

## **CURRICULUM VITAE**

**RENEA M. STURM, MD**

### **PERSONAL**

University of California Los Angeles  
Department of Urology  
200 Medical Plaza, Suite 170  
Los Angeles, CA 90095  
Clinical Office: 310-206-7502

### **EDUCATION**

B.A.                      Rice University, Houston, Texas (2004)  
                              Major: Music

M.D.                      Baylor College of Medicine, Houston, Texas (2009)  
                              Medical Science Research Track  
                              Member of De Biasi lab (neuroscience, cholinergic transmission)

### ***Residency and Fellowships***

2009-2011	University of California Davis	Internship, R2 - Surgery
2011-2015	University of California Davis Member of Kurzrock Lab (tissue engineering)	Residency - Urology
2015-2018	Northwestern University, LCH Member of Sharma Lab (tissue engineering, immunomodulation)	Fellow - Pediatric Urology
2019-2020	University of California Los Angeles	Fellow - UCLA Biodesign

### **LICENSURE**

California Medical Operator Permit: Fluoroscopy (2012-present)  
Illinois Medical License (2015-2020)  
California Medical License (2018-present, 2011-2015)

### **BOARD CERTIFICATION**

American Board of Urology Diplomate, Urology: Mar-2020

## **PROFESSIONAL EXPERIENCE**

1995-2000	Violin and Music Theory Instructor	Frederick, MD
2002-2003	Leadership Rice: Healthcare Administration Intern	Houston, TX
2003-2004	Administrative Liaison to Internal Vice President	Houston, TX
2018-present	Assistant Professor, Pediatric Urology	Los Angeles, CA

## **PROFESSIONAL ACTIVITIES**

2009-	Member, American Urological Association (National, Western Section)
2018-	Member, Society for Pediatric Urology
2019-	Member, Los Angeles Pediatric Society
2018-2019	Appointed Member, Academic Senate Committee on Committees (UCLA)
2018-2020	NIDDK/AUA Workgroup: Congenital Anomalies of the External Genitalia
2018-	UC Fetal Consortium (Lower Urinary Tract Obstruction subcommittee) member
2019-	Pediatric KIDney Stone (PKIDS) Care Improvement Network: UCLA PI and member of outcomes/guideline and publication committees
2019-	Western Pediatric Urology Consortium member
2019-	Reviewer: Reproductive Toxicology, Differentiation, Journal of Pediatric Urology, Physical Medicine and Rehabilitation, Journal of Urology
2019-2020	Certificate of Reviewing, Elsevier recognized reviewer: Journal of Pediatric Urology, Differentiation, Reproductive Toxicology
2020-	K Scholars Society participant, Mock NIH panel grant review participant
2020-	Member, UCLA Urology Taskforce on Racism, Equity & Social Justice

## **HONORS AND AWARDS (SELECT)**

### ***FACULTY***

- National Society of Black Engineers Region 6 Conference, First prize individual, Technical Research Exhibition (showcase track): Urethral Tissue Engineering presented by Jessica Chun (co-primary mentee of Renea Sturm MD and Nasim Annabi PhD): 2019
- UCLA Technology Development Group Innovation competition, Co-PI of Finalist team (MedTech track, Surgical luminal closure device): 2019
- Innovation Institute and MIT Hacking Pediatrics, Clinical lead, First prize team ('Internet of Things' pediatric discharge management application/platform): 2020
- MedTech Innovator Pediatric COVID Pitch Event, Co-PI of Finalist team (Outpatient urine biochemical parameter monitoring platform): 2020
- UCLA Technology Development Group Innovation competition, Co-PI of Finalist team (MedTech track, Multidirectional stiffening soft robotic catheter): 2020
- National Science Foundation, Innovation Corps: PI and technical lead, 'Team Award' for demonstration of "outstanding working relationship and great team dynamics" (Bio-Zipper surgical luminal closure device): 2020

### ***FELLOWSHIP/RESIDENCY/MEDICAL SCHOOL***

Baylor College of Medicine research scholar award, basic science: 2008

Northern California Resident Research Competition research awards: 2012, 2014, 2015

Jan 14, 2021

Western Section AUA scholarship meeting attendee: 2013  
Clinical research prize finalist: ESPU Fall Congress 2015  
Clinical research prize finalist (2 abstracts): SPU Fall Congress 2016

### **COLLEGE**

Rice University Dean's list: 2000-2004  
Collegiate societies, honorary nominations: National Collegiate Scholars, Phi Theta Kappa, Golden Key National Honor Society

### **RESEARCH SUPPORT, GRANTS AND FELLOWSHIPS**

#### **CURRENT / COMPLETED SUPPORT**

2020-2022                      Principal Investigator (PI)                      Extramural Grant Award  
Source: American Urological Association/Urology Care Foundation  
*Bioinspired Urethral Design: Scaffold Development and In Vitro Testing*  
Supports development of a biomimetic, biodegradable, implantable tissue engineered urethral scaffold with biomechanical properties mimicking the native urethra.

2020-2022                      Site PI    Extramural Grant  
Source: Patient-Centered Outcomes Research Institute (PCORI)  
*Pediatric Kidney Stone Improvement Network*  
Supports site participation in a prospective observational and survey-based study evaluating the efficacy of and patient experience with each of the three standard modalities for surgical treatment of kidney stones.

2020-2021                      PI (Technical Lead)                      Extramural Grant Award  
NSF I-Corps Bio-Zipper  
*Biozipper Surgical Luminal Closure device for Lower Urinary Tract Reconstruction*  
Funding for team development activities and broad stakeholder evaluation to support future commercialization of 'deep technology' from the academic environment.

2019-2021                      PI    Intramural Grant Award  
Source: UCLA Academic Senate  
*3D Modeling in Urologic Database Development: Defining Phenotypic Variation and Corresponding Clinical Outcomes*  
Supports equipment acquisition and development of a clinical database with 3D models of congenital genitourinary conditions and surgical repair techniques.

2018-2019                      Mentor/Collaborator                      Extramural Grant Award  
Source: Sexual Medicine Society of North America  
Awardee: Sriram Eleswarapu, MD PhD; Primary Mentor: Jesse Mills, MD  
*Quantitative Evaluation of Pre-treatment and Post-treatment Peyronie's Disease Deformities using Three-dimensional Photogrammetry*  
Funding to support development of clinical 3-dimensional monitoring of penile angulation deformities in Peyronie's disease.

2013-2015 Co-PI

Mentor/PI: Eric Kurzrock, MD

Project Number: 71001

Source: Shriner's Hospitals for Children

*Use of a Diurnal Closed In-Dwelling Catheter to Improve Continence and Satisfaction*

This clinical trial was a prospective investigation to analyze the safety, efficacy, changes in continence and quality of life that occur with the long-term use of a closed, indwelling catheter that is placed and removed daily.

## **PUBLICATIONS/BIBLIOGRAPHY**

### **RESEARCH PAPERS-PEER REVIEWED**

1. Bacal V, Rumohr J, **Sturm R**, Lipshultz LI, Schumacher M, Grober ED. Correlation of Degree of Penile Curvature between Patient Estimates and Objective Measures among Men with Peyronie's Disease. *J Sex Med* 2009 Mar;6(3):862-65. [PMID: 19284472]
2. Salas R\*, **Sturm R\***, Boulter J, De Biasi M (\*shared first authorship). Nicotinic Receptors in the Habenulo-interpeduncular System are Necessary for Nicotine Withdrawal in Mice. *J Neurosci* 2009 Mar;29(10):3014-18. [PMID: 19279237]
3. Salas R, Fung B, **Sturm R**, De Biasi M. Abnormal Social Behavior in Nicotinic Acetylcholine Receptor  $\beta 4$  Subunit-null Mice. *Nicotine Tobacco Research*, 2013 May;15(5):983-86. [PMID: 23042983]
4. **Sturm R**, Guralnick M, Stone A, Bales G, Dangle P, MD, O'Connor RC. Outcome Comparison between "Ideal" and "Non-Ideal" Transobturator Male Sling Candidates for Treatment of Post-Prostatectomy Stress Urinary Incontinence. *Urology*, 2014 May;83(5):1186-88. [PMID: 24767526]
5. **Sturm R**, Chandrasekar T, Durbin-Johnson B, Kurzrock EA. Urinary Diversion During and After Pediatric Pyeloplasty: A Population-Based Analysis of Over 2,000 Patients. *Journal of Urology*, 2014 Jul; 192(1): 214–220. [PMID: 24518773]
6. **Sturm R**, Breyer B, Lin TC, Li CS, Subak L, Brown J and Shindel A. Prevalence of Overactive Bladder and Stress Urinary Incontinence: An Internet-based Survey. *J Women's Health (Larchmt)*. 2014 Nov;23(11):935-40. [PMID: 25314336]
7. Godley S, **Sturm R**, Durbin-Johnson B, Kurzrock E. Meatal Stenosis: A Retrospective Analysis of over 4,000 Patients. *J Pediatr Urol*, 2015 Feb;11(1):38.e1-6. [PMID: 25703201]
8. **Sturm R**, Durbin-Johnson B, Kurzrock EA. Congenital Adrenal Hyperplasia: Current Surgical Management in United States Academic Medical Centers. *Journal of Urology*, 2015 May;193(5 Suppl):1796-801. [PMID: 25817160]
9. Liu JS, Bury MI, Fuller NJ, **Sturm RM**, Ahmad N, Sharma AK. Bone Marrow Stem/Progenitor Cells Attenuate the Inflammatory Milieu following Substitution Urethroplasty. *Scientific Reports*, 2016 Oct;6:35638. [PMID: 27762304]

10. **Sturm R**, Kurzrock E, Amend G, Shannon R, Gong E, Cheng E. Blind-ending Retroperitoneal Vessels on Diagnostic Laparoscopy for Nonpalpable Testis: Is a Nubbin Present? J Pediatr Urol, 2017 [PMID 28666917]
11. Chan Y, Durbin-Johnson B, **Sturm R**, Kurzrock E. Outcomes after Pediatric Open, Laparoscopic and Robotic Pyeloplasty at Academic Institutions. J Pediatr Urol, 2017 Feb;13(1):49.e1-49.e6. [PMID: 28288777]
12. **Sturm R**, Yerkes E, Nicholas J, Snow-Lisy D, Diaz Saldano D, Gandor PL, Halline C, Rosoklija I, Rychlik K, Johnson E, Cheng E. Ultrasound Shear Wave Elastography: A Simple, Non-invasive Method to Evaluate Bladder Pressure. Journal of Urology, 2017 Aug;198(2):422-29. [PMID: 28366710]
13. **Sturm R**, Cantrell AB, Durbin-Johnson B, Kurzrock E. Use of a Closed Diurnal Indwelling Catheter for Patients with Spinal Cord Disorders: A Pilot Study. Urology, 2020;142:237-42. [PMID: 32320790]
14. Siapno AED, Yi BC, Daniels D, Bolagani A, Kwan L, Walker D, Aninwene GE, Eleswarapu S, Joshi S, **Sturm RM**. Measurement Accuracy of 3-Dimensional Mapping Technologies versus Standard Goniometry for Angle Assessment. J Pediatr Urol. 2020 Oct;16(5):547-54. [PMID: 32980263]
15. Stadler HS,\* Peters CA,\* **Sturm RM**,\* Baker LA, Best C, Bird VY, Geller F, Hoshizaki DK, Knudsen TB, Norton JM, Romao RLP, Cohn MJ (\* denotes designated equal contribution of three first authors to this work). Meeting Report on the NIDDK/AUA Workshop on Congenital Anomalies of External Genitalia: Challenges and Opportunities for Translational Research. J Pediatr Urol. 2020 Dec;16(6):791-804. [PMID: 33097421]
16. Sparks TN, Lianoglou BR, Adami RR, Pluym ID, Holliman K, Duffy J, Downum SL, Patel S, Faubel A, Boe NM, Field NT, Murphy A, Laurent LC, Jolley J, Uy C, Slavotinek AM, Devine P, Hodogluligil U, Van Ziffle J, Sanders SJ, MacKenzie TC, Norton ME; University of California Fetal-Maternal Consortium\*; University of California, San Francisco Center for Maternal-Fetal Precision Medicine. \*Authorship denoted as collaborator of the UC Fetal-Maternal Consortium. Exome Sequencing for Prenatal Diagnosis in Nonimmune Hydrops Fetalis. NEJM, 2020 Oct;383(18):1746-1756. [PMID: 33027564]

#### RESEARCH PAPERS-PEER REVIEWED (IN PRESS)

1. Bury MI, Fuller NJ, **Sturm RM**, Rabizadeh R, Nolan B, Barac M, Edassery SS, Chan YY, Sharma AK. Variations in Bone Marrow Cell Seeding Densities on Polymeric Scaffolds and the Effects on Urinary Bladder Tissue Regeneration. Accepted Jan-2021, Sci Rep.

#### BOOK CHAPTERS

1. **Sturm R**, Yerkes E. Book Chapter: Uterocystoplasty. Hinman Atlas of Urologic Surgery. Philadelphia: Elsevier. 2018;62(4):469-72.

## LETTERS TO THE EDITOR

1. **Sturm R**, Cantrell AB, Durbin-Johnson B, Kurzrock EA. Author Reply to Letter-to-the-Editor regarding "Use of a Closed Diurnal Indwelling Catheter for Patients with Spinal Cord Disorders: A Pilot Study." Accepted Jan-8-2021 by Urology. Pending publication.

## REVIEWS

1. **Sturm R**, Cheng E. Review: The Management of the Pediatric Neurogenic Bladder. Current Bladder Dysfunction Reports, 2016;11:225-33. [PMID: 27610207]

## EDITORIALS

1. **Sturm R**, Cheng E. Editorial: Bladder Wall Thickness in the Assessment of Neurogenic Bladder: A Translational Discussion of Current Clinical Applications. Ann Transl Med, 2016; 4(2):32. [PMID: 26889485]

## ABSTRACTS (\*indicates presenting author)

1. Salas R\*, **Sturm R**\*, Boulter J, De Biasi M (\*shared first authorship). Nicotinic Receptors in the Habenulo-interpeduncular System are Necessary for Nicotine Withdrawal in Mice. *Neuroscience Meeting*, Podium Presentation by Salas: 2007  
*Baylor Medical Student Research Competition* by Sturm, Poster Presentation: May-2008; basic science award.
2. **Sturm R**\*, Salas R, Boulter J and De Biasi M. The  $\alpha 2$  and  $\alpha 5$  Nicotinic Acetylcholine Receptor Subunits are Critical for Nicotine Withdrawal in Mice. *American Academy of Neurology Meeting*, Poster Presentation: Apr-2008.
3. Rumohr J\*, Bacal V, **Sturm R**, Lipshultz LI, Grober E. Correlation of Estimated Degree of Penile Curvature with Objective Measures of Penile Angulation in Peyronie's Disease. *Sexual Medicine Society of North America Meeting*, Poster Presentation: Oct-2008.
4. **Sturm R**\*, Rumohr J, Khera M, Lipshultz LI. Increased Incidence of Hypogonadism in Patients with Peyronie's Disease as Compared to Organic Erectile Dysfunction. *American Urological Association Meeting*, Podium Presentation: Apr-2009.
5. **Sturm R**\*, Breyer B, Lin TC, Li CS, Subak L, Brown J and Shindel A. A Survey of Overactive Bladder and Stress Urinary Incontinence in Women. *Northern California Resident Research Symposium*, Podium Presentation: Apr-2012; 3<sup>rd</sup> place award - clinical research.

6. Farrow J\*, **Sturm R**, Hirschbein J, Gandour-Edwards R, Pele N, Yang J. Evolution of a Testicular Cystic Mass on Ultrasound: A Pediatric Case Report.  
*Western Section AUA Meeting*, Poster Presentation: Nov-2013.
7. **Sturm R\***, Guralnick M, Stone A, Bales G, Dangle P, MD, O'Connor RC. Outcome Comparison Between "Ideal" and "Non-Ideal" Transobturator Male Sling Candidates for Treatment of Post-Prostatectomy Stress Urinary Incontinence.  
*Northern California Resident Research Symposium*, Podium Presentation: Apr-2013.  
*Western Section AUA Meeting*, Podium Presentation: Nov-2013.
8. **Sturm R\***, Chandrasekar T, Durbin-Johnson B, Kurzrock E. Urinary Diversion During and After Pediatric Pyeloplasty: A Population-Based Analysis of Over 2,000 Patients.  
*Northern California Resident Research Symposium*, Podium Presentation: Apr-2014; honorable mention – clinical research.
9. **Sturm R\***, Durbin-Johnson B, Kurzrock E. Congenital Adrenal Hyperplasia: Current Management in United States Academic Medical Centers.  
*American Urological Association Meeting*, Podium Presentation: May-2014.
10. Godley S\*, **Sturm R**, Osborn SL, So M, Kurzrock E. Neo-vascularization of Bladder Grafts: Pilot Study and Optimization.  
*Northern California Resident Research Symposium*, Podium Presentation: Apr-2015; 2<sup>nd</sup> place award – basic science.
11. **Sturm R\***, Durbin-Johnson B, Yang J, Kurzrock E. Use of a Diurnal Indwelling Catheter for Patients with Spinal Cord Disorders: Pilot Study of Safety and Quality of Life.  
*Northern California Resident Research Symposium*, Podium Presentation: Apr-2015; 2<sup>nd</sup> place – clinical research.  
*European Society of Pediatric Urology Meeting*, Podium Presentation: Oct-2015; international clinical research prize finalist.
12. Liu JS\*, Bury MI, Fuller NJ, **Sturm R**, Ahmad N, Sharma AK. Reducing the Inflammatory Milieu in a Rat Model of Substitution Urethroplasty with Bone Marrow Stem Cells.  
*American Urological Association Meeting*, Podium Presentation: May-2016.
13. **Sturm R\***, Bury, M, Ahmed N, Fuller N, Sharma A. The Effect of Autologous Stem Cells on Inflammation and Vascularization in a Nonhuman Primate Model of Augmentation Cystoplasty.  
*American College of Wound Healing and Tissue Repair Meeting*, Poster Presentation: Nov-2015.  
*American Urological Association Meeting*, Podium Presentation: May-2016.

14. **Sturm R\***, Kurzrock E, Amend G, Shannon R, Gong E, Cheng E. Blind-ending Retroperitoneal Vas and Vessels do not Preclude the Presence of a Nubbin during Open Exploration for Nonpalpable Testis: A Multi-Institutional Analysis.  
*Pediatric Fall Congress*, Podium Presentation, clinical prize finalist: Sept-2016.
15. **Sturm R\***, Yerkes E, Nicholas J, Snow-Lisy D, Diaz Saldano D, Gandor PL, Halline C, Rosoklija I, Rychlik K, Johnson E, Cheng E. Ultrasound Shear Wave Elastography: A Simple, Non-invasive Method to Evaluate Bladder Pressure.  
*Northwestern University Lewis Landsberg Research Day*, Poster Presentation: Apr-2016.  
*Lurie Children's Hospital Research Day*, Poster Presentation: May-2016.  
*Pediatric Fall Congress*, Podium Presentation, clinical prize finalist: Sept-2016.  
*Society for Pediatric Radiology*, Technical Aspects Podium Presentation (presented by PL. Gandor): May-2017.
16. Franco I\*, **Sturm R**, Yerkes E, Nicholas J, Cheng E. Does Bladder Work Correlate with Shear Wave Velocity?  
*American Urological Association Meeting*, Podium Presentation: May-2017.  
*Joint Congress of the ICCS and SRHSB*, Podium Presentation: June-2017.
17. **Sturm R\***, Johnson E, Halline C, Meyer T, Snow-Lisy D, Rosoklija I, Balmert L, Cheng E, Yerkes E. Predictors of Bacteriuria and Antibiotic Resistance in Asymptomatic Children using CIC for Bladder Management.  
*American Urological Association Meeting*, Moderated Poster: May-2018.
18. Bowen D, Meyer T, **Sturm R**, Rosoklija I, Chu D, Cheng E, Yerkes E. Onabotulinum Toxin A in Patients At-Risk for Bladder Augmentation Due to Urologic Hostility: real impact or kicking the can?  
*Society for Pediatric Urology Fall Congress*, Moderated Poster: Sept-2019.
19. Siapno AED, Yi BC, Daniels D, Bolagani A, Herbert L, Joshi S, **Sturm RM.\*** Measurement Accuracy of 3D Modeling Technologies versus Standard Goniometry for Assessment of Angulation.  
*Josiah Brown DGSOM Research Symposium*, Poster Presentation: Aug-2019  
*Society for Pediatric Urology Fall Congress*, Moderated Poster: Sept-2019.  
*International Society 3rd World Congress*, Podium Presentation: Oct-2019.  
*Institute for Digital Research and Education, UCLA (IDRE Early Career Researchers' Research Day)*, Poster Presentation: Nov-2019.
20. Chun J\*, Baghdasarian S, Yi B, **Sturm R**, Annabi N. Engineering a Biomimetic Scaffold for Urethral Tissue Engineering Application.  
*Hypospadias International Society 3rd World Congress*, Podium Presentation: Oct-2019.  
*ABRCMS Conference Poster Session*, Nov-2019.  
*NSBE Fall Regional Conference (Region 6)*, Nov-2019.



21. Walker D, **Sturm R**, Daniels D, Mills J, Eleswarapu S. 3D-Printed Phantoms to Quantify Accuracy and Variability of Goniometric and Volumetric Assessment of Peyronie's Disease Deformities.  
*American Urological Association Meeting*, cancelled due to COVID, May-2020.

## **PATENTS/CREATIVE ACTIVITY**

### **Patent (UC Regents)**

1. U.S. Provisional Patent No. 62/915,361: BIO-ZIPPER URETHRAL CLOSURE DEVICE, filed Oct-15-2019.
2. BIO-TAPE SURGICAL CLOSURE addition; combined conversion filing, Oct 2020  
Inventors: **Renea Sturm**, George Aninwene, Peyton Tebon, M. Ali Darabi, Ali Khademhosseini
3. U.S. Provisional Patent No. 62/990,728: MULTI-DIRECTIONAL DEFLECTABLE CATHETER WITH SELECTIVE STIFFENING, filed Mar-18-2020.  
Inventors: Peter Hsiue, **Renea Sturm**, Lucas Allera, Marcus Goudie