

2020 First-Author Publications by Our PhD Students

- Akhbari, B., Morton, A.M., Shah, K.N., Molino, J., Moore, D.C., Weiss, A.-P.C., Wolfe, S.W., Crisco, J.J., 2020. Proximal-distal shift of the center of rotation in a total wrist arthroplasty is more than twice of the healthy wrist. *J Orthop Res*. <https://doi.org/10.1002/jor.24717>
- Alkekha, D., Hammond, P.T., Shukla, A., 2020a. Layer-by-Layer Biomaterials for Drug Delivery. *Annu Rev Biomed Eng*. <https://doi.org/10.1146/annurev-bioeng-060418-052350>
- Alkekha, D., Safford, H., Shukla, S., Hopson, R., Shukla, A., 2020b. β -Lactamase triggered visual detection of bacteria using cephalosporin functionalized biomaterials. *Chem Commun (Camb)*. <https://doi.org/10.1039/d0cc04088f>
- Bailey-Hytholt, C.M., Puranik, T., Tripathi, A., Shukla, A., 2020a. Investigating interactions of phthalate environmental toxicants with lipid structures. *Colloids Surf B Biointerfaces* 190, 110923. <https://doi.org/10.1016/j.colsurfb.2020.110923>
- Bailey-Hytholt, C.M., Shen, T., Nie, B., Tripathi, A., Shukla, A., 2020b. Placental trophoblast inspired lipid bilayers for cell-free investigation of molecular interactions. *ACS Appl Mater Interfaces*. <https://doi.org/10.1021/acsami.0c06197>
- Baptista, C., Azagury, A., Shin, H., Baker, C.M., Ly, E., Lee, R., Mathiowitz, E., 2020. The effect of temperature and pressure on polycaprolactone morphology. *Polymer* 191, 122227. <https://doi.org/10.1016/j.polymer.2020.122227>
- Black, C.J., Allawala, A.B., Bloye, K., Vanent, K.N., Edhi, M.M., Saab, C.Y., Borton, D.A., 2020. Automated and rapid self-report of nociception in transgenic mice. *Sci Rep* 10, 13215. <https://doi.org/10.1038/s41598-020-70028-8>
- Celinskis, D., Friedman, N., Koksharov, M., Murphy, J., Gomez-Ramirez, M., Borton, D., Shaner, N., Hochgeschwender, U., Lipscombe, D., Moore, C., 2020. Miniaturized Devices for Bioluminescence Imaging in Freely Behaving Animals. *Annu Int Conf IEEE Eng Med Biol Soc* 2020, 4385–4389. <https://doi.org/10.1109/EMBC44109.2020.9175375>
- Deraney, R.N., Schneider, L., Tripathi, A., 2020. Synergistic use of electroosmotic flow and magnetic forces for nucleic acid extraction. *Analyst* 145, 2412–2419. <https://doi.org/10.1039/c9an02191d>
- Flannery, S.W., Kiapour, A.M., Edgar, D.J., Murray, M.M., Fleming, B.C., 2020. Automated magnetic resonance image segmentation of the anterior cruciate ligament. *J Orthop Res*. <https://doi.org/10.1002/jor.24926>
- Lee, A.H., Ghosh, D., Quach, N., Schroeder, D., Dawson, M.R., 2020. Ovarian Cancer Exosomes Trigger Differential Biophysical Response in Tumor-Derived Fibroblasts. *Sci Rep* 10, 8686. <https://doi.org/10.1038/s41598-020-65628-3>
- Lee, K., Tripathi, A., 2020. Parallel DNA Extraction From Whole Blood for Rapid Sample Generation in Genetic Epidemiological Studies. *Front Genet* 11, 374. <https://doi.org/10.3389/fgene.2020.00374>

- Manning, K.L., Feder, J., Kanellias, M., Murphy, J. 3rd, Morgan, J.R., 2020. Toward Automated Additive Manufacturing of Living Bio-Tubes Using Ring-Shaped Building Units. *SLAS Technol* 2472630320920896. <https://doi.org/10.1177/2472630320920896>
- Minor, A.J., Coulombe, K.L.K., 2020. Engineering a collagen matrix for cell-instructive regenerative angiogenesis. *J Biomed Mater Res B Appl Biomater*. <https://doi.org/10.1002/jbm.b.34573>
- Perdikari, T.M., Murthy, A.C., Ryan, V.H., Watters, S., Naik, M.T., Fawzi, N.L., 2020. SARS-CoV-2 nucleocapsid protein undergoes liquid-liquid phase separation stimulated by RNA and partitions into phases of human ribonucleoproteins. *bioRxiv*. <https://doi.org/10.1101/2020.06.09.141101>
- Rupert, C.E., Irofuala, C., Coulombe, K.L.K., 2020a. Practical adoption of state-of-the-art hiPSCcardiomyocyte differentiation techniques. *PLoS One* 15, e0230001. <https://doi.org/10.1371/journal.pone.0230001>
- Rupert, C.E., Kim, T.Y., Choi, B.-R., Coulombe, K.L.K., 2020b. Human Cardiac Fibroblast Number and Activation State Modulate Electromechanical Function of hiPSC-Cardiomyocytes in Engineered Myocardium. *Stem Cells Int* 2020, 9363809. <https://doi.org/10.1155/2020/9363809>
- Shukla, S., Favata, J., Srivastava, V., Shahbazmohamadi, S., Tripathi, A., Shukla, A., 2020. Effect of polymer and ion concentration on mechanical and drug release behavior of gellan hydrogels using factorial design. *Journal of Polymer Science* 58, 1365–1379. <https://doi.org/10.1002/pol.20190205>
- Sigurdsson, S.A., Yu, Z., Lee, J., Nurmikko, A., 2020. A Method for Large Scale Implantation of 3D Microdevice Ensembles into Brain and Soft Tissue. *bioRxiv* 2020.03.06.979294. <https://doi.org/10.1101/2020.03.06.979294>
- Snider, A., Pirozzi, I., Tripathi, A., 2020. Centrifugal Microfluidics Traps for Parallel Isolation and Imaging of Single Cells. *Micromachines (Basel)* 11. <https://doi.org/10.3390/mi11020149>
- Stefan, S., Lee, J., 2020. Deep learning toolbox for automated enhancement, segmentation, and graphing of cortical optical coherence tomography microangiograms. *Biomed Opt Express* 11, 7325–7342. <https://doi.org/10.1364/BOE.405763>
- Vera-González, N., Bailey-Hytholt, C.M., Langlois, L., de Camargo Ribeiro, F., Santos, E.L. de S., Campos Junqueira, J., Shukla, A., 2020. Anidulafungin liposome nanoparticles exhibit antifungal activity against planktonic and biofilm *Candida albicans*. *J Biomed Mater Res A*. <https://doi.org/10.1002/jbm.a.36984>
- Vera-González, N., Shukla, A., 2020. Advances in Biomaterials for the Prevention and Disruption of *Candida* Biofilms. *Front Microbiol* 11, 538602. <https://doi.org/10.3389/fmicb.2020.538602/acs.inorgchem.9b02806>