Stanford

Oscar J. Abilez

Senior Scientist, Cardiothoracic Surgery - Pediatric Cardiac Surgery

NIH Biosketch available Online

Bio

ACADEMIC APPOINTMENTS

- Member (Staff), Cardiovascular Institute
- Member, Maternal & Child Health Research Institute (MCHRI)

HONORS AND AWARDS

- Andrew Olson Scientific Image Award, Stanford (2022)
- UC San Diego Future Faculty of Cardiovascular Sciences (FOCUS) Summer Institute Scholar, Stanford (2020-2021)
- Stanford MCHRI Transdisciplinary Initiatives Program (TIP) Award (Co-I), Stanford (2020-2022)
- Stanford-Penn Cardiovascular Meeting-1st Place Award, Stanford (2019)
- NIH NHLBI K01 Career Development Award (PI), Stanford (2016-2022)
- Siebel Scholar, Stanford (2011-2012)
- New York Stem Cell Foundation Meeting-1st Place Award, Stanford (2011)
- Advanced Residency Program at Stanford (ARTS), Stanford (2007-2011)
- International Endovascular Fellows' Research Award, 1st Place, Stanford (2006)
- Ethicon Endosurgery Fellowship, Stanford (2005-2006)
- Dean's Fellowship, Stanford (2005)
- Franklyn Ellenbogen Prize in Hematology/Oncology, Cornell (2002)
- US-European Medical Education Exchange (US-EUMEE) Fellowship, Cornell (2002)
- Max Kade Foundation Fellowship, Cornell (2002)
- Pi Tau Sigma Engineering Honor Society, University of Texas (1991)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Member, International Society for Stem Cell Research (ISSCR) (2020 - present)
- Member, Society for Biomaterials (SFB) (2020 - present)
- Member, International Society for Applied Cardiovascular Biology (ISACB) (2020 - present)

PROFESSIONAL EDUCATION

- Instructor, Stanford University (2013-2021) , Cardiovascular Medicine (2013)
- PhD, Stanford University , Bioengineering (2012)
- Resident, Stanford University Medical Center , Surgery (2004)

- Intern, Stanford University Medical Center , Surgery (2003)
- MD, Cornell University-Weill Medical College , Medicine (2002)
- BS, University of Texas at Austin , Mechanical Engineering (1992)

LINKS

- Linkedin: https://www.linkedin.com/in/oscarabilez/
- Research Gate: https://www.researchgate.net/profile/Oscar_Abilez
- Pediatric CT Surgery Lab: https://med.stanford.edu/ctsurgery/research/pediatric-cardiac-surgery-lab.html#research_areas
- Twitter: https://twitter.com/oscarabilez

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Dr. Abilez' lab combines human pluripotent stem cell (hPSC) biology, systems biology, developmental biology, bioengineering (systems developmental bioengineering), biotechnology development (optogenetics, microscopes, cell sorters, biomechanical devices), computational modeling, and tissue/organoid engineering to model and control the earliest stages of cardiac development and vascularization. We are also using the same approaches to vascularize neural and hepatic tissue.

We primarily study hPSC directed differentiated into 2D and 3D aggregates, as engineered- and self-organized cardiovascular tissues and organoids. These tissues and organoids exhibit fascinating levels of patterning, self-organization, and function. By collecting high-content, high-throughput, and comprehensive functional data, such as live cell time-lapse fluorescence imaging, single-cell RNA-sequencing (scRNA-seq), and optogenetics-based microscopy, we quantify gene expression, signaling pathways, signaling networks, cell-cell communication, and functions across different cell types at spatiotemporal scales that span several orders of magnitude. We use our established approaches to ask how cells in complex systems make decisions about cell fate, respond to changes in applied external biophysical stimuli, and communicate to produce higher-order functions such as coordinated cardiomyocyte contractions at the tissue level to cardiac pumping at the organ level. In future studies we aim to perform gain/loss-of-function studies (through signaling pathway activation/inhibition and CRISPR gene-editing), epi-genetic regulation studies (scATAC-seq), metabolomics, and proteomics for dissecting gene regulatory networks and enabling mechanistic studies.

Our combined hPSC biology, systems developmental bioengineering, biotechnology development, computational modeling, and tissue/organoid engineering approaches endeavor to provide an increased understanding of complex cellular systems and to realize applications that include modeling developmental processes, modeling diseases, screening drugs, and creating transplantable vascularized tissues.

Teaching

STANFORD ADVISEES

Med Scholar Project Advisor

Peter Nwokoye

Professional

WORK EXPERIENCE

- Postdoctoral Scholar - Stanford University (7/1/2004 - 9/30/2007)
- Postdoctoral Scholar - Stanford University (7/1/2012 - 3/31/2013)

- Instructor - Stanford University (4/1/2013 - 7/31/2021)
- Consultant - Rosebud Biosciences, Inc (1/1/2022 - present)
- Consultant - Cytohub, Inc (6/1/2022 - present)
- Co-Founder - Bullseye Biotechnologies, Inc (1/1/2023 - present)

Publications

PUBLICATIONS

- **Developing advanced organoids: challenges, progress, and outlook.** *BioTechniques*
  Abilez, O. J.
  2025: 1-6
- **Protocol to study electrophysiological properties of hPSC-derived 3D cardiac organoids using MEA and sharp electrode techniques.** *STAR protocols*
  Venkateshappa, R., Yildirim, Z., Zhao, S. R., Wu, M. A., Vacante, F., Abilez, O. J., Wu, J. C.
  2024; 5 (4): 103406
- **Blood vessels in a dish: the evolution, challenges, and potential of vascularized tissues and organoids.** *Frontiers in cardiovascular medicine*
  Nwokoye, P. N., Abilez, O. J.
  2024; 11: 1336910
- **Bioengineering methods for vascularizing organoids.** *Cell reports methods*
  Nwokoye, P. N., Abilez, O. J.
  2024: 100779
- **Tachycardia-induced metabolic rewiring as a driver of contractile dysfunction.** *Nature biomedical engineering*
  Tu, C., Caudal, A., Liu, Y., Gorgodze, N., Zhang, H., Lam, C. K., Dai, Y., Zhang, A., Wnorowski, A., Wu, M. A., Yang, H., Abilez, O. J., Lyu, et al
  2023
- **Micropatterned Organoids Enable Modeling of the Earliest Stages of Human Cardiac Vascularization** *bioRxiv*
  Abilez, O. J., et al
  2022
- **Endogenous Retrovirus-Derived lncRNA BANCR Promotes Cardiomyocyte Migration in Humans and Non-human Primates.** *Developmental cell*
  Wilson, K. D., Ameen, M. n., Guo, H. n., Abilez, O. J., Tian, L. n., Mumbach, M. R., Diecke, S. n., Qin, X. n., Liu, Y. n., Yang, H. n., Ma, N. n., Gaddam, S. n., Cunningham, et al
  2020
- **Passive Stretch Induces Structural and Functional Maturation of Engineered Heart Muscle as Predicted by Computational Modeling.** *Stem cells (Dayton, Ohio)*
  Abilez, O. J., Tzatzalos, E. n., Yang, H. n., Zhao, M. T., Jung, G. n., Zöllner, A. M., Tiburcy, M. n., Riegler, J. n., Matsa, E. n., Shukla, P. n., Zhuge, Y. n., Chour, T. n., Chen, et al
  2017
- **Stem cell reprogramming: A 3D boost.** *Nature materials*
  Abilez, O. J., Wu, J. C.
  2016; 15 (3): 259-261
- **Chemically defined generation of human cardiomyocytes.** *Nature methods*
  Burridge, P. W., Matsa, E., Shukla, P., Lin, Z. C., Churko, J. M., Ebert, A. D., Lan, F., Diecke, S., Huber, B., Mordwinkin, N. M., Plews, J. R., Abilez, O. J., Cui, et al
  2014; 11 (8): 855-860
- **Prospective isolation of human embryonic stem cell-derived cardiovascular progenitors that integrate into human fetal heart tissue** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
  Ardehali, R., Ali, S. R., Inlay, M. A., Abilez, O. J., Chen, M. Q., Blauwkamp, T. A., Yazawa, M., Gong, Y., Nusse, R., Drukker, M., Weissman, I. L.
  2013; 110 (9): 3405-3410

- **Abnormal Calcium Handling Properties Underlie Familial Hypertrophic Cardiomyopathy Pathology in Patient-Specific Induced Pluripotent Stem Cells** *CELL STEM CELL*
  Lan, F., Lee, A. S., Liang, P., Sanchez-Freire, V., Nguyen, P. K., Wang, L., Han, L., Yen, M., Wang, Y., Sun, N., Abilez, O. J., Hu, S., Ebert, et al
  2013; 12 (1): 101-113

- **Robust pluripotent stem cell expansion and cardiomyocyte differentiation via geometric patterning** *INTEGRATIVE BIOLOGY*
  Myers, F. B., Silver, J. S., Yan Zhuge, Z. G., Beygui, R. E., Zarins, C. K., Lee, L. P., Abilez, O. J.
  2013; 5 (12): 1495-1506

- **Multiscale Computational Models for Optogenetic Control of Cardiac Function** *BIOPHYSICAL JOURNAL*
  Abilez, O. J., Wong, J., Prakash, R., Deisseroth, K., Zarins, C. K., Kuhl, E.
  2011; 101 (6): 1326-1334

- **Modeling The Earliest Stages Of Human Cardiac And Hepatic Vascularization**
  Abilez, O. J., Yang, H., Wilson, K. D., Lyall, E. H.
  MARY ANN LIEBERT, INC.2023

- **Transcriptome Analysis of Non-Human Primate Induced Pluripotent Stem Cell-Derived Cardiomyocytes in 2D Monolayer Culture versus 3D Engineered Heart Tissue.** *Cardiovascular research*
  Yang, H. n., Shao, N. n., Holmström, A. n., Zhao, X. n., Chour, T. n., Chen, H. n., Itzhaki, I. n., Wu, H. n., Ameen, M. n., Cunningham, N. J., Tu, C. n., Zhao, M. T., Tarantal, et al
  2020

- **Treatment of volumetric muscle loss in mice using nanofibrillar scaffolds enhances vascular organization and integration.** *Communications biology*
  Nakayama, K. H., Quarta, M., Paine, P., Alcazar, C., Karakikes, I., Garcia, V., Abilez, O. J., Calvo, N. S., Simmons, C. S., Rando, T. A., Huang, N. F.
  2019; 2: 170

- **An in Vivo miRNA Delivery System for Restoring Infarcted Myocardium.** *ACS nano*
  Yang, H. n., Qin, X. n., Wang, H. n., Zhao, X. n., Liu, Y. n., Wo, H. T., Liu, C. n., Nishiga, M. n., Chen, H. n., Ge, J. n., Sayed, N. n., Abilez, O. J., Ding, et al
  2019

- **Big bottlenecks in cardiovascular tissue engineering.** *Communications biology*
  Huang, N. F., Serpooshan, V., Morris, V. B., Sayed, N., Pardon, G., Abilez, O. J., Nakayama, K. H., Pruitt, B. L., Wu, S. M., Yoon, Y., Zhang, J., Wu, J. C.
  2018; 1: 199

- **Partial Reprogramming of Pluripotent Stem Cell-Derived Cardiomyocytes into Neurons** *SCIENTIFIC REPORTS*
  Chuang, W., Sharma, A., Shukla, P., Li, G., Mall, M., Rajarajan, K., Abilez, O. J., Hamaguchi, R., Wu, J. C., Wernig, M., Wu, S. M.
  2017; 7

- **Anisotropic microfibrous scaffolds enhance the organization and function of cardiomyocytes derived from induced pluripotent stem cells.** *Biomaterials science*
  Wanjare, M. n., Hou, L. n., Nakayama, K. H., Kim, J. J., Mezak, N. P., Abilez, O. J., Tzatzalos, E. n., Wu, J. C., Huang, N. F.
  2017; 5 (8): 1567–78

- **Optophysiology of cardiomyocytes: characterizing cellular motion with quantitative phase imaging.** *Biomedical optics express*
  Cordeiro, C. n., Abilez, O. J., Goetz, G. n., Gupta, T. n., Zhuge, Y. n., Solgaard, O. n., Palanker, D. n.
  2017; 8 (10): 4652–62

- **iPSC-derived cardiomyocytes reveal abnormal TGF-ß signalling in left ventricular non-compaction cardiomyopathy.** *Nature cell biology*
  Kodo, K., Ong, S., Jahanbani, F., Termglinchan, V., Hirono, K., Inanloorahatloo, K., Ebert, A. D., Shukla, P., Abilez, O. J., Churko, J. M., Karakikes, I., Jung, G., Ichida, et al
  2016; 18 (10): 1031-1042

- **Engineered heart tissues and induced pluripotent stem cells: Macro- and microstructures for disease modeling, drug screening, and translational studies.** *Advanced drug delivery reviews*
  Tzatzalos, E., Abilez, O. J., Shukla, P., Wu, J. C.
  2016; 96: 234-244

- **CD13 and ROR2 Permit Isolation of Highly Enriched Cardiac Mesoderm from Differentiating Human Embryonic Stem Cells** *STEM CELL REPORTS*
  Skelton, R. J., Brady, B., Khoja, S., Sahoo, D., Engel, J., Arasaratnam, D., Saleh, K. K., Abilez, O. J., Zhao, P., Stanley, E. G., Elefanty, A. G., Kwon, M., Elliott, et al
  2016; 6 (1): 95-108

- **Human Engineered Heart Muscles Engraft and Survive Long Term in a Rodent Myocardial Infarction Model.** *Circulation research*
  Riegler, J., Tiburcy, M., Ebert, A., Tzatzalos, E., Raaz, U., Abilez, O. J., Shen, Q., Kooreman, N. G., Neofytou, E., Chen, V. C., Wang, M., Meyer, T., Tsao, et al
  2015; 117 (8): 720-730

- **Effect of human donor cell source on differentiation and function of cardiac induced pluripotent stem cells.** *Journal of the American College of Cardiology*
  Sanchez-Freire, V., Lee, A. S., Hu, S., Abilez, O. J., Liang, P., Lan, F., Huber, B. C., Ong, S., Hong, W. X., Huang, M., Wu, J. C.
  2014; 64 (5): 436-448

- **Human pluripotent stem cell tools for cardiac optogenetics** *Conf Proc IEEE Eng Med Biol Soc*
  Zhuge, Y., Patlolla, B., Ramakrishnan, C., Beygui, R. E., Zarins, C. K., Deisseroth, K., Kuhl, E., Abilez, O. J.
  2014: 6171-4

- **Human pluripotent stem cells (hPSCs) for heart regeneration** *CARDIAC REGENERATION AND REPAIR, VOL 1: PATHOLOGY AND THERAPIES*
  Abilez, O. J., Wu, J. C., Li, R. K., Weisel, R. D.
  2014; 71: 297–324

- **Multi-cellular interactions sustain long-term contractility of human pluripotent stem cell-derived cardiomyocytes.** *American journal of translational research*
  Burridge, P. W., Metzler, S. A., Nakayama, K. H., Abilez, O. J., Simmons, C. S., Bruce, M. A., Matsuura, Y., Kim, P., Wu, J. C., Butte, M., Huang, N. F., Yang, P. C.
  2014; 6 (6): 724-735

- **Optogenetic LED array for perturbing cardiac electrophysiology.** *Conference proceedings : ... Annual International Conference of the IEEE Engineering in Medicine and Biology Society. IEEE Engineering in Medicine and Biology Society. Conference*
  Abilez, O. J.
  2013; 2013: 1619-1622

- **Stem cell isolation: Differential stickiness.** *Nature materials*
  Abilez, O. J., Wu, J. C.
  2013; 12 (6): 474-476

- **Label-free electrophysiological cytometry for stem cell-derived cardiomyocyte clusters** *LAB ON A CHIP*
  Myers, F. B., Zarins, C. K., Abilez, O. J., Lee, L. P.
  2013; 13 (2): 220-228

- **Laparoscopic aortic surgery today** *NEZHAT'S VIDEO-ASSISTED AND ROBOTIC-ASSISTED LAPAROSCOPY AND HYSTEROSCOPY, 4TH EDITION*
  Picquet, J., Abilez, O. J., Cau, J., Zarins, C. K., Goeau-Brissoniere, O., Nezhat, C., Nezhat, F., Nezhat, C.
  2013: 581–85

- **Complications in laparoscopy** *NEZHAT'S VIDEO-ASSISTED AND ROBOTIC-ASSISTED LAPAROSCOPY AND HYSTEROSCOPY, 4TH EDITION*
  Abilez, O. J., Carpenter, J. E., Picquet, J., Zarins, C. K., Nezhat, C., Nezhat, F., Nezhat, C.
  2013: 642–62

- **Stretching Skeletal Muscle: Chronic Muscle Lengthening through Sarcomerogenesis** *PLOS ONE*
  Zoellner, A. M., Abilez, O. J., Boel, M., Kuhl, E.
  2012; 7 (10)

- **Computational optogenetics: A novel continuum framework for the photoelectrochemistry of living systems** *JOURNAL OF THE MECHANICS AND PHYSICS OF SOLIDS*
  Wong, J., Abilez, O. J., Kuhl, E.

2012; 60 (6): 1158-1178

- **Patient-Specific Induced Pluripotent Stem Cells as a Model for Familial Dilated Cardiomyopathy** *SCIENCE TRANSLATIONAL MEDICINE*
  Sun, N., Yazawa, M., Liu, J., Han, L., Sanchez-Freire, V., Abilez, O. J., Navarrete, E. G., Hu, S., Wang, L., Lee, A., Pavlovic, A., Lin, S., Chen, et al
  2012; 4 (130)

- **Pressure-related lateral displacement of anastomosed arteries and prosthetic grafts in an in vitro model: Implications for neointimal hyperplasia formation**
  Assar, A. N., Abilez, O. J., Xu, C., Zarins, C. K.
  WILEY-BLACKWELL.2012: 46

- **Cardiac Optogenetics** *34th Annual International Conference of the IEEE Engineering-in-Medicine-and-Biology-Society (EMBS)*
  Abilez, O. J.
  IEEE.2012: 1386–1389

- **COMPUTATIONAL MODELLING OF OPTOGENETICS IN CARDIAC CELLS** *ASME Summer Bioengineering Conference (SBC)*
  Wong, J., Abilez, O., Kuhl, E.
  AMER SOC MECHANICAL ENGINEERS.2012: 355–356

- **IN VITRO/IN SILICO CHARACTERIZATION OF ACTIVE AND PASSIVE STRESSES IN CARDIAC MUSCLE** *INTERNATIONAL JOURNAL FOR MULTISCALE COMPUTATIONAL ENGINEERING*
  Boel, M., Abilez, O. J., Assar, A. N., Zarins, C. K., Kuhl, E.
  2012; 10 (2): 171-188

- **Computational modeling of growth: systemic and pulmonary hypertension in the heart** *BIOMECHANICS AND MODELING IN MECHANOBIOLOGY*
  Rausch, M. K., Dam, A., Goktepe, S., Abilez, O. J., Kuhl, E.
  2011; 10 (6): 799-811

- **Identification of Cardiovascular Progenitors From Human Embryonic Stem Cells** *Scientific Sessions of the American-Heart-Association/ Resuscitation Science Symposium*
  Ardehali, R., Ali, S., Drukker, M., Abilez, O., Blauwkamp, T., Nusse, R., Weissman, I.
  LIPPINCOTT WILLIAMS & WILKINS.2011

- **Vascular anastomosis using controlled phase transitions in poloxamer gels** *NATURE MEDICINE*
  Chang, E. I., Galvez, M. G., Glotzbach, J. P., Hamou, C. D., El-Ftesi, S., Rappleye, C. T., Sommer, K., Rajadas, J., Abilez, O. J., Fuller, G. G., Longaker, M. T., Gurtner, G. C.
  2011; 17 (9): 1147-U160

- **Stretchable microelectrode array using room-temperature liquid alloy interconnects** *JOURNAL OF MICROMECHANICS AND MICROENGINEERING*
  Wei, P., Taylor, R., Ding, Z., Chung, C., Abilez, O. J., Higgs, G., Pruitt, B. L., Ziaie, B.
  2011; 21 (5)

- **Localized control of exsanguinating arterial hemorrhage: an experimental model.** *Polski przeglad chirurgiczny*
  Haick, M. B., Abilez, O. J., Johnson, B. L., Xu, C., Taylor, C. A., Rich, N. M., Zarins, C. K.
  2011; 83 (1): 1-9

- **Stimulation and Artifact-Free Extracellular Electrophysiological Recording of Cells in Suspension** *33rd Annual International Conference of the IEEE Engineering-in-Medicine-and-Biology-Society (EMBS)*
  Myers, F. B., Abilez, O. J., Zarins, C. K., Lee, L. P.
  IEEE.2011: 4030–4033

- **A matrix micropatterning platform for cell localization and stem cell fate determination** *ACTA BIOMATERIALIA*
  Huang, N. F., Patlolla, B., Abilez, O., Sharma, H., Rajadas, J., Beygui, R. E., Zarins, C. K., Cooke, J. P.
  2010; 6 (12): 4614-4621

- **Power Law as a Method for Ultrasound Detection of Internal Bleeding: In Vivo Rabbit Validation** *IEEE TRANSACTIONS ON BIOMEDICAL ENGINEERING*
  Wang, A. S., Abilez, O. J., Zarins, C. K., Taylor, C. A., Liang, D. H.
  2010; 57 (12): 2870-2875

- **Dynamic MicroRNA Expression Programs During Cardiac Differentiation of Human Embryonic Stem Cells Role for miR-499** *CIRCULATION-CARDIOVASCULAR GENETICS*
  Wilson, K. D., Hu, S., Venkatasubrahmanyam, S., Fu, J., Sun, N., Abilez, O. J., Baugh, J. J., Jia, F., Ghosh, Z., Li, R. A., Butte, A. J., Wu, J. C.
  2010; 3 (5): 426-U97

- **A generic approach towards finite growth with examples of athlete's heart, cardiac dilation, and cardiac wall thickening** *JOURNAL OF THE MECHANICS AND PHYSICS OF SOLIDS*
  Goktepe, S., Abilez, O. J., Kuhl, E.
  2010; 58 (10): 1661-1680

- **A multiscale model for eccentric and concentric cardiac growth through sarcomerogenesis** *JOURNAL OF THEORETICAL BIOLOGY*
  Goktepe, S., Abilez, O. J., Parker, K. K., Kuhl, E.
  2010; 265 (3): 433-442

- **IN VITRO ASSESSMENT OF RAT HEART FORCE GENERATION: A QUANTITATIVE APPROACH FOR PREDICTING OUTCOMES FROM PLURIPOTENT STEM CELL-DERIVED THERAPY FOR MYOCARDIAL INFARCTION** *12th ASME Summer Bioengineering Conference*
  Guillou, L., Abilez, O. J., Baugh, J., Billakanti, G., Zarins, C. K., Kuhl, E.
  AMER SOC MECHANICAL ENGINEERS.2010: 717–718

- **Outcome of open versus endovascular revascularization for chronic mesenteric ischemia: review of comparative studies** *JOURNAL OF CARDIOVASCULAR SURGERY*
  Assar, A. N., Abilez, O. J., Zarins, C. K.
  2009; 50 (4): 509-514

- **First report of an ilio-popliteal bypass through the greater sciatic foramen - Case report** *JOURNAL OF CARDIOVASCULAR SURGERY*
  Picquet, J., Thouveny, F., Abilez, O., Pegis, J. D., Blin, V., Enon, B.
  2008; 49 (3): 341-343

- **Lateral movement of endografts within the aneurysm sac is an indicator of stent-graft instability** *21st International Congress on Endovascular Interventions*
  Rafii, B. Y., Abilez, O. J., Benharash, P., Zarins, C. K.
  ALLIANCE COMMUNICATIONS GROUP DIVISION ALLEN PRESS.2008: 335–43

- **COMPLICATIONS IN LAPAROSCOPY Section 20.1. Major Vascular Injury** *NEZHAT'S OPERATIVE GYNECOLOGIC LAPAROSCOPY AND HYSTEROSCOPY, 3RD EDITION*
  Abilez, O. J., Picquet, J., Zarins, C. K., Nezhat, C., Nezhat, F., Nezhat, C.
  2008: 520–26

- **LAPAROSCOPIC VASCULAR SURGERY IN 2007** *NEZHAT'S OPERATIVE GYNECOLOGIC LAPAROSCOPY AND HYSTEROSCOPY, 3RD EDITION*
  Picquet, J., Abilez, O. J., Cau, J., Goeau-Brissonniere, O., Zarins, C. K., Nezhat, C., Nezhat, F., Nezhat, C.
  2008: 516–19

- **In vivo imaging and evaluation of different biomatrices for improvement of stem cell survival** *JOURNAL OF TISSUE ENGINEERING AND REGENERATIVE MEDICINE*
  Cao, F., Rafie, A. H., Abilez, O. J., Wang, H., Blundo, J. T., Pruitt, B., Zarins, C., Wu, J. C.
  2007; 1 (6): 465-468

- **Iliac fixation inhibits migration of both suprarenal and infrarenal aortic endografts** *60th Annual Meeting of the Society-for-Vascular-Surgery*
  Benharash, P., Lee, J. T., Abilez, O. J., Crabtree, T., Bloch, D. A., Zarins, C. K.
  MOSBY-ELSEVIER.2007: 250–57

- **Pulsatile pressure system for cellular mechanical stimulation** *ASME Summer Bioengineering Conference*
  Taylor, R., Abilez, O., Cao, F., Wu, J., Xu, C., Zarins, C., Pruitt, B.
  AMER SOC MECHANICAL ENGINEERS.2007: 1009–1010

- **Biomems platform for electromechanical stimulation of cell culture** *ASME Summer Bioengineering Conference*
  Blundo, J., Chua, G., Abilez, O., Park, Y., Rastegar, A., Cao, F., Zairins, C., Wu, J., Pruitt, B.
  AMER SOC MECHANICAL ENGINEERS.2007: 63–64

- **P19 progenitor cells progress to organized contracting myocytes after chemical and electrical stimulation: Implications for vascular tissue engineering** *JOURNAL OF ENDOVASCULAR THERAPY*
  Abilez, O., Benharash, P., Miyamoto, E., Gale, A., Xu, C., Zarins, C. K.
  2006; 13 (3): 377-388

- **A novel culture system shows that stem cells can be grown in 3D and under physiologic pulsatile conditions for tissue engineering of vascular grafts** *39th Annual Meeting of the Association-for-Academic-Surgery*
  Abilez, O., Benharash, P., Mehrotra, M., Miyamoto, E., Gale, A., Picquet, J., Xu, C. P., Zarins, C.
  ACADEMIC PRESS INC ELSEVIER SCIENCE.2006: 170–78

- **Superficial femoral artery transposition repair for isolated superior mesenteric artery dissection** *JOURNAL OF VASCULAR SURGERY*
  Picquet, J., Abilez, O., Penard, J., Jousset, Y., Rousselet, M. C., Enon, B.
  2005; 42 (4): 788-791

- **Adaptative media remodeling of the uterine artery during pregnancy.**
  Abilez, O., Alsac, J., Heikkinen, M., Nezhat, C. H., Zarin, C., Nezhat, C.
  ELSEVIER SCIENCE INC.2005: S399

- **Bone marrow-derived dendritic cells from CD36 null mice are less efficient than those derived from wild-type mice in the phagocytosis of apoptotic cells**
  Abilez, O. J., Berger, D. H., Febbraio, M., Silverstein, R. L.
  AMER SOC CELL BIOLOGY.1999: 189A