

Progress Since Proposal Submission (Grants, Awards, and Publications)

Type	First Name	Last Name	What	More Info
Grant	Steve	Abramowitch	Coordinated Advances in Reproductive Engineering for Health Research (CARE4HeR)	Sponsor: NSF 2053851 09/01/2021-08/31/2026 Amount: \$ 2,000,000 Role: Co-PI (PI - De Vita)
Grant	Steve	Abramowitch	Mesh complications: The role of local mechanical stresses on tissue remodeling following mesh implantation Total Direct	Sponsor: NIH 2 R01 HD083383-06 08/15/2021-07/31/2026 Amount: \$2,310,000 Role- PI (Multiple PI w/ Moalli)
Grant	Steve	Abramowitch	STTR Phase I: A mesh-free, sling-free, minimally invasive treatment for stress urinary incontinence in women	Sponsor: NSF 2127552 08/01/2021-01/31/2022 Amount: \$250,000 Role- Co-I (PI- Rostami Nia/Altyx Surgical, Inc.)
Grant	Steve	Abramowitch		Sponsor: INVESTIGATOR INITIATED Renovia Inc. 9/01/2020 – 8/31/2022 Amount: \$106,000 Role- PI
Publication	Steve	Abramowitch	Bowen ST, Moalli PA, Abramowitch SD, Lockhart ME, Weidner AC, Ferrando CA, Nager CW, Richter HE, Rardin CR, Komesu YM, Harvie HS, Mazloomdoost D, Sridhar A, Gantz MG; Eunice Kennedy Shriver National Institute of Child Health and Human Development Pelvic Floor Disorders Network. Defining mechanisms of recurrence following apical prolapse repair based on imaging criteria.	Reference: Am J Obstet Gynecol. 225(5):506.e1-506.e28, 2021. PMID: 34087229
Publication	Steve	Abramowitch	Rostaminia G, Abramowitch S, Chang C, Goldberg RP. Transvaginal sacrospinous ligament suture rectopexy for obstructed defecation symptoms: 1-year outcomes.	Reference: Int Urogynecol J. 32(11):3045-3052, 2021. PMID: 33237356.
Publication	Steve	Abramowitch	Sinex DCE, Bowen ST, Kashkoush A, Rosemond A, Carter D, Menon PG, Moalli PA, Abramowitch SD. The establishment of a 3D anatomical coordinate system for defining vaginal axis and spatial position.	Reference: Comput Methods Programs Biomed. 208:106175, 2021. PMID: 34082373.
Publication	Steve	Abramowitch	Routzong MR, Cook MS, Barone W, Abramowitch SD, Alperin M. Novel Application of Photogrammetry to Quantify Fascicle Orientations of Female Cadaveric Pelvic Floor Muscles.	Reference: Ann Biomed Eng. 49(8):1888-1899, 2021. PMID: 33638030.
Publication	Steve	Abramowitch	Routzong MR, Chang C, Goldberg RP, Abramowitch SD, Rostaminia G. Urethral support in female urinary continence part 1: dynamic measurements of urethral shape and motion. Int Urogynecol J. 2021.	Reference: Epub ahead of print. PMID: 33822259.
Publication	Steve	Abramowitch	Knight KM, King GE, Palcsey SL, Artsen AM, Abramowitch SD, Moalli PA. A soft elastomer alternative to polypropylene for pelvic organ prolapse repair: a preliminary study. Int Urogynecol J. 2021.	Reference: Epub ahead of print. PMID: 33860812.
Publication	Steve	Abramowitch	Huntington A, Abramowitch SD, Moalli PA, De Vita R. Strains induced in the vagina by smooth muscle contractions.	Reference: Acta Biomater. 129:178-187, 2021. PMID: 34033971.
Publication	Steve	Abramowitch	Routzong M.R., Abramowitch S.D., Chang C., Goldberg R.P., Rostaminia G. Obstructed Defecation Symptom Severity and Degree of Rectal Hypromobility and Folding Detected by Dynamic Ultrasound.	Reference: Ultrasound Q. 37(3):229-236, 2021. PMID 34478420.

Publication	Steve	Abramowitch	Routzong MR, Martin LC, Rostaminia G, Abramowitch S. Urethral support in female urinary continence part 2: a computational, biomechanical analysis of Valsalva. Int Urogynecol J. 2021 Mar 31. doi: 10.1007/s00192-021-04694-1.	Reference: Epub ahead of print. PMID: 33787951.
Publication	Steve	Abramowitch	Shapiro K., Knight K., Liang R., Cook J., King G., Abramowitch S.D., Moalli P.M. Comparison of Two Single Incision Slings on the Vagina in an Ovine Model.	Reference: Am J Obstet Gynecol. 224(1):78.e1-78.e7, 2020. PMID: 32771596.
Publication	Steve	Abramowitch	Routzong M.R., Rostaminia G., Bowen S.T., Goldberg R.P., Abramowitch S.D. Statistical Shape Modeling of the Pelvic Floor to Evaluate Women with Obstructed Defecation Symptoms. Computer Methods in Biomechanics and Biomedical Engineering.	Reference: E-Pub ahead of Print. 2020.
Publication	Steve	Abramowitch	Bowen S.T., Moalli P.A., Abramowitch S.D., Lockhart M., Ham M., Hahn M., Weidner A., Richter H., Radien C., Komesu Y., Harvie H., Ridgeway B., Mazloomdoost D., Shaffer A., Gantz M. Methods for the Defining Mechanisms of Anterior Vaginal Wall Descent (DEMAND) Study.	Reference: Int Urogynecol J. 32(4):809-818. 2021. PMID: 32870340
Publication	Steve	Abramowitch	Routzong M.R., Rostaminia G., Moalli P.A., Abramowitch S.D. Pelvic Floor Shape Variations During Pregnancy and After Vaginal Delivery.	Reference: Comput Methods Programs Biomed. 194, 105516. 2020. PMID: 32473515
Publication	Steve	Abramowitch	Rostaminia G., Abramowitch S.D., Chang C., Goldberg R.P. The Role of Conventional Pelvic Floor Reconstructive Surgeries in Obstructed Defecation Symptoms Change: CARE and OPTIMAL Trials Sub-Analysis of 2-year Follow-Up Data.	Reference: Int Urogynecol J. 31(7), pp. 1325-1334, 2020. PMID: 31875258
Publication	Steve	Abramowitch	Knight K.M., Artsen A.M., Routzong M.R., King G.E., Palcsey S.L., Abramowitch S.D., Moalli P.A. New Zealand White Rabbit: A Novel Model for Prolapse Mesh Implantation via a Lumbar-colpopexy.	Reference: Int Urogynecol J. 31(1), pp. 91-99, 2020. PMID: 31418044
Publication	Steve	Abramowitch	Sinex D., Besterfield-Sacre M., Mena I., Bilec M., Abramowitch S.D., Wosu S. Instituting Cultural Change: The Development and Perceived Impact of Mentor-Mentee Retreats on the Long-Term Development and Enhancement of Mentor-Mentee Relationships.	Reference: Frontiers in Education Uppsala, Sweden October 21-24, 2020.
Publication	Steve	Abramowitch	Sinex D., Besterfield-Sacre M., Carter-Veale W., Yohe D., Abramowitch S.D., Wosu S. The Pitt STRIVE Program: Adopting Evidence-Based Principles "The Meyerhoff and PROMISE Way".	Reference: ASEE Annual Conference, June 22-26, 2020.
Publication	Steve	Abramowitch	Gau D., Sinex D., Besterfield-Sacre M., Abramowitch S.D., Wosu S. Implementation of a Future Faculty Development Program: Impact and Evaluation of Years 1 & 2.	Reference: ASEE Annual Conference, June 22-26, 2020.
Grant	Gerard	Ateshian	<i>FEBio - Finite Elements for Biomechanics and Biophysics</i>	Sponsor: NIH, R01 GM083925 Co-PI: Gerard A. Ateshian and Jeffrey A. Weiss (University of Utah) 09/1/2020-06/30/2024. Amount: \$1,756,774
Grant	Gerard	Ateshian	<i>Lab-To-User Training And Dissemination For The FEBio Software Suite</i>	Sponsor: NIH, 1U24EB029007-01 09/30/2019-06/30/2024 Amount: \$1,775,065 Role: Subcontract PI
Grant	Gerard	Ateshian	<i>Sustained Dexamethasone Delivery to Prevent Onset of PTOA</i>	Sponsor: DoE, W81XWH-19-PRMRP-IIRA 09/01/2020-08/31/2023 Amount: \$1,571,838 Role: Co-PI

Publication	Gerard	Ateshian	Basilio AV, Xu P, Takahashi Y, Yanaoka T, Sugaya H, Ateshian GA, Morrison B, 3rd. Simulating cerebral edema and delayed fatality after traumatic brain injury using triphasic swelling biomechanics.	Reference: Traffic Inj Prev 2019; 20: 820-825 https://www.ncbi.nlm.nih.gov/pubmed/31647331 .
Publication	Gerard	Ateshian	Chen D, Wu JY, Kennedy KM, Yeager K, Bernhard JC, Ng JJ, Zimmerman BK, Robinson S, Dumey KM, Shaeffer C, Vila OF, Takawira C, Gimble JM, Guo XE, Ateshian GA, Lopez MJ, Eisig SB, Vunjak-Novakovic G. Tissue engineered autologous cartilage-bone grafts for temporomandibular joint regeneration.	Reference: Sci Transl Med 2020; 12 https://www.ncbi.nlm.nih.gov/pubmed/33055244 .
Publication	Gerard	Ateshian	Dumey KM, Shaeffer CA, Zimmerman BK, Nims RJ, Oungoulian S, Jones BK, Boorman-Padgett JF, Suh JT, Shah RP, Hung CT, Ateshian GA. Immature bovine cartilage wear by fatigue failure and delamination.	Reference: J Biomech 2020; 107: 109852 PMID: PMC7809915, https://www.ncbi.nlm.nih.gov/pubmed/32517855 .
Publication	Gerard	Ateshian	Gatti V, Nauleau P, Karageorgos GM, Shim JJ, Ateshian GA, Konofagou EE. Modelling Pulse Wave Propagation Through a Stenotic Artery with Fluid Structure Interaction: A Validation Study Using Ultrasound Pulse Wave Imaging.	Reference: J Biomech Eng 2020; 143: 031005 PMID: PMC7872000, https://www.ncbi.nlm.nih.gov/pubmed/33030208 .
Publication	Gerard	Ateshian	Stefani RM, Barbosa S, Tan AR, Setti S, Stoker AM, Ateshian GA, Cadossi R, Vunjak-Novakovic G, Aaron RK, Cook JL, Bulinski JC, Hung CT. Pulsed electromagnetic fields promote repair of focal articular cartilage defects with engineered osteochondral constructs.	Reference: Biotechnol Bioeng 2020; 117: 1584-1596 https://www.ncbi.nlm.nih.gov/pubmed/31985051 .
Publication	Gerard	Ateshian	Stefani RM, Lee AJ, Tan AR, Halder SS, Hu Y, Guo XE, Stoker AM, Ateshian GA, Marra KG, Cook JL, Hung CT. Sustained low-dose dexamethasone delivery via a PLGA microsphere-embedded agarose implant for enhanced osteochondral repair.	Reference: Acta Biomater 2020; 102: 326-340 PMID: PMC6956850, https://www.ncbi.nlm.nih.gov/pubmed/31805408 .
Publication	Gerard	Ateshian	Zimmerman B, Nims R, Chen A, Hung CT, Ateshian GA. Direct Osmotic Pressure Measurements in Articular Cartilage Demonstrate Non-Ideal and Concentration-Dependent Phenomena.	Reference: J Biomech Eng 2020 PMID: PMC7872001, https://www.ncbi.nlm.nih.gov/pubmed/33210125 .
Publication	Gerard	Ateshian	Lee AJ, Mahoney C, Cai C, Ichinose R, Stefani RM, Marra K, Ateshian GA, Shah RP, Vunjak-Novakovic G, Hung CTPD. Sustained Delivery of SB-431542, a Type I TGF-beta1 Receptor Inhibitor, to Prevent Arthrofibrosis.	Reference: Tissue Eng Part A 2021 https://www.ncbi.nlm.nih.gov/pubmed/33752445 .
Publication	Gerard	Ateshian	Shim JJ, Ateshian GA. A hybrid biphasic mixture formulation for modeling dynamics in porous deformable biological tissues.	Reference: Archive of Applied Mechanics 2021: 1-21
Publication	Gerard	Ateshian	Shim JJ, Maas SA, Weiss JA, Ateshian GA. Finite Element Implementation of Biphasic-Fluid Structure Interactions in FEBio.	Reference: J Biomech Eng 2021, https://www.ncbi.nlm.nih.gov/pubmed/33764435 .
Publication	Gerard	Ateshian	Ateshian GA, Zimmerman BK. Continuum Thermodynamics of Constrained Reactive Mixtures.	Reference: J Biomech Eng 2022; 144 PMID: PMC8719048, https://www.ncbi.nlm.nih.gov/pubmed/34802058 .
Publication	Gerard	Ateshian	Shim JJ, Ateshian GA. A Hybrid Reactive Multiphasic Mixture With a Compressible Fluid Solvent.	Research: J Biomech Eng 2022; 144 PMID: PMC8547015, https://www.ncbi.nlm.nih.gov/pubmed/34318318 .
Publication	Gerard	Ateshian	Zimmerman BK, Maas SA, Weiss JA, Ateshian GA. A Finite Element Algorithm for Large Deformation Biphasic Frictional Contact Between Porous-Permeable Hydrated Soft Tissues.	Reference: Biomech Eng 2022; 144 PMID: PMC8547016, https://www.ncbi.nlm.nih.gov/pubmed/34382640 .
Grant	Philip V	Bayly	<i>Developing a Prediction Model to Guide Surgical Decision Making in Female Pelvic Organ Prolapse Surgery Based on Anatomic Measurements</i>	Sponsor: Washington University Women's Health Technologies Collaboration Initiation Grant 5/1/2021-4/30/2022 Amount: \$20,000

Grant	Philip V	Bayly	<i>Regulation of Motile Cilia Assembly in Lung Disease</i>	Sponsor: NIH/NHLBI (R01 HL128370) 3/15/2020 – 3/31/2024 Amount: \$3,932,142
Publication	Philip V	Bayly	Hou Z, Guertler CA, Okamoto RJ, Chen H, Garbow JR, Kamilov US, Bayly PV. <i>Estimation of the mechanical properties of a transversely isotropic material from shear wave fields via artificial neural networks.</i>	Reference: J Mech Behav Biomed Mater. 2021. doi: 10.1016/j.jmbbm.2021.105046.
Publication	Philip V	Bayly	Bayly PV, Alshareef A, Knutsen AK, Upadhyay K, Okamoto RJ, Carass A, Butman JA, Pham DL, Prince JL, Ramesh KT, Johnson CL. <i>MR Imaging of Human Brain Mechanics In Vivo: New Measurements to Facilitate the Development of Computational Models of Brain Injury.</i>	Reference: Ann Biomed Eng. 2021. doi: 10.1007/s10439-021-02820-0.
Publication	Philip V	Bayly	Gomez AD, Bayly PV, Butman JA, Pham DL, Prince JL, Knutsen AK. <i>Group characterization of impact-induced, in vivo human brain kinematics.</i>	Reference: J R Soc Interface. 2021. doi: 10.1098/rsif.2021.0251.
Publication	Philip V	Bayly	Hou Z, Bayly PV, Okamoto RJ. <i>Shear wave speeds in nearly-incompressible fibrous materials with two fiber families.</i>	Reference: J Acoust Soc Am. 2021. 149(2):1097. doi: 10.1121/10.0003528.
Publication	Philip V	Bayly	Escarcega JD, Knutsen AK, Okamoto RJ, Pham DL, Bayly PV. <i>Natural oscillatory modes of 3D deformation of the human brain in vivo.</i>	Reference: J Biomech. 2021. 119:110259. doi: 10.1016/j.jbiomech.2021.110259.
Publication	Philip V	Bayly	Kim M, Bayly PV, Meacham JM. <i>Motile cells as probes for characterizing acoustofluidic devices.</i>	Reference: Lab Chip. 2021. doi: 10.1039/d0lc01025a.
Publication	Philip V	Bayly	Manduca A, Bayly PV, Ehman RL, Kolipaka A, Royston TJ, Sack I, Sinkus R, Van Beers BE. <i>MR elastography: Principles, guidelines, and terminology.</i>	Reference: Magn Reson Med. 2020. doi: 10.1002/mrm.28627.
Publication	Philip V	Bayly	Knutsen AK, Gomez AD, Gangolli M, Wang WT, Chan D, Lu YC, Christoferou E, Prince JL, Bayly PV, Butman JA, Pham DL. <i>In vivo estimates of axonal stretch and 3D brain deformation during mild head impact.</i>	Reference: Brain Multiphys. 2020. doi: 10.1016/j.brain.2020.100015.
Publication	Philip V	Bayly	McGarry M, Van Houten E, Guertler CA, Okamoto RJ, Smith D, Sowinski D, Johnson CL, Bayly PV, Weaver J, Paulsen K. <i>A Heterogenous, Time Harmonic, Nearly Incompressible Transverse Isotropic Finite Element Brain Simulation for MR Elastography.</i>	Reference: Phys Med Biol. 2020. doi: 10.1088/1361-6560/ab9a84.
Publication	Philip V	Bayly	Authors: Smith D, Guertler CA, Okamoto RJ, Romano A, Bayly PV, Johnson CL. <i>Multi-Excitation MR Elastography of the Brain: Wave Propagation in Anisotropic White Matter.</i>	Reference: J Biomech Eng. 2020. doi: 10.1115/1.4046199.
Publication	Philip V	Bayly	Guertler CA, Okamoto RJ, Ireland J, Pacia C, Garbow JR, Chen H, Bayly PV. <i>Estimation of Anisotropic Material Properties of Soft Tissue by MRI of Ultrasound-induced Shear Waves.</i>	Reference: J Biomech Eng. 2020. doi:10.1115/1.4046127.
Publication	Philip V	Bayly	Hou Z, Okamoto RJ, Bayly PV. <i>Shear wave propagation and estimation of material parameters in a nonlinear, fibrous material.</i>	Reference: J Biomech Eng. 2019. doi:10.1115/1.4044504.
Grant	Ellen	Casey	Exploring the Modulatory Role of Sex Hormones Along the Neuromechanical Axis in Females (EMRSHN	Sponsor: University of Texas Southwestern Medical Center NIH1R01AR069176-01A1 7/1/16-6/30/21 Amount: \$695,546 Role: Co-PI (PI Yasin Dhaher)

Grant	Ellen	Casey	Foundation Grant	Sponsor: AMSSM-ACSM, 2020 6/2020-6/2023 Amount: \$20,000 Role: PI
Publication	Ellen	Casey	Cheng J, Ammerman B, Santiago K, Jivanelli B, Lin E, Casey E, Ling D. Sex-Based Differences in the Incidence of Sports-Related Concussion: Systematic Review and Meta-analysis.	Reference: Sports Health. 2019 Nov/Dec;11(6):486-491. doi: 10.1177/1941738119877186. Epub 2019 Sep 30. PMID: 31567052; PMCID: PMC6822209.
Publication	Ellen	Casey	Gruskay JA, Strickland SM, Casey E, Chiaia TA, Green DW, Gomoll AH. Team Approach: Patellofemoral Instability in the Skeletally Immature.	Reference: JBJS Rev. 2019 Jul;7(7):e10. doi: 10.2106/JBJS.RVW.18.00159. PMID: 31365447.
Publication	Ellen	Casey	Ling D, Sleeper M, Casey E. Identification of Risk Factors for Injury in Women's Collegiate Gymnastics With the Gymnastics Functional Measurement Tool.	Reference: PM R. 2020 Jan;12(1):43-48. doi: 10.1002/pmrj.12184. Epub 2019 Sep 12. PMID: 31063637.
Publication	Ellen	Casey	Disser NP, De Micheli AJ, Schonk MM, Konnaris MA, Piacentini AN, Edon DL, Toresdahl BG, Rodeo SA, Casey EK, Mendias CL. Musculoskeletal Consequences of COVID-19.	Reference: J Bone Joint Surg Am. 2020 Jul 15;102(14):1197-1204. doi: 10.2106/JBJS.20.00847. PMID: 32675661; PMCID: PMC7508274.
Publication	Ellen	Casey	Shafi K, Lovecchio F, Forston K, Wyss J, Casey E, Press J, Creighton A, Sandhu H, Iyer S. The Efficacy of Telehealth for the Treatment of Spinal Disorders: Patient-Reported Experiences During the COVID-19 Pandemic.	Reference: HSS J. 2020 Nov 4;16(Suppl 1):1-7. doi: 10.1007/s11420-020-09808-x. Epub ahead of print. PMID: 33169072; PMCID: PMC7640578.
Publication	Ellen	Casey	Katz NB, Casey E, Fink D. Monitoring Serum Beta-Carotene Levels in a Female Athlete Triad Patient: A Case Report.	Reference: PM R. 2021 Sep;13(9):1056-1057. doi: 10.1002/pmrj.12483. Epub 2020 Nov 23. PMID: 32890456.
Publication	Ellen	Casey	Cheng J, Santiago KA, Abutalib Z, Temme KE, Hulme A, Goolsby MA, Esopenko CL, Casey EK. Menstrual Irregularity, Hormonal Contraceptive Use, and Bone Stress Injuries in Collegiate Female Athletes in the United States.	Reference: PM R. 2021 Nov;13(11):1207-1215. doi: 10.1002/pmrj.12539. Epub 2021 Feb 3. PMID: 33340255; PMCID: PMC8262270.
Publication	Ellen	Casey	Wolff AL, Ling DI, Casey EK, Toresdahl BG, Gellhom AC. Feasibility and impact of a musculoskeletal health for musicians (MHM) program for musician students: A randomized controlled pilot study.	Reference: J Hand Ther. 2021 Apr-Jun;34(2):159-165. doi: 10.1016/j.jht.2021.04.001. Epub 2021 Apr 15. PMID: 34011470.
Publication	Ellen	Casey	Cheney S, Casey E, Abutalib Z, Tepper KB, Dressler R, Sutton KM. Men's Lacrosse Injuries in the 2018 International World Championship Play.	Reference: Orthop J Sports Med. 2021 May 19;9(5):23259671211007951. doi: 10.1177/23259671211007951. PMID: 34046508; PMCID: PMC8138304.
Publication	Ellen	Casey	Bonanno J, Cheng J, Tilley D, Abutalib Z, Casey E. Factors Associated With Achilles Tendon Rupture in Women's Collegiate Gymnastics.	Reference: Sports Health. 2021 Jul 31:19417381211034510. doi: 10.1177/19417381211034510. Epub ahead of print. PMID: 34338076.
Publication	Ellen	Casey	Sweeney E, Howell DR, Seehusen CN, Tilley D, Casey E. Health outcomes among former female collegiate gymnasts: the influence of sport specialization, concussion, and disordered eating.	Reference: Phys Sportsmed. 2021 Nov;49(4):438-444. doi: 10.1080/00913847.2020.1850150. Epub 2020 Nov 23. PMID: 33186080.
Publication	Ellen	Casey	Ferber A, Howell DR, Seehusen CN, Tilley D, Casey E, Sweeney EA. Intersection of surgical injuries and pain interference among former female collegiate gymnasts.	Reference: PM R. 2021 Sep 9. doi: 10.1002/pmrj.12703. Epub ahead of print. PMID: 34498793.
Publication	Ellen	Casey	Leopold, Madeline BA1; Santiago, Kristen BA1; Cheng, Jennifer PhD1; Keller, Leah CPT2; Abutalib, Zafir MHS3; Bonder, Jaclyn MD4; Sharma, Geeta MD5; Tenforde, Adam MD6,7; Casey, Ellen MD1 Efficacy of a Core Strengthening Program for Diastasis Rectus Abdominis in Postpartum Women: A Prospective Observational Study	Reference: Journal of Women's Health Physical Therapy: October/December 2021 - Volume 45 - Issue 4 - p 147-163. doi: 10.1097/JWH.0000000000000214

Grant	Naomi	Chesler	<i>Early pulmonary vascular dysfunction in the post-9/11 military veterans</i>	Sponsor: Veterans Affairs 7/1/2020 – 6/30/2022 Project #: I01CX001515 Amount: \$52,875
Grant	Naomi	Chesler	<i>Role of endothelial Twist1 in vascular remodeling in pulmonary hypertension</i>	Sponsor: NIH/NHLBI Project #: 5 R01 HL 139638 02/01/2019 – 01/31/2023 Amount: \$96,595
Grant	Naomi	Chesler	<i>The role of YAP1 in angiogenesis during organ regeneration</i>	Sponsor: NIH/NHLBI Project #: 5 R01 HL 142578 07/01/2019 – 06/30/2023 Amount: \$99,295
Grant	Naomi	Chesler	<i>Mechanobiological mechanisms of pulmonary hypertension secondary to left heart failure</i>	Sponsor: NIH/NHLBI Project #: 5 R01 HL 147590 06/01/2020 – 04/30/2024 Amount: \$2,751,222
Grant	Naomi	Chesler	<i>Multiscale computational modeling of right ventricular failure</i>	Sponsor: NIH/NHLBI Project #: 7 R01 HL 154624 07/01/2020 – 06/30/2025 Amount: \$3,802,495
Grant	Naomi	Chesler	<i>Mechanisms of Right Ventricle Adaptation to Pulmonary Hypertension</i>	Sponsor: NIH/NHLBI Project #: 5 R01 HL144727 09/01/2019 – 06/30/2023 Amount: \$519,990
Award	Tim	Downing	2020- Shu Chien Early Career Award Finalist (top 3 across UC system)	
Award	Tim	Downing	2020 UC Berkeley Bioengineering Rising Star Lecture	
Award	Tim	Downing	2020 Rising Star Junior Faculty Award, BMES-Cell and Molecular Bioengineering (CMBE)	
Award	Tim	Downing	2019 National Institutes of Health (NIH) Director's New Innovator Award	
Grant	Tim	Downing	<i>URoL: Epigenetics 2: Connecting cell fate and epigenome drift through physical models of chromatin structure and dynamics</i>	Sponsor: NSF EF2022182 09/01/2020 – 08/31/2025 Amount: \$3,000,000 (T) Role: Principal Investigator
Grant	Tim	Downing	<i>Spatial epigenomics: A new framework for overcoming mechanical heterogeneity in solid tumors</i>	Sponsor: NIH/NCI DP2-CA250382 8/15/2019 – 6/30/2024 Amount: \$2,204,264 (T) Role: Principal Investigator
Publication	Tim	Downing	<i>P.K. Veerasubramanian, V.C. Joe, W.F. Liu†, T.L. Downing†. Characterization of Macrophage and Cytokine Interactions with Biomaterials Used in Negative-Pressure Wound Therapy.</i>	Reference: Bioengineering 2022, 9, 2. https://doi.org/10.3390/bioengineering9010002 - Special Issue.
Publication	Tim	Downing	<i>P.K. Veerasubramanian, H. Shao, V.S. Meli, T.A.Q. Phan, T.U. Luu, W.F. Liu, T.L. Downing†. A Src-H3 acetylation signaling axis integrates macrophage mechanosensation with inflammatory response.</i>	Reference: Biomaterials 2021 December, Volume 279, 121236, https://doi.org/10.1016/j.biomaterials.2021.121236
Publication	Tim	Downing	<i>C.A. Chinn*, H. Ren*, J.L.P. Morival, Q. Nie, M.A. Wood, T.L. Downing†. Examining age-dependent DNA methylation patterns and gene expression in the male and female mouse hippocampus.</i>	Reference: Neurobiology of Aging (In press) 2021, ISSN 0197-4580, https://doi.org/10.1016/j.neurobiolaging.2021.08.006 .

Publication	Tim	Downing	<u>J.L.P. Morival</u> , H.P. Widyastuti, C.H.H. Nguyen, M.V. Zaragoza†, T.L. Downing† . DNA methylation analysis reveals epimutation hotspots in patients with dilated cardiomyopathy-associated laminopathies.	Reference: Clinical Epigenetics 2021 Jul 10;13(1):139. doi: 10.1186/s13148-021-01127-0. PMID: 34246298; PMCID: PMC8272901.
Publication	Tim	Downing	<u>L.A. Urban</u> , <u>A. Trinh</u> , E. Pearlman, A. Siryapom, T.L. Downing† . The impact of age-related hypomethylated DNA on immune signaling upon cellular demise.	Reference: Aesthet Surg J. 2021 Jul 26:sjab299. doi: 10.1093/asj/sjab299. Epub ahead of print. PMID: 34309680.
Publication	Tim	Downing	<u>P.K. Veerasubramanian</u> , <u>A. Trinh</u> , <u>N. Akhtar</u> , W.F. Liu, T.L. Downing† . Biophysical and epigenetic regulation of cancer stemness, invasiveness and immune action.	Reference: Current Tissue Microenvironment Reports 2020 Dec;1(4):277-300. doi: 10.1007/s43152-020-00021-w. Epub 2020 Nov 2. PMID: 33817661; PMCID: PMC8015331.
Publication	Tim	Downing	V.S. Meli, H. Atcha, <u>P.K. Veerasubramanian</u> , R.R. Nagalla, T.U. Luu, E.Y. Chen, C.F. Guerrero-Juarez, K. Yamaga, W. Pandori, J.Y. Hsieh, T.L. Downing , Fruman DA, Lodoen MB, Plikus MV, Wang W, Liu WF. YAP-mediated mechanotransduction tunes the macrophage inflammatory response.	Reference: Science Advances 2020 Dec 4;6(49):eabb8471. doi: 10.1126/sciadv.abb8471. PMID: 33277245; PMCID: PMC7717914.
Publication	Tim	Downing	L. Busto-Moner, <u>J.L.P. Morival</u> , <u>A. Fahim</u> , <u>Z. Reitz</u> , T.L. Downing , E.L. Read†. Stochastic Modeling Reveals Kinetic Heterogeneity in Post-replication DNA Methylation.	Reference: PLoS Computational Biology 16(4): e1007195.
Publication	Tim	Downing	V.S. Meli, <u>P.K. Veerasubramanian</u> , H. Atcha, <u>Z. Reitz</u> , T.L. Downing , W.F. Liu†. "Biophysical regulation of macrophages in health and disease."	Reference: Journal of Leukocyte Biology; 1- 17.
Publication	Tim	Downing	<i>T.L. Downing†. Towards Spheroid-Omics.</i>	Reference: Nature Methods 18, 1283–1285 (2021). https://doi.org/10.1038/s41592-021-01311-3 .
Grant	Christine P.	Hendon	Evaluating the role of photobiomodulation in human cervical remodeling in pregnancy	Sponsor: NIH 1R21HD106061-01. 09/2021 – 08/31/2022 (JS Vink, MPI, CP Hendon MPI, KM Myers MPI)
Grant	Christine P.	Hendon	Optically guided catheter ablation of atrial fibrillation	Sponsor: NIH 1R01HL149369-01. 08/01/2019 - 07/31/2023 Amount: \$2,841,635, CP Portion: \$840,795 Role: Principal Investigator (CP Hendon MPI, K Laurita MPI, AM Rollins MPI)
Publication	Christine P.	Hendon	Xiaowei Zhao, Ohad Ziv, Reza Mohammadpour, Benjamin Crosby, Walter J Hoyt, Michael W Jenkins, Christopher Snyder, Christine Hendon, Kenneth R Laurita, Andrew M Rollins. Polarization-sensitive optical coherence tomography monitoring of percutaneous radiofrequency ablation in left atrium of living swine.	Reference: Scientific Reports 11(1). pp 1-10 (2021)
Publication	Christine P.	Hendon	Soo Young Park, Rajinder Singh-Moon, Haiqiu Yang, Deepak Saluja, Christine Hendon. Quantification of irrigated lesion morphology using near-infrared spectroscopy.	Reference: Scientific reports 11 (1), pp1-11. (2021)
Publication	Christine P.	Hendon	Xingchen Ji, Diana Mojahed, Yoshitomo Okawachi, Alexander Gaeta, Christine Hendon, and Michal Lipson. Millimeter-scale chip-based supercontinuum generation for optical coherence tomography.	Reference: Science Advances. 7(38), pp. eabg8869 (2021)
Publication	Christine P.	Hendon	Shu Fang, James McLean, Lei Shi, Joy-Sarah Y. Vink, Christine P. Hendon, Kristin M. Myers. Anisotropic Mechanical Properties of the Human Uterus Measured by Spherical Indentation.	Reference: Annals of Biomedical Engineering, pp 1-20. (2021)
Publication	Christine P.	Hendon	James P. McLean, Christine P. Hendon. 3-D compressed sensing optical coherence tomography using predictive coding.	Reference: Biomedical Optics Express 12 (4), pp 2531-2549 (2021)

Publication	Christine P.	Hendon	James P. McLean, Shuyang Fang, George Gallos, Kristin M. Myers, and Christine P. Hendon. Three-dimensional collagen fiber mapping and tractography of human uterine tissue using OCT.	Reference: Biomedical Optics Express. 11(9). (2020)
Publication	Christine P.	Hendon	Rajinder P. Singh-Moon, Soo Young Park, Diego M. Song Cho, Agastya Vaidya, Charles C. Marboe, Elaine Y. Wan, and Christine P. Hendon. Feasibility of near-infrared spectroscopy as a tool for anatomical mapping of the human epicardium.	Reference: Biomedical Optics Express. 11(8) pp 4099-4109 (2020) Editors Pick
Publication	Christine P.	Hendon	Diana Mojahed, Richard S. Ha, Peter Chang, Yu Gan, Xinwen Yao, Brigid Angelini, Hanina Hibshoosh, Brett Tabaek, and Christine Hendon. Fully automated post lumpectomy breast margin assessment utilizing convolutional neural network based optical coherence tomography image classification method.	Reference: Academic Radiology. 27 (5) pp e81-e86. (2020)
Publication	Christine P.	Hendon	Theresa H. Lye, Charles C. Marboe and Christine P. Hendon. Imaging of Sub-Endocardial Adipose Tissue and Fiber Orientation Distributions in the Human Left Atrium using Optical Coherence Tomography.	Reference: Journal of Cardiac Electrophysiology. 30 (12), 2950-2959 (2019)
Publication	Christine P.	Hendon	Xingchen Ji**, Xinwen Yao**, Yu Gan, Aseema Mohanty, Mohammad A. Tadayon, Christine P. Hendon, and Michal Lipson. On-chip tunable photonic delay line.	Reference: APL Photonics. 4 pp 090803. (2019)
Publication	Christine P.	Hendon	Yu Gan, Theresa H. Lye, Charles C. Marboe, Christine P. Hendon. Characterization of the human myocardium by optical coherence tomography.	Reference: Journal of biophotonics, e201900094 (2019)
Publication	Christine P.	Hendon	Xingchen Ji, Alexander Klenner, Xinwen Yao, Yu Gan, Alexander L. Gaeta, Christine P. Hendon, and Michal Lipson. Chip-based frequency comb sources for optical coherence tomography.	Reference: Optics Express 27 (14), 19896-19905 (2019)
Publication	Christine P.	Hendon	Lei Shi, Wang Yao, Yu Gan, Lily Y. Zhao, W. Eugene McKee, Joy-Sarah Y. Vink, Ronald J. Wapner, Christine P. Hendon, Kristin Myers. Anisotropic Material Characterization of Human Cervix Tissue based on Indentation.	Reference: Journal of Biomechanical Engineering. 141(9). (2019).
Grant	Christine E.	King	VentureWell Faculty Grant	Sponsor: VentureWell 2019 Amount: \$27,000
Grant	Christine E.	King	UCI Wayfinder IP Based Startup Grant	Sponsor: UCI 2021 Amount: \$6,500
Grant	Christine E.	King	VentureWell E-Team Pioneer Program	Sponsor: VentureWell 2021 Amount: \$5,000
Grant	Christine E.	King	NIH R25 Team-Based Design in Biomedical Engineering Education	Sponsor: NIH 2021 Amount: \$20,721
Publication	Christine E.	King	[J1] C.E. King, C. Hoo, W.C. Tang, M. Khine. Introducing entrepreneurship into a biomedical engineering capstone course at the University of California Irvine.	Reference: Technology and Innovation, 20(2019), pp. 179-195, 2019.
Publication	Christine E.	King	[C1] C.E. King, B. Lopour. Introducing neuroscience to high school students through low-cost brain computer interface technologies.	Reference: In Proc. of the 2020 American Society of Engineering Education Conference, (accepted), 2019.

Publication	Christine E.	King	[C2] J. Naik, C.E. King, A. Grosberg. CardioStart: Development and implementation of a tissue engineering summer high school program.	Reference: In Proc. of the 2020 American Society of Engineering Education Conference, (accepted), 2019.
Publication	Christine E.	King	[C3] E.Y. Salinas, A.E. Williams, C.E. King. Effect of controlling group heterogeneity of student performance in a graphical programming course.	Reference: In Proc. of the 2019 IEEE Frontiers in Education Conference, (in press), 2019.
Publication	Christine E.	King	[C4] C.E. King. Introduction of whiteboards to improve sketching in computer-aided design courses.	Reference: In Proc. of the 2019 American Society of Engineering Education Conference, (in press), 2019.
Publication	Christine E.	King	[C5] C.E. King. Assessing effectiveness of a ground rule system for group work in large engineering courses	Reference: In Proc. of the 2019 ASEE Pacific Southwest Division Conference, (in press), 2019.
Grant	Katrina	Knight		Sponsor: NIH/NICHHD K12HD043441 (PI: Y Sadovsky, PD: J Yanowitz, Scholar: Knight) Program: Magee-Womens Basic & Translational Reproductive Health Training Program (BIRCVH) Amount: \$125,000 DC
Grant	Katrina	Knight	Best Basic Science Paper 2020 awarded at the Pelvic Floor Disorders Week Conference	Sponsor: American Urogynecology Society
Publication	Katrina	Knight	Knight KM., King GE, Palcsey SL, Artsen AM, Abramowitch SD, Moalli PA. A soft elastomer alternative to polypropylene for pelvic organ prolapse repair: a preliminary study.	Reference: International Urogynecology Journal. 2021 Apr 16. doi: 10.1007/s00192-021-04792-0. Epub ahead of print. PMID: 33860812.
Publication	Katrina	Knight	Shapiro KK., Knight KM., Liang R., Cook J., King GE., Abramowitch SD., Moalli PA. Comparison of 2 single incision slings on the vagina in an ovine model.	Reference: American Journal of Obstetrics and Gynecology. 2021 Jan;224(1):78.e1-78.e7. doi: 10.1016/j.ajog.2020.07.005. Epub 2020 Jul 21. PMID: 32707267.
Publication	Katrina	Knight	Knight K.M., Egnot B.R., Moalli P.A. "Synthetic Mesh and Biologic Grafts: Properties and Biomechanics".	Reference: Walters and Karram Urogynecology and Reconstructive Pelvic Surgery. Ed. Matthew D. Barber, Catherine S. Bradley, Mickey M. Karram, Mark D. Walters. Netherlands, Elsevier, 2021, Chapter 7, pp. 93-114.
Award	Aaron	Kyle	Inducted as Fellow, Mar 2020	Sponsor: American Institute for Medical and Biological Engineering (AIMBE)
Award	Aaron	Kyle	Diversity Lecture Award, Oct 2020	Sponsor: Biomedical Engineering Society
Award	Aaron	Kyle	Outstanding Alumni Achievement, Oct. 2021	Sponsor: Kettering University
Grant	Aaron	Kyle	Hk Maker Lab 2.0: Inspiring Engineering Design Thinking in Grades 6 - 12 Students and Teachers	Sponsor: National Institutes of Health Science Education Partnership Award, Federal Award #1 R25 GM142072-01. Amount: \$1.24MM
Grant	Aaron	Kyle	Fostering Computational Thinking Through Neural Engineering	Sponsor: NSF, DRK-12, Federal Award #2101615 Amount: \$297,000
Grant	Spencer	Lake	<i>Exploration of MRI Coupled with Machine Learning for Disease Evaluation of Elbow Contracture</i>	Sponsor: Institute of Clinical and Translational Sciences, Washington University School of Medicine, JIT Funds Role: Principal Investigator 8/9/21 – 8/8/22 Amount: \$5,000
Grant	Spencer	Lake	Exploration of MRI Coupled with Machine Learning for Disease Evaluation of Elbow Contracture	Sponsor: Mallinckrodt Institute of Radiology, Washington University School of Medicine, Pilot Grant Role: Principal Investigator 6/30/21 – 6/29/22 Amount: \$9,795
Grant	Spencer	Lake	Defining the role of elastic fibers in tendon mechanics	Sponsor: National Science Foundation, CMMI-BMNB 2037125 Role: Principal Investigator 2/1/21 – 1/31/24 Amount: \$454,261

Grant	Spencer	Lake	Machine learning approach for disease evaluation of elbow post-traumatic contracture and osteoarthritis	<p>Sponsor: National Institutes of Health, NIAMS Project: P30AR074992-01 Washington University Musculoskeletal Research Center Pilot and Feasibility Grant Role: Principal Investigator 4/1/21 – 3/31/22 Amount: \$40,000</p>
Publication	Spencer	Lake	David MA, Reiter AJ, Dunham CL, Castile RM, Abraham JA, Iannucci LE, Shah ID, Havlioglu N, Chamberlain AM, Lake SP: Pleiotropic effects of simvastatin and losartan in preclinical models of post-traumatic elbow contracture.	Reference: <i>Frontiers in Bioengineering & Biotechnology</i> (Special Issue: <i>Extracellular Matrix Dynamics in Biology, Bioengineering, and Pathology</i>), <i>In press</i> .
Publication	Spencer	Lake	Reiter AJ, Castile RM, Schott HR, Kivitz GJ, Chamberlain AJ, Lake SP: Investigating the effects of physical therapy timing, intensity and duration on post-traumatic joint contracture in a rat elbow model: a preliminary study.	Reference: <i>Muscles, Ligaments and Tendons Journal</i> , 11(3):547-553, 2021.
Publication	Spencer	Lake	Reiter AJ, Schott HR, Castile RM, Cannon PC, Havlioglu N, Chamberlain AM, Lake SP: Females and males exhibit similar functional, mechanical and morphological outcomes in a rat model of post-traumatic elbow contracture	Reference: <i>Journal of Biomechanical Engineering</i> , 141(7):071001, 2019. Invited article based on 2018 Y.C. Fung Early Career Award from the ASME.
Publication	Spencer	Lake	Dunham CL, Steenbock H, Brinckmann J, Reiter AJ, Castile RM, Chamberlain AM, Lake SP: Increased volume and collagen crosslinks drive soft tissue contribution to post-traumatic elbow contracture in an animal model.	Reference: <i>Journal of Orthopaedic Research</i> , 39(8):1800-1810, 2021.
Publication	Spencer	Lake	David MA, Chamberlain AM, Lake SP: Preclinical models of elbow injury and pathology.	Reference: <i>Annals of Joint</i> , 6:12, 2021.
Publication	Spencer	Lake	Dunham CL, Havlioglu N, Chamberlain AM, Lake SP, Meyer GA: Adipose stem cells exhibit mechanical memory and reduce fibrotic contracture in a rat elbow injury model	Reference: <i>FASEB</i> , 34(9):12976-12990, 2020.
Publication	Spencer	Lake	Reiter AJ, Kivitz, GJ, Castile RM, Cannon PC, Mills EH, Jacobs BY, Allen KD, Chamberlain AM, Lake SP: Functional measures of grip strength and gait remain altered long-term in a rat model of post-traumatic elbow contracture.	Reference: <i>Journal of Biomechanical Engineering</i> , 141(7):071001, 2019. <i>Invited article based on 2018 Y.C. Fung Early Career Award from the ASME.</i>
Publication	Spencer	Lake	Dunham CL, Castile RM, Chamberlain AM, Lake SP: The role of periarticular soft tissues in persistent motion loss in a rat model of post-traumatic elbow contracture.	Reference: <i>Journal of Bone and Joint Surgery</i> , 101(5):e17, 2019.
Publication	Spencer	Lake	Solon LF, Castile RM, Smith MV, Lake SP: Mechanical properties and microstructural organization of common ulnar collateral ligament grafts: palmaris longus and gracilis tendons	Reference: <i>Journal of Orthopaedic Research</i> , <i>In press</i> .
Publication	Spencer	Lake	Castile RM, Cannon PC, Smith MV, Brophy RH, Lake SP: Donor age and sex have limited effects on the mechanical and microstructural properties of human connective tissues	Reference: <i>Journal of Orthopaedic Research</i> , <i>In press</i> .
Publication	Spencer	Lake	Eekhoff JD, Steenbock H, Berke IM, Brinckmann J, Yanagisawa H, Wagenseil JE, Lake SP: Dysregulated assembly of elastic fibers in fibulin-5 knockout mice results in a tendon specific increase in elastic modulus	Reference: <i>Journal of Mechanical Behavior of Biomedical Materials</i> , 113, 104134, 2021.
Publication	Spencer	Lake	Patel R, Castile RM, Lake SP, Brophy RH: Microstructural and mechanical properties of the anterolateral ligament of the knee	Reference: <i>American Journal of Sports Medicine</i> , 49(1):172-182, 2021.
Publication	Spencer	Lake	King NO, Gruev V, Lake SP: The implementation of a logarithmic division-of-focal-plane polarimeter to quantify changes in collagen alignment at varying levels of illumination	Reference: <i>Applied Optics</i> , 59(26):7813-7820, 2020.

Publication	Spencer	Lake	Eekhoff JD, Lake SP: Three-dimensional computation of fiber orientation, diameter, and branching in segmented image stacks of fibrous networks	Reference: Journal of Royal Society Interface, 17(169):20200371, 2020.
Publication	Spencer	Lake	Castile RM, Jenkins MJ, Lake SP, Brophy RH: Microstructural and mechanical properties of grafts commonly used for cruciate ligament reconstruction	Reference: Journal of Bone and Joint Surgery, 102(22):1948-1955, 2020.
Publication	Spencer	Lake	Hill JR, Eekhoff JD, Brophy RH, Lake SP: Elastic Fibers in orthopaedics: form and function in tendons and ligaments, clinical implications, and future directions	Reference: Journal of Orthopaedic Research, 38(11):2305-2317, 2020.
Publication	Spencer	Lake	Smith MV, Castile RM, Brophy RH, Dewan A, Bernholt D, Lake SP: Collagen alignment and real-time microstructural changes in the ulnar collateral ligament during loading	Reference: American Journal of Sports Medicine, 47(1):151-157, 2019.
Publication	Spencer	Lake	Lake SP, Stoikes NFN, Badhwar A, Deeken CR: Contamination of hybrid hernia meshes compared to bioresorbable Phasix™ Mesh in a rabbit subcutaneous implant inoculation model	Reference: Annals of Medicine in Surgery, 46:12-16, 2019.
Award	Kam	Leong	Founder's Award of Society for Biomaterials, 2022	
Award	Kam	Leong	Elected Member of the USA National Academy of Medicine, 2020	
Award	Kam	Leong	CAB Global Biomaterials Leadership Award, 2019	
Award	Kam	Leong	Elected Member of International Institute of Medical and Biological Engineering, 2019	
Grant	Kam	Leong	Targeting Endosomal Receptors for Treatment of Chronic Pain	Project Number: 1RO1DE029951 09/15/2020 – 08/31/2024 Name of PD/PI: Bunnett, N. W. Source of Support: NIH
Grant	Kam	Leong	Human multi-tissue platform to study effects of space radiation and countermeasures	Project Number: BCMH 7000001227 10/01/2020 – 09/30/2023 Name of PD/PI: Vunjak-Novakovic, G. Source of Support: NASA
Grant	Kam	Leong	Development of Microbur Technology for Oral Delivery of Biologics	Name of PD/PI: Leong K.W. 04/01/2022 – 03/31/2024 Source of Support: NIH
Publication	Kam	Leong	Willner MJ, Xiao Y, Kim HS, Chen X, Xu B, and Leong KW. (2021) Modeling SARS-CoV-2 infection in individuals with opioid use disorder with brain organoids.	Reference: J Tissue Eng, 12: 2041731420985299.
Publication	Kam	Leong	Shen H, Xu B, Yang C, Xue W, You Z, Wu X, Ma D, Shao D, Leong K, and Dai J. (2021) A DAMP-scavenging, IL-10-releasing hydrogel promotes neural regeneration and motor function recovery after spinal cord injury.	Reference: Biomaterials, 280: 121279.
Publication	Kam	Leong	Saha K, et al. (2021) The NIH Somatic Cell Genome Editing program.	Reference: Nature, 592(7853): 195-204.
Publication	Kam	Leong	Liu F, Sheng S, Shao D, Xiao YQ, Zhong YL, Zhou J, Quek CH, Wang YB, Dawulieti J, Yang C, Tian HY, Chen XS, and Leong KW. (2021) Targeting multiple mediators of sepsis using multifunctional tannic acid-Zn2+-gentamicin nanoparticles.	Reference: Matter, 4(11): 3677-3695.
Publication	Kam	Leong	Lee JH, Chen Z, He S, Zhou J, Tsai A, Truskey G, and Leong KW. (2021) Emulating Early Atherosclerosis in a Vascular Microphysiological System Using Branched Tissue-Engineered Blood Vessels.	Reference: Adv Biol, 5(4): e2000428.

Publication	Kam	Leong	Kim HS, Xiao Y, Chen XJ, He S, Im J, Willner1 M, Finlayson MO, Xu C, Zhu H, Choi SJ, Mosharov EV, Kim HW, Xu B, and Leong KW. (2021) Chronic opioid treatment arrests neurodevelopment and alters synaptic activity in human midbrain organoids.	Reference: BioRxiv Preprint, doi: https://doi.org/10.1101/2021.06.02.446827 .
Publication	Kam	Leong	Kim HS, Mandakhbayar N, Kim HW, Leong KW, and Yoo HS. (2021) Protein-reactive nanofibrils decorated with cartilage-derived decellularized extracellular matrix for osteochondral defects.	Reference: Biomaterials, 269: 120214.
Publication	Kam	Leong	Ho TC, Kim HS, Chen Y, Li Y, LaMere MW, Chen C, Wang H, Gong J, Palumbo CD, Ashton JM, Kim HW, Xu Q, Becker MW, and Leong KW. (2021) Scaffold-mediated CRISPR-Cas9 delivery system for acute myeloid leukemia therapy.	Reference: Sci Adv, 7(21).
Publication	Kam	Leong	Ding Y, Yu J, Chen X, Wang S, Tu Z, Shen G, Wang H, Jia R, Ge S, Ruan J, Leong KW, and Fan X. (2021) Dose-Dependent Carbon-Dot-Induced ROS Promote Uveal Melanoma Cell Tumorigenicity via Activation of mTOR Signaling and Glutamine Metabolism.	Reference: Adv Sci, 8(8): 2002404.
Publication	Kam	Leong	Park IS, Mahapatra C, Park JS, Dashnyam K, Kim JW, Ahn JC, Chung PS, Yoon DS, Mandakhbayar N, Singh RK, Lee JH, Leong KW, and Kim HW. (2020) Revascularization and limb salvage following critical limb ischemia by nanoceria-induced Ref-1/APE1-dependent angiogenesis.	Reference: Biomaterials, 242: 119919.
Publication	Kam	Leong	Mintz RL, Lao YH, Chi CW, He S, Li M, Quek CH, Shao D, Chen B, Han J, Wang S, and Leong KW. (2020) CRISPR/Cas9-mediated mutagenesis to validate the synergy between PARP1 inhibition and chemotherapy in BRCA1-mutated breast cancer cells.	Reference: Bioeng Transl Med, 5(1): e10152.
Publication	Kam	Leong	Lee CS and Leong KW. (2020) Advances in microphysiological blood-brain barrier (BBB) models towards drug delivery.	Reference: Curr Opin Biotechnol, 66: 78-87.
Publication	Kam	Leong	Kim HS, Mandakhbayar N, Kim HW, Leong KW, and Yoo HS. (2020) Protein-reactive nanofibrils decorated with cartilage-derived decellularized extracellular matrix for osteochondral defects.	Reference: Biomaterials: 120214.
Publication	Kam	Leong	Jimenez-Vargas NN, Gong J, Wisdom MJ, Jensen DD, Latorre R, Hegron A, Teng S, DiCello JJ, Rajasekhar P, Veldhuis NA, Carbone SE, Yu Y, Lopez-Lopez C, Jaramillo-Polanco J, Canals M, Reed DE, Lomax AE, Schmidt BL, Leong KW, Vanner SJ, Halls ML, Bunnett NW, and Poole DP. (2020) Endosomal signaling of delta opioid receptors is an endogenous mechanism and therapeutic target for relief from inflammatory pain.	Reference: Proc Natl Acad Sci U S A, 117(26): 15281-15292.
Publication	Kam	Leong	Huang D, Gibeley S, Xu C, Xiao Y, Celik O, Ginsberg H, and Leong K. (2020) Engineering liver microtissues for disease modeling and regenerative medicine.	Reference: Adv Func Mat: 1909553.
Publication	Kam	Leong	Gong J, Wang HX, Lao YH, Hu H, Vatan N, Guo J, Ho TC, Huang D, Li M, Shao D, and Leong KW. (2020) A Versatile Nonviral Delivery System for Multiplex Gene-Editing in the Liver.	Reference: Adv Mater: e2003537.
Publication	Kam	Leong	Deng S, Li X, Liu S, Chen J, Li M, Chew SY, Leong KW, and Cheng D. (2020) Codelivery of CRISPR-Cas9 and chlorin e6 for spatially controlled tumor-specific gene editing with synergistic drug effects.	Reference: Sci Adv, 6(29): eabb4005.
Publication	Kam	Leong	Dawulieti J, Sun M, Zhao Y, Shao D, Yan H, Lao YH, Hu H, Cui L, Lv X, Liu F, Chi CW, Zhang Y, Li M, Zhang M, Tian H, Chen X, Leong KW, and Chen L. (2020) Treatment of severe sepsis with nanoparticulate cell-free DNA scavengers.	Reference: Sci Adv, 6(22): eaay7148.

Publication	Kam	Leong	Chi CW, Lao YH, Ahmed AHR, Benoy EC, Li C, Dereli-Korkut Z, Fu BM, Leong KW, and Wang S. (2020) High-Throughput Tumor-on-a-Chip Platform to Study Tumor-Stroma Interactions and Drug Pharmacokinetics.	Reference: Adv Healthc Mater, 9(21): e2000880.
Publication	Kam	Leong	Tong S, Moyo B, Lee CM, Leong KW, and Bao G. (2019) Engineered materials for in vivo delivery of genome-editing machinery.	Reference: Nature Reviews Materials, 4(11): 726-737.
Grant	Sherry X.	Liu	Leveraging modeling-based bone formation for osteoporosis treatment	Sponsor: NIH/NIAMS Project: R01AR077598-01A1 03/05/21-01/31/26 Amount: \$2,123,585 Role: PI
Grant	Sherry X.	Liu	Core Center for Musculoskeletal Disorders	Sponsor: NIH/NIAMS Project: P30AR069619-06 09/01/21-06/30/26 Amount: \$4,085,845
Grant	Wendy	Liu	COVID-19 and the role of the immune system in cardiac function and pathology	Sponsor: NSF/BMMB (Award 2035264) 10/1/20-9/30/23 Amount: \$547,168 (total) Role: co-PI; PI: Grosberg
Grant	Wendy	Liu	Regulation of microglia by tissue stiffness and Piezo1 in Alzheimer's disease	Sponsor: NIH/NIA (1R21AG069067-01) 9/30/20-8/31/22 Amount: \$431,750 Role: PI; co-I Pathak and Blurton-Jones
Grant	Wendy	Liu	Biophysical regulation of macrophage function	Sponsor: NIH/NIAID (AI151301-09A1) 9/22/20-8/31/25 Amount: \$2,893,485 (total) Role: PI; co-I: Plikus, Pathak, Wang, Mortazavi
Grant	Wendy	Liu	Mechanical regulation of skin repair and regeneration	Sponsor: NIH.NIAMS (Award R21AR077288-01) 7/01/20-6/30/22 Amount: \$379,940 (total) Role: PI; co-I Pathak and Plikus
Publication	Sherry X.	Liu	Tseng WJ, Lee W, Zhao H, Liu Y, Wang W, de Bakker CMJ, Li Y, Osuna C, Tong W, Wang L, Ma X, Qin L, Liu XS . Short cyclic regimen with parathyroid hormone (PTH) results in prolonged anabolic effect relative to continuous treatment followed by discontinuation in ovariectomized rats.	Reference: J Bone Miner Res. 2021 Dec 26. doi: 10.1002/jbmr.4495.
Publication	Sherry X.	Liu	Sang W, Li Y, Guignon J, Liu XS , Ural A. Structural role of osteocyte lacunae on mechanical properties of bone matrix: A cohesive finite element study.	Reference: J Mech Behav Biomed Mater, 2022 Jan;125:104943.
Publication	Sherry X.	Liu	Wang W, Tseng W-J, Zhao H, Azar T, Pei S, Jiang X, Dymant N, Liu XS . Activation, development, and attenuation of modeling- and remodeling-based bone formation in adult rats.	Reference: Biomaterials, 2021 Sep;276:121015
Publication	Sherry X.	Liu	Lai X, Chung R, Li Y, Liu XS , Wang L. Lactation alters fluid flow and solute transport in maternal skeleton: A multiscale modeling study on the effects of microstructural changes and loading frequency.	Reference: Bone, 2021 Oct;151:116033.

Publication	Sherry X.	Liu	Li Y, de Bakker CMJ, Lai X, Zhao H, Parajuli A, Tseng W-J, Pei S, Meng T, Chung R, Wang L, Liu XS . Maternal bone adaptation to mechanical loading during pregnancy, lactation, and post-weaning recovery	Reference: <i>Bone</i> , 2021 Oct;151:116031
Publication	Sherry X.	Liu	Yu W, Zhong L, Yao L, Wei Y, Gui T, Li Z, Kim H, Holdreith N, Jiang X, Tong W, Dymont N, Liu XS , Yang S, Choi Y, Ahn J, Qin L. Bone marrow adipogenic lineage precursors promote osteoclastogenesis in bone remodeling and pathologic bone loss.	Reference: <i>J Clin Invest</i> , 2021 131(2):e140214.
Publication	Sherry X.	Liu	Wei Y, Sun H, Gui T, Yao L, Zhong L, Yu W, Heo S, Han L, Dymont NA, Liu XS , Zhang Y, Koyama E, Long F, Zgonis MH, Mauck RL, Ahn J, Qin L. The critical role of Hedgehog-responsive mesenchymal progenitors in meniscus development and injury repair.	Reference: <i>Elife</i> , 2021 (10): e62917
Publication	Sherry X.	Liu	Li Y, Tseng WJ, de Bakker CMJ, Zhao H, Chung R, Liu XS . Peak trabecular bone microstructure predicts rate of estrogen-deficiency-induced bone loss in rats	Reference: <i>Bone</i> . 2021 Apr;145:115862.
Publication	Wendy	Liu	Veerasubramanian P.K. Shao H., Meli V, Phan T.Q., Luu T.U., Liu W.F., Downing TD. (2021) A Src-H3 acetylation signaling axis integrates macrophage mechanosensation with inflammatory response.	Reference: <i>Biomaterials</i> . 279:121236. doi: 10.1016/j.biomaterials.2021.121236.
Publication	Wendy	Liu	Meli V.S., Donahue, R.P., Link J.M., Hu J.C., Athanasiou K.A., Liu W.F. (2021) Isolation and characterization of porcine macrophages and their inflammatory and fusion responses in different stiffness environments.	Reference: <i>Biomaterials Science</i> , 9:7851-7861. doi: 10.1039/D1BM000746G.
Publication	Wendy	Liu	Atcha H, Jairaman A., Evans E. L., Pathak M.M., Cahalan M.D., Liu W.F. (2021) Ion channel mediated mechanotransduction in immune cells.	Reference: <i>Current Opinion in Solid State & Materials Science</i> , 25(6) 100951. doi: 10.1016/j.cossms.2021.100951.
Publication	Wendy	Liu	Atcha H, Meli V.S., Davis C.T., Brumm K.T., Anis S., Chin J., Jiang K., Liu W.F. (2021) CD11b and Piezo1 crosstalk mediates macrophage response to mechanical stretch.	Reference: <i>Frontiers in Immunology</i> , 12:689397. doi: 10.3389/fimmu.2021.689397.
Publication	Wendy	Liu	Atcha H., Jairaman A.I., Holt J.R., Meli V.S., Nagalla R.R., Veerasubramanian P.K., Brumm K.T., Lim H.E., Cahalan M.D., Pathak M., Liu W.F. (2021) Mechanically activated ion channel Piezo1 modulates macrophage polarization and stiffness sensing.	Reference: <i>Nature Communications</i> , 12:3256. doi:10.1038/s41467-021-23482-5.
Publication	Wendy	Liu	Veerasubramanian P.K., Trinh A., Akhtar N., Liu W.F., Downing T.L. (2020) Biophysical and epigenetic regulation of cancer stemness, invasiveness and immune action.	Reference: <i>Current Tissue Microenvironment Reports</i> .1(4):277-300. doi: 10.1007/s43152-020-00021-w.
Publication	Wendy	Liu	Meli V., Atcha H., Veerasubramanian P.K., Nagalla R., Luu T.U., Chen E.Y., Guerrero-Juarez C.F., Yamaga K., Pandori W., Hsieh J.Y., Downing T.L., Fruman D., Lodoen M.B., Plikus M.V., Wang W., Liu W.F. (2020) YAP-mediated mechanotransduction tunes the macrophage inflammatory response.	Reference: <i>Science Advances</i> . 6(49):eabb8471. PMID: PMC7717914
Publication	Wendy	Liu	Rowley A.T., Meli V., Wu-Woods N, Chen E.Y., Liu W.F., Wang S.W. (2020) Effect of surface-bound collagen-mimetic peptides on macrophage uptake and immunomodulation.	Reference: <i>Frontiers in Bioengineering and Biotech</i> ,8:747. doi: 10.3389/fbioe.2020.00747.
Grant	Jerry	Lowder	Clinical Outcomes Research Training in Female Lower Urinary Tract Disorders	Sponsor: NIH/NIDDK, T32 DK120497 07/01/2020-06/30/2025 Amount: \$158,000/ year, 5 years total Role: Co-PI

Grant	Jerry	Lowder	<i>Developing a Prediction Model to Guide Surgical Decision Making in Female Pelvic Organ Prolapse Surgery Based on Anatomic Measurements</i>	Sponsor: Collaboration Initiation Grant in Women's Health Technologies 6/1/2021-5/31/2025 Amount: \$20,000 Role: PI
Grant	Jerry	Lowder	<i>Tertiary lymphoid tissue development in response to recurrent urinary infection: A translational investigation of the bladder immune response.</i>	Sponsor: Institute of Clinical and Translational Sciences Clinical and Translational Sciences Research Program 6/1/2020-6/20/2021 Amount: \$50,000 Role: Co-PI
Publication	Jerry	Lowder	Meister MR, Wang C, Lowder JL, Mysorekar IU. Vaginal Estrogen Therapy is Associated With Decreased Inflammatory Response in Postmenopausal Women With Recurrent Urinary Tract Infections.	Reference: 2019 No 11. Female Pelvic Med Reconstr Surg. PMID: 31725016.
Publication	Jerry	Lowder	Brady, S. S., Brubaker, L., Fok, C. S., Gahagan, S., Lewis, C. E., Lewis, J., Lowder, J. L., Nodora, J., Stapleton, A., & Palmer, M. H., PLUS Research Consortium. (In Press). Development of conceptual models to guide public health research, practice, and policy: Synthesizing traditional and contemporary paradigms.	Reference: Health Promotion Practice. 2020 Jan 7:1524839919890869. doi: 10.1177/1524839919890869. [Epub ahead of print] PMID: 31910039
Publication	Jerry	Lowder	Brady SS, Berry A, Camenga DR, Fitzgerald CM, Gahagan S, Hardacker CT, Harlow BL, Hebert-Beime J, LaCoursiere DY, Lewis JB, Low LK, Lowder JL, Markland AD, McGwin G, Newman DK, Palmer MH, Shoham DA, Smith AL, Stapleton A, Williams BR, Sutcliffe S; Prevention of Lower Urinary Tract Symptoms (PLUS). Applying concepts of life course theory and life course epidemiology to the study of bladder health and lower urinary tract symptoms among girls and women.	Reference: NeuroUrol Urodyn. 2020 Mar 2. doi: 10.1002/nau.24325. [Epub ahead of print]
Publication	Jerry	Lowder	Smith AL, Rickey LM, Brady SS, Fok CS, Lowder JL, Markland AD, Mueller ER, Sutcliffe S, Bavendam TG, Brubaker L. Laying the Foundation for Bladder Health Promotion in Women and Girls.	Reference: Urology. 2021 Apr;150:227-233. doi: 10.1016/j.urology.2020.03.011. PMID: 32197984
Publication	Jerry	Lowder	Meister MR, Brubaker A, Sutcliffe S, Lowder JL. Effectiveness of Botulinum Toxin for Treatment of Symptomatic Pelvic Floor Myofascial Pain in Women: A Systematic Review and Meta-analysis.	Reference: Female Pelvic Med Reconstr Surg 2021 Jan 1;27(1):e152-e160. PMID: 32301801.
Publication	Jerry	Lowder	Lenger SM, Bradley MS, Thomas DA, Bertolet MH, Lowder JL,* Sutcliffe S*. D-mannose vs other agents for recurrent urinary tract infection prevention in adult women: a systematic review and meta-analysis.	Reference: Am J Obstet Gynecol. 2020 Aug;223(2):265.e1-265.e13. PMID: 32497610. (*co-senior author)*** Chosen by the American Board of Obstetrics and Gynecology as a Female Pelvic Medicine & Reconstructive Surgery Maintenance of Certification (MOC) article 2021.
Publication	Jerry	Lowder	Putman JG, Meister MR, Lenger SM, Lowder JL. Regional Performance Of Apical Support Procedures At Time Of Hysterectomy For Benign Indications: What Is The Role Of Surgeon Training?	Reference: Female Pelvic Med Reconstr Surg. 2020 Jul 1;27(7):421-426. PMID: 32701766.
Publication	Jerry	Lowder	Javed I, Yu T, Li J, Pakpahan R, Milbrandt M, Andriole GL, <u>Lowder JL</u> , Lai HH, Colditz GA, Sutcliffe S. Does Pollen Trigger Urologic Chronic Pelvic Pain Syndrome Flares? A Case-Crossover Analysis in the Multidisciplinary Approach to the Study of Chronic Pelvic Pain Research Network.	Reference: J Urol. 2020 Dec 21:101097JU0000000000001482. doi: 10.1097/JU.0000000000001482. Epub ahead of print. PMID: 33347771.
Publication	Jerry	Lowder	Rickey LM, Constantine ML, Lukacz ES, Lowder JL, Newman DK, Brubaker L, Rudser K, Lewis C, Low LK, Palmer MH, Rockwood T. Measuring Bladder Health: Development and Cognitive Evaluation of Items for a Novel Bladder Health Instrument.	Reference: J Urol. 2020 May;205(5):1407-1414. doi: 10.1097/JU.0000000000001581. Epub ahead of print. PMID: 33350312.

Publication	Jerry	Lowder	Lowder JL, Barker MA, Ferzandi T, Gardiner H, Hall EF, Nihira M, Holzberg A, Hurtado E, Patton S, Rathbun J, Shepherd JP, Biller D; Developed by the AUGS Payment Reform Committee. Developing an Advanced Alternative Payment Model for Stress Urinary Incontinence.	Reference: Female Pelvic Med Reconstr Surg. 2020 Dec 23; Publish Ahead of Print. doi: 10.1097/SPV.0000000000000997. Epub ahead of print. PMID: 33315626.
Publication	Jerry	Lowder	Pollack LM, Lowder JL, Keller M, Chang SH, Gehlert SJ, Olsen MA. Racial/Ethnic Differences in the Risk of Surgical Complications and Post-hysterectomy Hospitalization Among Women Undergoing Hysterectomy for Benign Conditions.	Reference: Journal of Minimally Invasive Gynecology. May;28(5):1022-1032.e12. doi.org/10.1016/j.jmig.2020.12.032. Epub ahead of print. Awarded 2020 HCUP Outstanding Article of the Year Award - Clinical category - sponsored by AHRQ and AcademyHealth
Publication	Jerry	Lowder	Lukacz ES, Constantine ML, Kane Low L, Lowder JL, Markland AD, Mueller ER, Newman DK, Rickey LM, Rockwood T, Rudser K; Prevention of Lower Urinary Tract Symptoms (PLUS) Research Consortium. Rationale and design of the validation of bladder health instrument for evaluation in women (VIEW) protocol.	Reference: BMC Womens Health. 2021 Jan 7;21(1):18. Doi: 10.1186/s12905-020-01136-w. PMIDS: 33413284.
Publication	Jerry	Lowder	Rickey LM, Constantine ML, Lukacz ES, Lowder JL, Newman DK, Brubaker L, Rudser K, Lewis CE, Low LK, Palmer MH, Rockwood T. Reply by Authors.	Reference: J Urol. 2021 May;205(5):1414. doi: 10.1097/JU.0000000000001581.02. Epub 2021 Mar 17. PMID: 33728941.
Publication	Jerry	Lowder	Lenger SM, Chu CM, Ghetti C, Hardi AC, Lai HH, Pakpahan R, Lowder JL*, Sutcliffe S*. Adult female urinary incontinence guidelines: a systematic review of evaluation guidelines across clinical specialties.	Reference: Int Urogynecol J. 2021 Apr 21. doi: 10.1007/s00192-021-04777-z. Epub ahead of print. PMID: 33881602. (*co-senior authors).
Publication	Jerry	Lowder	Foster SN, Spitznagle TM, Tuttle LJ, Sutcliffe S, Lowder JL, Meister N, Ghetti C, Mueller MJ, Harris-Hayes, M. Hip and Pelvic Floor Muscle Strength in Women With and without Urgency and Frequency Predominant Lower Urinary Tract Symptoms.	Reference: J Womens Health Phys Therap. 2021 Jul-Sep;45(3):126-134. PMID: 34366727
Publication	Jerry	Lowder	Harm-Emandes I, Boyle V, Hartmann D, Fitzgerald CM, Lowder JL, Kotarinos R, Whitcomb E. Assessment of the Pelvic Floor and Associated Musculoskeletal System: Guide for Medical Practitioners.	Reference: Female Pelvic Med Reconstr Surg. 2021 Dec 1;27(12):711-718. doi: 10.1097/SPV.0000000000001121. PMID: 34807882
Publication	Joshua	Mauney	Gundogdu G, Tosun M, Morhardt D, Gheinani AH, Algarrahi K, Yang X, Costa K, Alegria CG, Adam RM, Yang W, Mauney JR . Molecular mechanisms of esophageal epithelial regeneration following repair of surgical defects with acellular silk fibroin grafts.	Reference: Sci Rep. 2021 Mar 29;11(1):7086. doi: 10.1038/s41598-021-86511-9. PMID: 33782465; PMCID: PMC8007829.
Publication	Joshua	Mauney	Gundogdu G, Okhunov Z, Starek S, Veneri F, Orabi H, Holzman SA, Sullivan MP, Khoury AE, Mauney JR . Evaluation of Bi-Layer Silk Fibroin Grafts for Penile Tunica Albuginea Repair in a Rabbit Corporoplasty Model.	Reference: Front Bioeng Biotechnol. 2021 Dec 7;9:791119. doi: 10.3389/fbioe.2021.791119. PMID: 34950646; PMCID: PMC8688800.
Publication	Joshua	Mauney	Gundogdu G, Okhunov Z, Cristofaro V, Starek S, Veneri F, Orabi H, Jiang P, Sullivan MP, Mauney JR. Evaluation of Bi-Layer Silk Fibroin Grafts for Tubular Ureteroplasty in a Porcine Defect Model.	Reference: Front Bioeng Biotechnol. 2021 Sep 17;9:723559. doi: 10.3389/fbioe.2021.723559. PMID: 34604185; PMCID: PMC8484785.
Publication	Joshua	Mauney	Gundogdu G, Morhardt D, Cristofaro V, Algarrahi K, Yang X, Costa K, Alegria CG, Sullivan MP, Mauney JR. Evaluation of Bilayer Silk Fibroin Grafts for Tubular Esophagoplasty in a Porcine Defect Model.	Reference: Tissue Eng Part A. 2021 Jan;27(1-2):103-116. doi: 10.1089/ten.TEA.2020.0061. Epub 2020 Jun 26. PMID: 32460641; PMCID: PMC7826443.
Grant	Pamela	Moalli	Mesh complications: The role of local mechanical stresses on tissue remodeling following mesh implantation	Sponsor: NICHD Project Number: R01HD083383-06 08/15/2021 – 07/31/2026 Amount: \$2,901,097

Grant	Pamela	Moalli	Overcoming Complications of Polypropylene Prolapse Meshes: Development of Novel	Sponsor: NICHD Project Number: 5R01HD097187-03 04/17/2019 – 03/31/2024 Amount: \$1,587,540
Grant	Pamela	Moalli	The Design and Development of the UroCure Absorbable Midurethral Sling	Sponsor: UroCure, LLC 02/18/2021 – 01/31/2026 Amount: \$50,000
Grant	Pamela	Moalli	Vaginal stem cells: The missing link in vaginal reconstruction	Sponsor: Magee-Womens Research Institute and Foundation 01/01/2022 – 12/31/2024 Project Number: MP002 Amount: \$972,000
Grant	Pamela	Moalli	Pittsburgh Pelvic Floor Research Program	Sponsor: NICHD 08/01/2011 – 06/30/2022 Project Number: UG3UG1HD069006-10S1 Amount: \$100k.year for BioLift
Publication	Pamela	Moalli	Sung VW, Menefee S, Dunivan G, Richter HE, Moalli P, Weidner A, Andy UU, Jelovsek E, Mazloomdoost D, Whitworth R, Thomas S; NICHD Pelvic Floor Disorders Network. Design of a Study to Measure Patient-Perspectives in Adverse Event Reporting (the PPAR Study): Supplementary Study to the ASPIRe Trial.	Reference: Female Pelvic Med Reconstr Surg. 2021 Jan 1;27(1):e112-e117. doi: 10.1097/SPV.0000000000000845. PMID: 32487881.
Publication	Pamela	Moalli	Ferrante KL, Gantz MG, Sridhar A, Smith A, Rahn DD, Ellington DR, Weidner AC, Wohlrab K, Mazloomdoost D, Moalli P, Lukacz ES; NICHD Pelvic Floor Disorders Network. Do Women Who Self-Report More Exercise Have Increased Rates of Symptomatic Stress Urinary Incontinence After Midurethral Slings?	Reference: Female Pelvic Med Reconstr Surg. 2021 Jan 1;27(1):e202-e207. doi: 10.1097/SPV.0000000000000893. PMID: 32898050; PMCID: PMC7793633.
Publication	Pamela	Moalli	Giugale LE, Moalli PA, Canavan TP, Meyn LA, Oliphant SS. Prevalence and Predictors of Urinary Incontinence at 1 Year Postpartum.	Reference: Female Pelvic Med Reconstr Surg. 2021 Feb 1;27(2):e436-e441. doi: 10.1097/SPV.0000000000000955. PMID: 33009263.
Publication	Pamela	Moalli	Giugale LE, Baranski LA, Meyn LA, Schott NJ, Emerick TD, Moalli PA. Preoperative Pelvic Floor Injections with Bupivacaine and Dexamethasone for Pain Control After Vaginal Prolapse Repair: A Randomized Controlled Trial.	Reference: Obstet Gynecol. 2021 Jan 1;137(1):21-31. doi: 10.1097/AOG.00000000000004205. PMID: 33278291.
Publication	Pamela	Moalli	Knight KM, King GE, Palcsey SL, Arsen AM, Abramowitch SD, Moalli PA. A soft elastomer alternative to polypropylene for pelvic organ prolapse repair: a preliminary study.	Reference: Int Urogynecol J. 2021 Apr 16. doi: 10.1007/s00192-021-04792-0. Epub ahead of print. PMID: 33860812.
Publication	Pamela	Moalli	Pace N, Arsen A, Baranski L, Palcsey S, Durst R, Meyn L, Moalli PA. Symptomatic improvement after mesh removal: a prospective longitudinal study of women with urogynaecological mesh complications.	Reference: BJOG. 2021 May 28. doi: 10.1111/1471-0528.16778. Epub ahead of print. PMID: 34047446.
Publication	Pamela	Moalli	Huntington A, Abramowitch SD, Moalli PA, De Vita R. Strains Induced in the Vagina by Smooth Muscle Contractions.	Reference: Acta Biomater. 2021 May 22:S1742-7061(21)00325-1. doi: 10.1016/j.actbio.2021.05.015. Epub ahead of print. PMID: 34033971.
Publication	Pamela	Moalli	Bradley CS, Brown HW, Shippey SS, Gutman RE, Andy UU, Yurteri-Kaplan LA, Kudish B, Mehr A, O'Boyle A, Foster RT Sr, Anger JT, Ten Eyck P, Moalli PA; Developed by the Pelvic Floor Disorders Registry. Generic Health-Related Quality of Life in Patients Seeking Care for Pelvic Organ Prolapse.	Reference: Female Pelvic Med Reconstr Surg. 2021 Jun 1;27(6):337-343. doi: 10.1097/SPV.0000000000001069. PMID: 34080581.
Publication	Pamela	Moalli	Sinex DCE, Bowen ST, Kashkoush A, Rosemond A, Carter D, Menon PG, Moalli PA, Abramowitch SD. The establishment of a 3D anatomical coordinate system for defining vaginal axis and spatial position.	Reference: Comput Methods Programs Biomed. 2021 Sep;208:106175. doi: 10.1016/j.cmpb.2021.106175. Epub 2021 May 16. PMID: 34082373.

Publication	Pamela	Moalli	Bowen ST, Moalli PA , Abramowitch SD, Lockhart ME, Weidner AC, Ferrando CA, Nager CW, Richter HE, Rardin CR, Komesu YM, Harvie HS, Mazloomdoost D, Sridhar A, Gantz MG; Eunice Kennedy Shriver National Institute of Child Health and Human Development Pelvic Floor Disorders Network. Defining mechanisms of recurrence following apical prolapse repair based on imaging criteria.	Reference: Am J Obstet Gynecol. 2021 Jun 1:S0002-9378(21)00609-8. doi: 10.1016/j.ajog.2021.05.041. Epub ahead of print. PMID: 34087229. NIHMS 1723378
Publication	Pamela	Moalli	Sung VW, Richter HE, Moalli P , Weidner AC, Nguyen JN, Smith AL, Dunivan G, Ridgeway B, Borello-France D, Newman DK, Mazloomdoost D, Carper B, Gantz MG; NICHD Pelvic Floor Disorders Network. Characteristics Associated with Treatment Failure 1 Year After Midurethral Sling in Women with Mixed Urinary Incontinence.	Reference: Obstet Gynecol. 2021 Aug 1;138(2):199-207. doi: 10.1097/AOG.0000000000004444. PMID: 34237755.
Publication	Pamela	Moalli	Burkett L, Moalli P , Ackenbom M. What is Being Reported About Vaginal "Lasers?": An Examination of Adverse Events Reported to the Food and Drug Administration on Energy-Based Devices.	Reference: Aesthet Surg J. 2021 Jul 26:sjab299. doi: 10.1093/asj/sjab299. Epub ahead of print. PMID: 34309680.
Publication	Pamela	Moalli	Brito LGO, Pereira GMV, Moalli P , Shynlova O, Manonai J, Weintraub AY, Deprest J, Bortolini MAT. Age and/or postmenopausal status as risk factors for pelvic organ prolapse development: systematic review with meta-analysis.	Reference: Int Urogynecol J. 2021 Aug 5. doi: 10.1007/s00192-021-04953-1. Epub ahead of print. PMID: 34351465.
Grant	Kristin	Myers	Evaluating the role of photobiomodulation in human cervical remodeling in pregnancy	Sponsor: NIH Award #: 1R21HD106061-01 09/2021-08/2023 Amount: \$445,500
Grant	Kristin	Myers	Coordinated Advances in Reproductive Engineering for Health Research (CARE4HeR)	Sponsor: NSF 09/2021-08/2026 Amount: \$49,993
Grant	Kristin	Myers	Artificial Intelligence Based Spontaneous Preterm Birth Prediction Using Ultrasound and EMR Data	Sponsor: SEAS, Columbia University 07/2021-06/2022 Amount: \$85,000
Grant	Kristin	Myers	Provost's Grants Program for Mid-Career Faculty who Contribute to the Diversity Goals of the University	Sponsor: Columbia University Office of the Provost 05/2020-04/2023 Amount: \$37,000
Grant	Kristin	Myers	A Multi-modality, Multiscale Approach to Understanding Parturition	Sponsor: NIH Award #: R01HD072077 09/2018-05/2022 Amount: \$3,037,974
Grant	Kristin	Myers	Integrated Cartilage Repair	Sponsor: NIH Award #: 1R21HD106061-01 09/2021-08/2023 Amount: \$445,500
Grant	Kristin	Myers	A Computational Framework for the Clinical Evaluation of the Soft Tissue Mechanics in Pregnancy	Sponsor: NIH Award #: R01HD091153 09/2017-05/2022 Amount: \$1,560,600
Publication	Kristin	Myers	<u>Jayyosi C, Lee N, Madhukaran SP, Nallasamy S, Mahendroo M, Myers K. The swelling behavior of the mouse cervix: Changing kinetics with osmolarity and the role of hyaluronan in pregnancy.</u>	Reference: Acta Biomater. 2021 Nov;135:414-424. doi: 10.1016/j.actbio.2021.08.018. Epub 2021 Aug 17. PubMed PMID: 34411755.

Publication	Kristin	Myers	Fang S, McLean J, Shi L, Vink JY, Hendon CP, Myers KM. <u>Anisotropic Mechanical Properties of the Human Uterus Measured by Spherical Indentation.</u>	Reference: Ann Biomed Eng. 2021 Aug;49(8):1923-1942. doi: 10.1007/s10439-021-02769-0. Epub 2021 Apr 20. PubMed PMID: 33880632; PubMed Central PMCID: PMC8376808.
Publication	Kristin	Myers	Louwagie EM, Carlson L, Over V, Mao L, Fang S, Westervelt A, Vink J, Hall T, Feltovich H, Myers K. <u>Longitudinal ultrasonic dimensions and parametric solid models of the gravid uterus and cervix.</u>	Reference: PLoS One. 2021;16(1):e0242118. doi: 10.1371/journal.pone.0242118. eCollection 2021. PubMed PMID: 33507927; PubMed Central PMCID: PMC7842891.
Publication	Kristin	Myers	McLean JP, Fang S, Gallos G, Myers KM, Hendon CP. Three-dimensional collagen fiber mapping and tractography of human uterine tissue using OCT.	Reference: Biomed Opt Express. 2020 Oct 1;11(10):5518-5541. doi: 10.1364/BOE.397041. eCollection 2020 Oct 1. PubMed PMID: 33149968; PubMed Central PMCID: PMC7587264.
Award	Christine	O' Brien	Biomedical Engineering Society (BMES) Career Development Award	Sponsor: BMES
Grant	Christine	O' Brien	<i>"Wearable multifunctional optical device for early detection of postpartum hemorrhage"</i>	Sponsor: NIH NICHD Amount: \$127,701, 1K99HD103954-01
Publication	Christine	O' Brien	<i>"Application driven assessment of probe designs for Raman spectroscopy"</i>	Reference: Biomedical Optics Express
Publication	Christine	O' Brien	<i>"Focal dynamic thermal imaging for label-free high-resolution characterization of materials and tissue heterogeneity"</i>	Reference: Scientific Reports
Publication	Christine	O' Brien	<i>"Raman microspectroscopy differentiates perinatal pathogens on ex vivo infected human fetal membrane tissues"</i>	Reference: Journal of Biophotonics
Publication	Michelle	Oyen	Koh CT, Tonsomboon K, Oyen ML, Fracture Toughness of Human Amniotic Membranes	Reference: J. Royal Society Interface Focus 9 (2019) 20190012. DOI: 10.1098/rsfs.2019.0012
Publication	Michelle	Oyen	Abbas Y, Camicer-Lombarte A, Gardner L, Thomas J, Brosens JJ, Moffett A, Sharkey A, Franze K, Burton GJ, and Oyen ML, Tissue stiffness at the human maternal-fetal interface	Reference: Human Reproduction 34 (2019) 1999 – 2008. DOI: 10.1093/humrep/dez139.
Publication	Michelle	Oyen	Wheeler ML, Oyen ML, Premature Rupture of Membranes and Severe Weather Systems	Reference: Frontiers in Physiology 11 (2020) 524. DOI: 10.3389/fphys.2020.00524
Publication	Michelle	Oyen	Wheeler ML, Oyen ML, Bioengineering Approaches for Placental Research	Reference: Annals of Biomedical Engineering 49 (2021) 1805 – 18. DOI: 10.1007/s10439-020-02714-7
Publication	Itsik	Pe'er	TA Joseph, P Chlenski, A Litman, T Korem, I Pe'er. Accurate and robust inference of microbial growth dynamics from metagenomic sequencing reveals personalized growth rates	Reference: Genome Research, gr. 275533.121
Publication	Itsik	Pe'er	AP Pasarkar, TA Joseph, I Pe'er. Directional Gaussian Mixture Models of the gut microbiome elucidate microbial spatial structure	Reference: Msystems 6 (6), e00817-21
Publication	Itsik	Pe'er	Y Liu, S Kadyan, I Pe'er. A Recovery Algorithm and Pooling Designs for One-Stage Noisy Group Testing under the Probabilistic Framework	Reference: International Conference on Algorithms for Computational Biology, 42-53
Publication	Itsik	Pe'er	AK Moretti, L Zhang, CA Naesseth, H Venner, D Blei, I Pe'er. Variational Combinatorial Sequential Monte Carlo Methods for Bayesian Phylogenetic Inference	Reference: arXiv preprint arXiv:2106.00075
Publication	Itsik	Pe'er	T Lencz, J Yu, RR Khan, E Flaherty, S Cami, M Lam, D Ben-Avraham. Novel ultra-rare exonic variants identified in a founder population implicate cadherins in schizophrenia	Reference: Neuron 109 (9), 1465-1478. e4
Publication	Itsik	Pe'er	A Khalil Moretti, L Zhang, CA Naesseth, H Venner, D Blei, I Pe'er. Variational Combinatorial Sequential Monte Carlo Methods for Bayesian Phylogenetic Inference	Reference: arXiv e-prints, arXiv: 2106.00075

Publication	Itsik	Pe'er	T Lencz, J Yu, R Khan, M Lam, E Flaherty, T Maniatis, A Malhotra, ...Ultra-Rare Exonic Variants Identified in a Founder Population Implicate Cadherins and Protocadherins in Schizophrenia	Reference: Biological Psychiatry 89 (9), S83
Publication	Itsik	Pe'er	A Goretsky, A Dmitrienko, I Tang, N Lari, O Kunhardt, RR Khan, ...Data Preparation of the nuMoM2b Dataset	Reference: medRxiv
Publication	Itsik	Pe'er	P Chlenski, M Hsu, I Pe'er. MiSDEED: a synthetic multi-omics engine for microbiome power analysis and study design	Reference: bioRxiv
Publication	Itsik	Pe'er	TA Joseph, I Pe'er. An Introduction to Whole-Metagenome Shotgun Sequencing Studies	Reference: Deep Sequencing Data Analysis. 107-122
Publication	Itsik	Pe'er	TA Joseph, P Chlenski, T Korem, I Pe'er. Accurate and robust inference of microbial growth dynamics from metagenomic sequencing	Reference: bioRxiv
Publication	Itsik	Pe'er	D Li, JL Chen, Q Ma, Y Xie, A Liu, J Cheung, H Gudjonson, T Nawy, ...Counterfactual Hypothesis Testing of Tumor Microenvironment Scenarios Through Semantic Image Synthesis	Reference: bioRxiv. 2020.10. 27.358101
Publication	Itsik	Pe'er	A Moretti, L Zhang, I Pe'er, Variational combinatorial sequential monte carlo for bayesian phylogenetic inference	Reference: Machine Learning in Computational Biology
Publication	Itsik	Pe'er	J Yuan, H Xing, AL Lamy, ...Correction: Leveraging correlations between variants in polygenic risk scores to detect heterogeneity in GWAS cohorts	Reference: PLoS Genetics 16 (10), e1009158
Publication	Itsik	Pe'er	J Yuan, H Xing, AL Lamy, ... Leveraging correlations between variants in polygenic risk scores to detect heterogeneity in GWAS cohorts	Reference: PLoS genetics 16 (9), e1009015
Publication	Itsik	Pe'er	TA Joseph, AP Pasarkar, I Pe'er. Efficient and accurate inference of mixed microbial population trajectories from longitudinal count data	Reference: Cell Systems 10 (6), 463-469. e6
Publication	Itsik	Pe'er	TA Joseph, L Shenhav, JB Xavier, E Halperin, I Pe'er. Compositional Lotka-Volterra describes microbial dynamics in the simplex	Reference: PLoS computational biology 16 (5), e1007917
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