



Utkan Demirci

Professor of Radiology (Canary Cancer Center)

CONTACT INFORMATION

- **Alternate Contact**

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Bio

BIO

Dr. Demirci is currently a Professor at Stanford University School of Medicine with tenure at the Canary Center for Early Cancer Detection. Prior to his Stanford appointment, he was an Associate Professor of Medicine at Brigham and Women's Hospital, Harvard Medical School and at Harvard-MIT Division of Health Sciences and Technology serving at the Division of Biomedical Engineering, Division of Infectious Diseases and Renal Division. He leads a group of 20+ researchers focusing on micro- and nano-scale technologies. He received his B.S. degree in Electrical Engineering in 1999 as a James B. Angell Scholar (summa cum laude) from University of Michigan, Ann Arbor. He received his M.S. degree in 2001 in Electrical Engineering, M.S. degree in Management Science and Engineering in 2005, and Ph.D. in Electrical Engineering in 2005, all from Stanford University.

The Demirci Bio-Acoustic MEMS in Medicine Lab (BAMM) specializes in applying micro- and nanoscale technologies to problems in medicine at the interface between micro/nanoscale engineering and medicine. Our goal is to apply innovative technologies to clinical problems. Our major research theme focuses on creating new microfluidic technology platforms targeting broad applications in medicine. In this interdisciplinary space at the convergence of engineering, biology and materials science, we create novel technologies for disposable point-of-care (POC) diagnostics and monitoring of infectious diseases, cancer and controlling cellular microenvironment in nanoliter droplets for biopreservation and microscale tissue engineering applications. These applications are unified around our expertise to test the limits of cell manipulation by establishing microfluidic platforms to provide solutions to real world problems at the clinic.

Our lab creates technologies to manipulate cells in nanoliter volumes to enable solutions for real world problems in medicine including applications in infectious disease diagnostics and monitoring for global health, cancer early detection, cell encapsulation in nanoliter droplets for cryobiology, and bottom-up tissue engineering.

Dr. Demirci has published over 120 peer reviewed publications in journals including PNAS, Nature Communications, Advanced Materials, Small, Trends in Biotechnology, Chemical Society Reviews and Lab-chip, over 150 conference abstracts and proceedings, 10+ book chapters, and an edited book. His work was highlighted in Wired Magazine, Nature Photonics, Nature Medicine, MIT Technology Review, Reuters Health News, Science Daily, AIP News, BioTechniques, and Biophotonics. He is fellow-elect of the American Institute of Biological and Medical Engineering (AIMBE, 2017). His scientific work has been recognized by numerous national and international awards including the NSF Faculty Early Career Development (CAREER) Award (2012), the IEEE-EMBS Early Career Achievement Award (2012), Scientist of the year award from Stanford radiology Department (2017). He was selected as one of the world's top 35 young innovators

under the age of 35 (TR-35) by the MIT Technology Review at the age of 28. In 2004, he led a team that won the Stanford University Entrepreneur's Challenge Competition and Global Start-up Competition in Singapore. His work has been translated to start-up companies including DxNow, KOEK Biotechnology and LEVITAS. There has been over 10,000 live births in the US, Europe and Turkey using the sperm selection technology that came out of Dr. Demirci's lab. He has been cited over 3000 times within the last two years (H index, 68).

ACADEMIC APPOINTMENTS

- Professor, Radiology
- Member, Bio-X
- Member, Cardiovascular Institute
- Member, Stanford Cancer Institute
- Member, Wu Tsai Neurosciences Institute

HONORS AND AWARDS

- Basic Scientist of the Year, Department of Radiology, Stanford School of Medicine (2017)
- Fellow-Elect, American Institute of Medical and Biomedical Engineers (AIMBE) (2017)
- 2nd Place Student and Investigator Section Oral Presentation, Tissue Engineering and Regenerative Medicine International Society (TERMIS)-Asia Pacific Meeting (2016)
- StarTURK Award, Assembly of Turkish American Association (2014)
- Bright Futures Award, Brigham and Women's Hospital, Brigham Research Institute (2013)
- Sharktank Competition, American Epilepsy Foundation (2013)
- Faculty Early Career Development Award, NSF (2012)
- Early Career Achievement Award, IEEE-EMBS (2012)
- Partners in Excellence Award, Partners Health Care (2011)
- Coulter Translational Research Award, Biomedical Engineering Society (BMES) (2011)
- Engineering in Medicine and Biology Research Award for Translational Research, IEEE-Wyss Institute (2011)
- Chinese Young Investigator Award, National Science Foundation of China (2010)
- The Outstanding Young Persons of the World, Junior Chamber International (JCI) (2009)
- Nano-Biotechnology Award, National Science Council of Turkey and The Turkish Industrialists' and Businessmen's Association (2007)
- TR-35 Award-MIT, MIT Technology Review (2006)
- Ministry of Education Award, Turkish Ministry of Education (2005)
- Winner of Accenture Grand Prize, Singapore Business Plan Competition (2004)
- 1st Place, BASES Entrepreneur's Challenge Business Plan Competition, Stanford University (2004)
- Outstanding Paper Award, Transactions on Ultrasonic, Ferroelectrics, and Frequency Control, IEEE (2003)
- Raymond William Barrow (RWB) Stephens Student Prize of Elsevier Science, Proceedings of Ultrasonic International (2001)
- Phi Kappa Phi, National Honor Society, University of Michigan (1999)
- Scholarship for Undergraduate Education, Turkish Ministry of Education (1996)
- James B. Angell Scholar, University of Michigan (1999)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Co-founder and Scientific Advisor, Levitas Inc (2017 - present)
- Co-founder and Scientific Advisor, DxNow Inc. (2013 - present)
- Co-founder and Scientific Advisor, Koek Biotech (2012 - present)

PROFESSIONAL EDUCATION

- Ph.D., Stanford University, Stanford, CA , Electrical Engineering (2005)
- M.S., Stanford University, Stanford, CA , Management Science and Engineering (2005)
- M.S., Stanford University, Stanford, CA , Electrical Engineering (2001)
- B.S., University of Michigan, Ann Arbor, MI , Electrical Engineering (1999)

LINKS

- "BAMM Lab Website": <https://bammlab.stanford.edu/home>

Teaching

COURSES

2017-18

- Senior Capstone Design I: BIOE 141A (Aut)

STANFORD ADVISEES

Doctoral Dissertation Reader (AC)

Nurlybek Mursaliyev

Postdoctoral Faculty Sponsor

Rajib Ahmed, Mehmet Ozen, Fernando Soto, Jie Wang

Doctoral Dissertation Advisor (AC)

Shreya Deshmukh

Publications

PUBLICATIONS

- **A confirmatory test for sperm in sexual assault samples using a microfluidic-integrated cell phone imaging system.** *Forensic science international. Genetics*
Deshmukh, S., Inci, F., Karaaslan, M. G., Ogut, M. G., Duncan, D., Klevan, L., Duncan, G., Demirci, U.
2020; 48: 102313
- **Enhancing cell packing in buckyballs by acoustofluidic activation.** *Biofabrication*
Ren, T., Steiger, W., Chen, P., Ovsianikov, A., Demirci, U.
2020; 12 (2): 025033
- **Flow-induced Shear Stress Confers Resistance to Carboplatin in an Adherent Three-Dimensional Model for Ovarian Cancer: A Role for EGFR-Targeted Photoimmunotherapy Informed by Physical Stress.** *Journal of clinical medicine*
Nath, S., Pigula, M., Khan, A. P., Hanna, W., Ruhi, M. K., Dehkordy, F. M., Pushpavanam, K., Rege, K., Moore, K., Tsujita, Y., Conrad, C., Inci, F., Carmen, et al
2020; 9 (4)
- **Tunable Fano-Resonant Metasurfaces on a Disposable Plastic-Template for Multimodal and Multiplex Biosensing.** *Advanced materials (Deerfield Beach, Fla.)*
Ahmed, R., Ozen, M. O., Karaaslan, M. G., Prator, C. A., Thanh, C., Kumar, S., Torres, L., Iyer, N., Munter, S., Southern, S., Henrich, T. J., Inci, F., Demirci, et al
2020; e1907160
- **Multiscale brain research on a microfluidic chip.** *Lab on a chip*
Zhao, Y., Demirci, U., Chen, Y., Chen, P.
2020
- **Fabrication of calcium phosphate 3D scaffolds for bone repair using magnetic levitational assembly.** *Scientific reports*

- Parfenov, V. A., Mironov, V. A., Koudan, E. V., Nezhurina, E. K., Karalkin, P. A., Pereira, F. D., Petrov, S. V., Krokhmal, A. A., Aydemir, T., Vakhrushev, I. V., Zobkov, Y. V., Smirnov, I. V., Fedotov, et al
2020; 10 (1): 4013
- **A disposable microfluidic-integrated hand-held plasmonic platform for protein detection** *APPLIED MATERIALS TODAY*
Inci, F., Saylan, Y., Kojouri, A., Ogut, M., Denizli, A., Demirci, U.
2020; 18
 - **Total Microfluidic chip for Multiplexed diagnostics (ToMMx).** *Biosensors & bioelectronics*
Ozen, M. O., Sridhar, K., Ogut, M. G., Shanmugam, A., Avadhani, A. S., Kobayashi, Y., Wu, J. C., Haddad, F., Demirci, U.
2020; 150: 111930
 - **A Circulating Bioreactor Reprograms Cancer Cells Toward a More Mesenchymal Niche** *ADVANCED BIOSYSTEMS*
Calamak, S., Ermis, M., Sun, H., Islam, S., Sikora, M., Nguyen, M., Hasirci, V., Steinmetz, L. M., Demirci, U.
2020
 - **A Circulating Bioreactor Reprograms Cancer Cells Toward a More Mesenchymal Niche.** *Advanced biosystems*
Calamak, S., Ermis, M., Sun, H., Islam, S., Sikora, M., Nguyen, M., Hasirci, V., Steinmetz, L. M., Demirci, U.
2020; 4 (2): e1900139
 - **A bioartificial liver support system integrated with a DLM/GelMA-based bioengineered whole liver for prevention of hepatic encephalopathy via enhanced ammonia reduction.** *Biomaterials science*
Wu, G., Wu, D., Lo, J., Wang, Y., Wu, J., Lu, S., Xu, H., Zhao, X., He, Y., Li, J., Demirci, U., Wang, S.
2020
 - **Levitating Cells to Sort the Fit and the Fat.** *Advanced biosystems*
Puluca, N., Durmus, N. G., Lee, S., Belbachir, N., Galdos, F. X., Ogut, M. G., Gupta, R., Hirano, K. I., Krane, M., Lange, R., Wu, J. C., Wu, S. M., Demirci, et al
2020: e1900300
 - **Emerging organoid models: leaping forward in cancer research.** *Journal of hematology & oncology*
Fan, H., Demirci, U., Chen, P.
2019; 12 (1): 142
 - **Soft Ring-Shaped Cellu-Robots with Simultaneous Locomotion in Batches.** *Advanced materials (Deerfield Beach, Fla.)*
Ren, T., Chen, P., Gu, L., Ogut, M. G., Demirci, U.
2019: e1905713
 - **Activate capture and digital counting (AC + DC) assay for protein biomarker detection integrated with a self-powered microfluidic cartridge.** *Lab on a chip*
Che, C., Li, N., Long, K. D., Aguirre, M. A., Canady, T. D., Huang, Q., Demirci, U., Cunningham, B. T.
2019
 - **Utility of High-Sensitivity and Conventional Troponin in Patients Undergoing Transcatheter Aortic Valve Replacement: Incremental Prognostic Value to B-type Natriuretic Peptide.** *Scientific reports*
Kobayashi, Y., Kim, J. B., Moneghetti, K. J., Fischbein, M., Lee, A., Watkins, C. A., Yeung, A. C., Liang, D., Ozen, M. O., Demirci, U., Bowen, R., Fearon, W. F., Haddad, et al
2019; 9 (1): 14936
 - **Multi-stimuli-responsive programmable biomimetic actuator.** *Nature communications*
Dong, Y., Wang, J., Guo, X., Yang, S., Ozen, M. O., Chen, P., Liu, X., Du, W., Xiao, F., Demirci, U., Liu, B.
2019; 10 (1): 4087
 - **Plasmonic-based platforms for diagnosis of infectious diseases at the point-of-care.** *Biotechnology advances*
Li, Z., Leustean, L., Inci, F., Zheng, M., Demirci, U., Wang, S.
2019: 107440
 - **Amplification of nuclear deformation of breast cancer cells by seeding on micropatterned surfaces to better distinguish their malignancies.** *Colloids and surfaces. B, Biointerfaces*
Antmen, E., Demirci, U., Hasirci, V.
2019; 183: 110402

- **Square prism micropillars on poly(methyl methacrylate) surfaces modulate the morphology and differentiation of human dental pulp mesenchymal stem cells** *COLLOIDS AND SURFACES B-BIOINTERFACES*
Hasturk, O., Ermis, M., Demirci, U., Hasirci, N., Hasirci, V.
2019; 178: 44–55
- **Density Based Characterization of Mechanical Cues on Cancer Cells Using Magnetic Levitation** *ADVANCED HEALTHCARE MATERIALS*
Baday, M., Ercal, O., Sahan, A., Sahan, A., Ercal, B., Inan, H., Demirci, U.
2019; 8 (10)
- **Microfluidic Chip for Detection of Fungal Infections.** *ACS omega*
Asghar, W., Sher, M., Khan, N. S., Vyas, J. M., Demirci, U.
2019; 4 (4): 7474–81
- **Density Based Characterization of Mechanical Cues on Cancer Cells Using Magnetic Levitation.** *Advanced healthcare materials*
Baday, M., Ercal, O., Sahan, A. Z., Sahan, A., Ercal, B., Inan, H., Demirci, U.
2019: e1801517
- **Loss of Endothelium-Derived Wnt5a Is Associated With Reduced Pericyte Recruitment and Small Vessel Loss in Pulmonary Arterial Hypertension** *CIRCULATION*
Yuan, K., Shamskhou, E. A., Orcholski, M. E., Nathan, A., Reddy, S., Honda, H., Mani, V., Zeng, Y., Ozen, M. O., Wang, L., Demirci, U., Tian, W., Nicolls, et al
2019; 139 (14): 1710–24
- **Microfluidic Chip for Detection of Fungal Infections** *ACS OMEGA*
Asghar, W., Sher, M., Khan, N. S., Vyas, J. M., Demirci, U.
2019; 4 (4): 7474–81
- **MICROVESICLES LARGER THAN 200NM RESCUE CARDIOMYOCYTES FROM DOXORUBICIN INJURY IN A PATIENT-SPECIFIC MODEL OF ANTHRACYCLINE INDUCED CARDIOMYOPATHY**
O'Brien, C., Shi, L., Ozgun, M., Vaskova, E., Santoso, M., Jung, J., Ikeda, G., Demirci, U., Yang, P.
ELSEVIER SCIENCE INC.2019: 688
- **INDEPENDENT PROGNOSTIC VALUES OF CLINICAL RISK SCORES, RIGHT VENTRICULAR SYSTOLIC PRESSURE, AND N-TERMINAL PRO-B-TYPE PEPTIDE IN HEART FAILURE WITH PRESERVED EJECTION FRACTION: INSIGHTS FROM SUPERVISED AND UNSUPERVISED MODELS**
Tremblay-Gravel, M., Kobayashi, Y., Boralkar, K., Li, X., Bouajila, S., Nishi, T., Amsallem, M., Moneghetti, K., Selej, M., Ozen, M., Demirci, U., Ashley, E. A., Wheeler, et al
ELSEVIER SCIENCE INC.2019: 718
- **Square prism micropillars on poly(methyl methacrylate) surfaces modulate the morphology and differentiation of human dental pulp mesenchymal stem cells.** *Colloids and surfaces. B, Biointerfaces*
Hasturk, O., Ermis, M., Demirci, U., Hasirci, N., Hasirci, V.
2019; 178: 44–55
- **Engineered natural and synthetic polymer surfaces induce nuclear deformation in osteosarcoma cells** *JOURNAL OF BIOMEDICAL MATERIALS RESEARCH PART B-APPLIED BIOMATERIALS*
Antmen, E., Ermis, M., Demirci, U., Hasirci, V.
2019; 107 (2): 366–76
- **3-D geometry and irregular connectivity dictate neuronal firing in frequency domain and synchronization.** *Biomaterials*
Ren, T., Grosshauser, B., Sridhar, K., Nieland, T. J., Tocchio, A., Schepers, U., Demirci, U.
2019; 197: 171–81
- **Epithelial-to-Mesenchymal Transition (EMT) and Drug Response in Dynamic Bioengineered Lung Cancer Microenvironment** *ADVANCED BIOSYSTEMS*
Mani, V., Lyu, Z., Kumar, V., Ercal, B., Chen, H., Malhotra, S., Demirci, U.
2019; 3 (1)
- **Real-time Biosensing of Proteins on a DVD Nanoplasmonic Grating**
Ahmed, R., Ozen, M., Inci, F., Karaaslan, M., Henrich, T. J., Demirci, U., VoDinh, T., Ho, H. P., Ray, K.
SPIE-INT SOC OPTICAL ENGINEERING.2019
- **Bioinspired Preservation of Natural Killer Cells for Cancer Immunotherapy** *Advanced Science*

El Assal, R., Abou-Elkacem, L., Tocchio, A., Pasley, S., Matosevic, S., Kaplan, D., Zylberberg, C., Demirci, U.
2019

- **Bioinspired Preservation of Natural Killer Cells for Cancer Immunotherapy.** *Advanced science (Weinheim, Baden-Wurttemberg, Germany)*
El Assal, R., Abou-Elkacem, L., Tocchio, A., Pasley, S., Matosevic, S., Kaplan, D. L., Zylberberg, C., Demirci, U.
2019; 6 (6): 1802045
- **MICROSCALE MAGNETIC LEVITATION FOR MULTIPLEXED ANALYSIS OF MALARIA-INFECTED BLOOD SAMPLES IN RESOURCE-LIMITED SETTINGS**
Deshmukh, S. S., Durmus, N., Greenhouse, B., Egan, E., Demirci, U.
AMER SOC TROP MED & HYGIENE.2019: 130–31
- **Approaching Higher Dimension Imaging Data Using Cluster-Based Hierarchical Modeling in Patients with Heart Failure Preserved Ejection Fraction.** *Scientific reports*
Kobayashi, Y., Tremblay-Gravel, M., Boralkar, K. A., Li, X., Nishi, T., Amsallem, M., Moneghetti, K. J., Bouajila, S., Selej, M., Ozen, M. O., Demirci, U., Ashley, E., Wheeler, et al
2019; 9 (1): 10431
- **Biochemical Gradients to Generate 3D Heterotypic-Like Tissues with Isotropic and Anisotropic Architectures** *ADVANCED FUNCTIONAL MATERIALS*
Canadas, R. F., Ren, T., Marques, A. P., Oliveira, J. M., Reis, R. L., Demirci, U.
2018; 28 (48)
- **A Novel On-Chip Method for Differential Extraction of Sperm in Forensic Cases** *ADVANCED SCIENCE*
Inci, F., Ozen, M. O., Saylan, Y., Miansari, M., Cimen, D., Dhara, R., Chinnasamy, T., Yuksekkaya, M., Filippini, C., Kumar, D., Calamak, S., Yesil, Y., Durmus, et al
2018; 5 (9): 1800121
- **Microfluidic sorting selects sperm for clinical use with reduced DNA damage compared to density gradient centrifugation with swim-up in split semen samples** *HUMAN REPRODUCTION*
Quinn, M. M., Jalalian, L., Ribeiro, S., Ona, K., Demirci, U., Cedars, M. I., Rosen, M. P.
2018; 33 (8): 1388–93
- **Tunable anisotropic networks for 3-D oriented neural tissue models.** *Biomaterials*
Canadas, R. F., Ren, T., Tocchio, A., Marques, A. P., Oliveira, J. M., Reis, R. L., Demirci, U.
2018; 181: 402–14
- **Ultrastructural brain abnormalities and associated behavioral changes in mice after low-intensity blast exposure** *BEHAVIOURAL BRAIN RESEARCH*
Song, H., Konan, L. M., Cui, J., Johnson, C. E., Langenderfer, M., Grant, D., Ndam, T., Simonyi, A., White, T., Demirci, U., Mott, D. R., Schwer, D., Hubler, et al
2018; 347: 148–57
- **Scaffold-free, label-free and nozzle-free biofabrication technology using magnetic levitational assembly** *BIOFABRICATION*
Parfenov, V. A., Koudan, E. V., Bulanova, E. A., Karalkin, P. A., Pereira, F. S., Norkin, N. E., Knyazeva, A. D., Gryadunova, A. A., Petrov, O. F., Vasiliev, M. M., Myasnikov, M. I., Chernikov, V. P., Kasyanov, et al
2018; 10 (3): 034104
- **An Embryonic and Induced Pluripotent Stem Cell Model for Ovarian Granulosa Cell Development and Steroidogenesis** *REPRODUCTIVE SCIENCES*
Lipskind, S., Lindsey, J. S., Gerami-Naini, B., Eaton, J. L., O'Connell, D., Kiezun, A., Ho, J. K., Ng, N., Parasar, P., Ng, M., Nickerson, M., Demirci, U., Maas, et al
2018; 25 (5): 712–26
- **Evaluation of an ovary-on-a-chip in large mammalian models: Species specificity and influence of follicle isolation status** *JOURNAL OF TISSUE ENGINEERING AND REGENERATIVE MEDICINE*
Nagashima, J. B., El Assal, R., Songsasen, N., Demirci, U.
2018; 12 (4): E1926–E1935
- **A decade of progress in liver regenerative medicine** *BIOMATERIALS*
Zhang, J., Zhao, X., Liang, L., Li, J., Demirci, U., Wang, S.
2018; 157: 161–76
- **A MAGNETIC LEVITATION PLATFORM FOR THE ISOLATION OF MATURE SPERM FROM TESE/TESA SAMPLES**
Durmus, G., Gupta, R., Badamjav, O., Reddy, V., Eisenberg, M. L., Behr, B., Demirci, U.

ELSEVIER SCIENCE INC.2018: E26–E27

- **An Automated Microfluidic Assay for Photonic Crystal Enhanced Detection and Analysis of an Antiviral Antibody Cancer Biomarker in Serum** *IEEE Sensors Journal*
Race, C. N.
2018; 18 (4): 1464 - 1473
- **Loss of Endothelial Derived WNT5A is Associated with Reduced Pericyte Recruitment and Small Vessel Loss in Pulmonary Arterial Hypertension.** *Circulation*
Yuan, K., Shamskhou, E. A., Orcholski, M. E., Nathan, A., Reddy, S., Honda, H., Mani, V., Zeng, Y., Ozen, M. O., Wang, L., Demirci, U., Tian, W., Nicolls, et al
2018
- **Guidance and Self-Sorting of Active Swimmers: 3D Periodic Arrays Increase Persistence Length of Human Sperm Selecting for the Fittest.** *Advanced science (Weinheim, Baden-Wuerttemberg, Germany)*
Chinnasamy, T., Kingsley, J. L., Inci, F., Turek, P. J., Rosen, M. P., Behr, B., Tüzel, E., Demirci, U.
2018; 5 (2): 1700531
- **Identification of hydrodynamic forces around 3D surrogates using particle image velocimetry in a microfluidic channel**
Afshar, S., Nath, S., Demirci, U., Hasan, T., Scarcelli, G., Rizvi, I., Franco, W., Gray, B. L., Becker, H.
SPIE-INT SOC OPTICAL ENGINEERING.2018
- **An Automated Microfluidic Assay for Photonic Crystal Enhanced Detection and Analysis of an Antiviral Antibody Cancer Biomarker in Serum.** *IEEE sensors journal*
Race, C. M., Kwon, L. E., Foreman, M. T., Huang, Q., Inan, H., Kesiraju, S., Le, P., Lim, S. J., Smith, A. M., Zangar, R. C., Demirci, U., Anderson, K. S., Cunningham, et al
2018; 18 (4): 1464–73
- **Bioacoustic-enabled patterning of human iPSC-derived cardiomyocytes into 3D cardiac tissue** *BIOMATERIALS*
Serpooshan, V., Chen, P., Wu, H., Lee, S., Sharma, A., Hu, D. A., Venkatraman, S., Ganesan, A. V., Usta, O. B., Yarmush, M., Yang, F., Wu, J. C., Demirci, et al
2017; 131: 47-57
- **The promise of organ and tissue preservation to transform medicine.** *Nature biotechnology*
Giwa, S., Lewis, J. K., Alvarez, L., Langer, R., Roth, A. E., Church, G. M., Markmann, J. F., Sachs, D. H., Chandraker, A., Wertheim, J. A., Rothblatt, M., Boyden, E. S., Eidbo, et al
2017; 35 (6): 530-542
- **Bio-inspired Solute Enables Preservation of Human Oocytes using Minimum Volume Vitrification.** *Journal of tissue engineering and regenerative medicine*
Choi, J. K., El Assal, R., Ng, N., Ginsburg, E., Anchan, R. M., Demirci, U.
2017
- **High-throughput Characterization of HIV-1 Reservoir Reactivation Using a Single-Cell-in-Droplet PCR Assay.** *EBioMedicine*
Yucha, R. W., Hobbs, K. S., Hanhauser, E., Hogan, L. E., Nieves, W., Ozen, M. O., Inci, F., York, V., Gibson, E. A., Thanh, C., Shafiee, H., El Assal, R., Kiselina, et al
2017
- **An integrated double-filtration microfluidic device for isolation, enrichment and quantification of urinary extracellular vesicles for detection of bladder cancer** *SCIENTIFIC REPORTS*
Liang, L., Kong, M., Zhou, S., Sheng, Y., Wang, P., Yu, T., Inci, F., Kuo, W. P., Li, L., Demirci, U., Wang, S.
2017; 7
- **Photonic crystals: emerging biosensors and their promise for point-of-care applications.** *Chemical Society reviews*
Inan, H., Poyraz, M., Inci, F., Lifson, M. A., Baday, M., Cunningham, B. T., Demirci, U.
2017; 46 (2): 366-388
- **Paper-based analytical devices for clinical diagnosis: recent advances in the fabrication techniques and sensing mechanisms.** *Expert review of molecular diagnostics*
Sher, M., Zhuang, R., Demirci, U., Asghar, W.
2017
- **Monitoring Neutropenia for Cancer Patients at the Point of Care** *Small Methods*
Inan, H., et al

2017

- **Isolation, Detection, and Quantification of Cancer Biomarkers in HPV-Associated Malignancies.** *Scientific reports*
Inan, H., Wang, S., Inci, F., Baday, M., Zangar, R., Kesiraju, S., Anderson, K. S., Cunningham, B. T., Demirci, U.
2017; 7 (1): 3322
- **Monitoring Neutropenia for Cancer Patients at the Point of Care.** *Small methods*
Inan, H., Kingsley, J. L., Ozen, M. O., Tekin, H. C., Hoerner, C. R., Imae, Y., Metzner, T. J., Preiss, J. S., Durmus, N. G., Ozsoz, M., Wakelee, H., Fan, A. C., Tüzel, et al
2017; 1 (9)
- **Tissue Engineering of 3D Organotypic Microtissues by Acoustic Assembly.** *Methods in molecular biology (Clifton, N.J.)*
Zhu, Y., Serpooshan, V., Wu, S., Demirci, U., Chen, P., Güven, S.
2017
- **An Integrated Double-Filtration Microfluidic Device for Detection of Extracellular Vesicles from Urine for Bladder Cancer Diagnosis** *EXTRACELLULAR VESICLES: METHODS AND PROTOCOLS*
Liang, L., Sheng, Y., Zhou, S., Inci, F., Li, L., Demirci, U., Wang, S., Kuo, W. P., Jia, S.
2017; 1660: 355–64
- **Guidance and Self-Sorting of Active Swimmers via 3-D Periodic Arrays** *Advanced Science*
Chinnasamy, T., Kingsley, J. L., Inci, F., Turek, P. J., Rosen, M. P., Behr, B., Tuzel, E., Demirci, U.
2017: 1700531
- **Magnetically Guided Self-Assembly and Coding of 3D Living Architectures.** *Advanced materials (Deerfield Beach, Fla.)*
Tocchio, A., Durmus, N. G., Sridhar, K., Mani, V., Coskun, B., El Assal, R., Demirci, U.
2017
- **The Exosome Total Isolation Chip.** *ACS nano*
Liu, F., Vermesh, O., Mani, V., Ge, T. J., Madsen, S. J., Sabour, A., Hsu, E. C., Gowrishankar, G., Kanada, M., Jokerst, J. V., Sierra, R. G., Chang, E., Lau, et al
2017
- **3-D Microwell Array System for Culturing Virus Infected Tumor Cells** *SCIENTIFIC REPORTS*
El Assal, R., Gurkan, U. A., Chen, P., Juillard, F., Tocchio, A., Chinnasamy, T., Beauchemin, C., Unluisler, S., Canikyan, S., Holman, A., Srivatsa, S., Kaye, K. M., Demirci, et al
2016; 6
- **Dynamic Microenvironment Induces Phenotypic Plasticity of Esophageal Cancer Cells Under Flow** *SCIENTIFIC REPORTS*
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