Prostatectomy. World Robotic Urology Symposium, Orlando, FL March 17, 2008.

Carey RI; Carey DL, Kyle CC, Bird VG, Leveillee RJ Precision Injection Molding With Bego Stone and Ultracal 30 for the Preparation of Artificial Kidney Stones of Reproducible Size, Shape, and Mass. Engineering and Urology Society, May 19, 2007.

Kyle CC, Carey RI, Bhalani V, Leveillee RJ Use of a Phase Transition Polymer to Decrease Retropulsion and Increase Efficiency of Lithotripsy: An In Vitro Study. Engineering and Urology Society, May 19, 2007.

Bird VG, Carey RI, Gomez, CG, Evaluation and Durability of the Latest Generation of flexible Ureterscopes. Engineering and Urology Society, May 19, 2007.

Kyle CC, Carey RI, Rane A, Bhalani V, Leveillee RJ. Evaluation of a Novel Cordless Pneumatic Lithotripter. Engineering and Urology Society, May 19, 2007.

Wingo MS, Carey RI, Kurzer E, Siddiq FM, Lopez-Pujals A, Leveillee R. Peripheral Temperature Monitoring to Augment Percutaneous Radiofrequency Ablation: Intermediate Follow-up of 65 Renal Tumors. American Urological Association, Anaheim, CA May 21, 2007.

Wingo MS, Carey RI, Kurzer E, Siddiq FM, Lopez-Pujals A, Leveillee R. Size does not Matter: Use of Peripheral Temperature Monitoring in Laparoscopic and CT-guided Percutaneous Radiofrequency Ablation of Renal Tumors. American Urological Association, Anaheim, CA May 21, 2007.

Barzell W, Carey RI, Melamed M. Transperineal 3-Dimensional Pathological Mapping for Stratification of Risk in Patients Seeking Expectant Management for Low Volume Prostate Cancer. American Urological Association, Anaheim, CA May 2007.

Barzell W, Carey RI, Melamed M. The Utility of Transperineal 3-Dimensional Pathological Mapping in Counseling Patients Seeking Expectant Management for Low Volume Prostate Cancer. Society of Urological Oncology. Bethesda, MD November 2006.

Carey RI, Leveillee. Peripheral Temperature Monitoring for Radiofrequency Ablation of Renal Masses. American College of Surgeons, Chicago, IL, October 10, 2006.

Kyle CC, Carey RI, Bird VG, Leveillee RJ Robotic-assisted Transperitoneal Laparoscopic Pyeloplasty: Experience where it Counts. World Congress of Endourology, Cleveland, OH, August 2006.

Kyle CC, Carey RI, Leveillee RJ Robotic-assisted Laparoscopic Vesicoureteral Reimplant in a Fertile Female with Adnexa Intact. Video presentation. World Congress of Endourology, Cleveland, OH, August 2006.

Carey RI, Bird VG, Udgiri N, Kyle CC, .Laparoscopic Renal Surgery in the Aging Population: and Analysis by Age-decade. World Congress of Endourology, Cleveland, OH, August 2006.

Carey RI, Bhalani V, Udgiri N, Kyle CC, Bird VG Efficacy and Design Related Limitations for Reinforced and Nonreinforced 12/14 FR Diameter ureteral Access Sheaths. World Congress of Endourology, Cleveland, OH, August 2006.

Carey RI & Leveillee RJ Direct, Real-time Temperature Monitoring for Laparoscopic and CT-guided Radiofrequency Ablation of renal Tumors Between 3 and 5 Centimeters. World Congress of Endourology, Cleveland, OH, August 2006.

Carey RI, Kyle CC, Carey DL, Leveillee RJ Preparation of Artificial Kidney Stones of Reproducible Size, Shape, and Mass by Precision Injection Molding. World Congress of Endourology, Cleveland, OH, August 2006.

Carey RI, Udgiri N, Bird VG Safety and Efficacy of Veress Needle Access in Modified Flank Position for Patients Undergoing Laparoscopic Renal Surgery. World Congress of Endourology, Cleveland, OH, August 2006.

Carey RI, Kurzer E, Bird VG, Leveillee RJ. Laparoscopic and CT-guided Radio Frequency Ablation of Renal Masses with Peripheral Temperature Monitoring: The University of Miami Experience. American Urological Association Meeting, Atlanta, GA, May 2006.

Carey RI, Kurzer E, Berger A, Stifelman M, Bird VG, Leveillee RJ. Multi-institutional Evaluation of Hand-assisted Laparoscopic Nephroureterectomy with Cystoscopic Circumferential Excision of the Distal Ureter Without Primary Closure of the Bladder Cuff. American Urological Association Meeting, Atlanta, GA, May 2006.

Kyle CC, Carey, RI, Leveillee RJ, Bird VG. Increased Diagnostic Yield Using Ureteral Access Sheaths in the Evaluation and Treatment of Upper Tract Urothelial Carcinoma. Southeastern Section AUA, Puerto Rico, March 2006.

Bird VG, Carey RI, Siddiq FM, Leveillee RJ. Conservative Management of a Splenic Injury Related to Percutaneous Nephrostolithotomy. 23rd World Congress of Endourology and SWL, Amsterdam, The Netherlands, August 23, 2005.

Kurzer E, Carey RI, Bird VG, Leveillee RJ. Radiofrequency Ablation of Renal Tumors with Accessory Temperature Coupling: The University of Miami Experience. 23rd World Congress of Endourology and SWL, Amsterdam, The Netherlands, August 23, 2005.

Kurzer E, Carey RI, Bird VG Leveillee RJ. Combining Hand Assisted Laparoscopic Nephroureterectomy with Cystoscopic Circumferential Excision of the Distal Ureter without Primary Closure of the Bladder Cuff. Is It Safe? 23rd World Congress of Endourology and SWL, Amsterdam, The Netherlands, August 23, 2005.

Kurzer E. Carey RI, Vird VG, Kim SS, Leveillee RJ Obesity as a Risk Factor for Complications During Laparoscopic Surgery for Renal Tumors: a Multivariate Analysis. 23rd World Congress of Endourology and SWL, Amsterdam, The Netherlands, August 23, 2005.

Carey RI, Bird VG, Gomez CG, Maurici G, Leveillee R. Frequency and Cause of Ureteroscope Damage Seen in a Tertiary Care Center. 23rd World Congress of Endourology and SWL, Amsterdam, The Netherlands, August 23, 2005.

Bird VG, Carey RI, Gomez C , Maurici G, Leveillee RJ. Frequency and Cause of Ureteroscope Damage Seen in Tertiary Care Center. American Urological Association Annual Meeting, San Antonio, May 2005.

Bird VG and Carey RI., Ureteroscopic Management of Ten Separate Fibroepithelial Polyps Arising in a Single Ureter, 22nd World Congress on Endourology and SWL, Mumbai India, November 2004.

Bird VG, Gomez CS, Carey RI, Leveillee R, Maurici G. Frequency and Types of Uretroscope Damage Seen in a Tertiary Care Center. 22nd World Congress on Endourology and SWL, Mumbai India, November 2004.

Chemistry Publications

Kemp D, Fotouhi N, Boyd J, Carey R, Ashton C, Hoare J. Practical Preparation and Deblocking conditions for N- α -(2-(p-biphenyl)-2-propyloxycarbonyl)-amino acid (N- α -Bpoc-Xxx-OH) Derivatives. *Int J. Peptide Protein Res* 1988;31:359-372.

Kemp D, Carey R, Dewan J, Galakatos N, Kerkman D, Leung S. Rational Design of Templates for Intramolecular O,N-Acyl Transfer via Medium-sized Cyclic Intermediates Derived from L-Cysteine -- Definition of an Experimental Maximum in Effective Molarity through the Study of Tunable Templates. *J Organic Chem* 1989;54:1589-1603.

Kemp D & Carey R. L-(-)-tert-butylloxycarbonyl-2,2-dimethylthiazolidine-4-carboxylic acid (Boc-L-Dmt-OH) as a Fully N,S-Blocked Cysteine Derivative for Peptide Synthesis by Prior Thiol Capture. Facile Conversion of N-terminal Boc-L-Dmt-Peptides to H-Cys(Scm)-peptides (Scm = methoxycarbonylsulfonyl, Me-O-CO-S). *J. Organic Chem* 1989;54:3640-3646.

Kemp D & Carey R. Cysteine N,S-blocking Through Thiazolidine Formation for Amide Ligation by Means of Thiol Capture. *Peptides. Chemistry, Structure, and Biology* 1990;11:920-921.

Carey R, Altmann K, Mutter M. Protein Design: Template Assembled Synthetic Proteins. In *Host-Guest Molecular Interactions: From Chemistry to Biology*, CIBA Foundation Symposium 158. 1991;187-203.

Kemp D & Carey R. Resolution of the Histidine Problem for Thiol Capture--Synthesis of a 39-Peptide. *Tetrahedron Letters* 1991;32:2845-2848.

Carey R & Mutter M. Template Assembled Synthetic Proteins (TASPs): A Chemical Approach to the Synthesis of New Proteins. In *Molecular Conformation and Biological Interactions*. Eds. Balaram P and Ramaseshan S. IAS, Bangalore 1991;457-468.

Mutter M, Tuchscherer G, Miller C, Altmann K, Carey R, Wyss D, Labhardt A, Rivier J. Template-Assembled Synthetic Proteins (TASP) with Four-helix Bundle Topology. *Total Chemical Synthesis and Conformational Studies*. *J Am Chem Soc* 1992;114:1463-1470.

Carey R, Doerner B, Mutter M, Labhardt A, Steiner V, Rink H. New Routes to Artificial Proteins Applying the TASP Concept: Synthesis and Conformational Studies of Cyclic Decapeptides and the Synthesis of a Designed Six Helix Bundle TASP. In *Innovations and Perspectives in Peptide Synthesis*. Epton R, ed. Elsevier, Amsterdam 1992;163-170.

Mutter M, Carey R, Doerner B, Ernest I, Floegel R, Giezendanner U, Rivier J, Servis C, Sigel C. The TASP Concept: from Template-assembled Synthetic Proteins to Protein Surface Mimetics. *Peptides: Chemistry and Biology* 1992;12:326-328.

Kemp D & Carey R. Synthesis of a 39-Peptide and a 25-Peptide by Thiol Capture Ligations: Observation of a 40-Fold Rate Acceleration of the Intramolecular O,N-acyl Transfer Reaction Between Peptide Fragments Bearing Only Cysteine Protective Groups. *J. Organic Chemistry* 1993;58:2216-2222.

Lee T, Carey R, Biebuyck H, Whitesides G. The Wetting of Monolayer Films Having Ionizable Organic Acids and Bases. *Langmuir* 1994;10:741-749.

Carey R, Folkers J, Whitesides G. Self-assembled Monolayers Containing ω -Mercapto-alkylboronic Acids Adsorbed onto Gold form a Highly Crosslinked, Thermally Stable Borate Glass Surface. *Langmuir* 1994;10:2228-2234.

Grigorean G, Carey R, Amster J. Alternative Matrices for Laser Desorption of Peptide Ions and Neutral Molecules. In Proceedings of the 42nd ASMS Conference on Mass Spectrometry and Allied Topics, Chicago 1994;979-985.

Carey R, Burrell S, Huang H, Wadsworth J, Purvis L, Slaughter R. New Developments in N^α-Bpoc and N^α-Ddz-Solid-Phase peptide Synthesis. *Peptides: Chemistry, Structure and Biology* 1995;14:121-122.

Carey R, Bezencon O, Burrell S. Studies with Racemization Resistant Derivatives of L-Cysteine Designed for Practical use in Peptide Bond Formation. *Peptides: Chemistry, Structure, Biology* 1995;14:443-444.

Carey R, Huang H, Wadsworth J, Burrell S. Protection of Asparagine and Glutamine During N^α-Bpoc Solid-Phase peptide Synthesis. *Intl J. Peptide Protein Res* 1996;47:209-213.

Carey R, Bordas L, Slaughter R, Meadows B, Wadsworth J, Huang H, Smith J, Furujo E. Preparation of N^α-Bpoc Amino Acid Pentafluorophenyl Esters. *Journal of Peptide Research* 1997;49:570-581.

Carey R & Huang H. Preparation of Boc-Cys(SPyr)-OH and Z-Cys(SPyr)-OH: Application in Orthogonal Coupling of Unprotected Peptide Segments. *Journal of Peptide Research*. 1998;51:290-296.