

Stanford



Nazish Sayed MD, PhD

Assistant Professor (Research) of Surgery (Vascular Surgery) and at the Stanford Cardiovascular Institute

Surgery - Vascular Surgery

CONTACT INFORMATION

- **Administrative Assistant**

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Bio

BIO

Nazish Sayed, MD, PhD is an Assistant Professor in the Department of Surgery, Division of Vascular Surgery and The Stanford Cardiovascular Institute. Dr. Sayed earned his MD degree from the University of Mumbai, India and his PhD degree from the University of Medicine and Dentistry of New Jersey (Rutgers New Jersey Medical School). He has a Master's degree in Molecular Biology from Montclair State University. He completed his postdoctoral fellowship in cardiovascular and regenerative medicine in the Division of Cardiovascular Medicine at Stanford University followed by an Instructor position at the Stanford Cardiovascular Institute.

Dr. Sayed has received numerous awards including the ATVB Young Investigator Award by the American Heart Association and Jay D. Coffman Young Investigator Award by the Society of Vascular Medicine. He has been a recipient of the Ruth L. Kirschstein National Research Service Award (NRSA) Individual Postdoctoral Fellowship (F32), AHA Scientist Development Grant and the National Institute of Health (NIH), National Heart, Lung, and Blood Institute K-award. His lab is funded by the NIH-NHLBI R01 grant and Stanford SAGE center seed funding.

ACADEMIC APPOINTMENTS

- Assistant Professor (Research), Surgery - Vascular Surgery
- Member, Cardiovascular Institute
- Member, Maternal & Child Health Research Institute (MCHRI)

HONORS AND AWARDS

- CVI Manuscript Award, Stanford University (Feb 2021)
- Stanford WSDM Seed Grant, Stanford University (November 2017)
- Stanford Lyme Disease Seed Grant, Stanford University (November 2017)
- Translational Research and Applied Medicine (TRAM) Pilot Grant, Stanford University (October 2017)
- Cardiovascular Institute Travel Award, Stanford University (May 2017)
- NHLBI - K01 HL135455 Grant, National Institute of Health (January 2017)
- Cardiovascular Institute Poster Prize, Stanford University (October 2016)

- Cardiovascular Institute Seed Grant - Co-PI, Stanford University (October 2016)
- Cardiovascular Institute Seed Grant - Co-PI, Stanford University (October 2015)
- Winner - President's Award- Peer Reviewed Publication, Houston Methodist Research Institute (March 2015)
- NHLBI - PCBC Pilot Grant, National Institute of Health (March 2014)
- American Heart Association Specialty Conferences: Arteriosclerosis, Thrombosis and Vascular Biology, American Heart Association (November 2013)
- American Heart Association Scientist Development Grant (SDG) 2013-2017, American Heart Association (July 2013)
- Basic Cardiovascular Science New Investigator Travel Award, American Heart Association (July 2013)
- Winner - Jay D. Coffman Young Investigator Award, Society of Vascular Medicine (June 2013)
- Arteriosclerosis, Thrombosis and Vascular Biology Early Career Travel Award, American Heart Association (May 2013)
- NIH - NRSA Individual Postdoctoral Fellowship (F32), National Institute of Health (January 2013)
- Winner - ATVB Young Investigator Award, American Heart Association (November 2012)
- Cardiovascular Institute Poster Prize, Stanford University (September 2012)
- NIH - NRSA Institutional Research Training Grant Recipient (T32), National Institute of Health (July 2010)
- Nomination, Stanley S. Bergen, Jr., M.D. Medal of Excellence award, Rutgers New Jersey Medical School (2007)
- Nomination, Morris Schaffer Endowed Scholarship Fund, Rutgers New Jersey Medical School (2006)
- Travel Scholarship to pursue studies overseas, Khoja Foundation of India
- Deans List, K. J. Somaiya Medical College, Mumbai, India
- Distinction Award for State Merit List, KC College, Mumbai, India
- Silver Medal – Sinhal Classes, KC College, Mumbai, India
- The Dr. Abraham Shellim Proficiency Shield, Sir Jacob Sassoon High School

PROFESSIONAL EDUCATION

- PhD, Rutgers New Jersey Medical School , Pharmacology/Physiology (2008)
- MS, Montclair State University, NJ , Molecular Biology (2003)
- MD, University of Bombay, India , Medicine (1999)

PATENTS

- Cooke JP, Sayed N, Lee J. "United States Patent PCT/US2013/021954 Activation of Innate Immunity for Enhanced Reprogramming of Cells to Pluripotency.", Leland Stanford University,, Jan 1, 2012

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

The Sayed Laboratory is focused on the development of novel technologies that drive innovation in regenerative medicine, disease modeling, and drug testing in vascular biology. The lab conducts translational research in vascular biology and aims to understand the role of the vasculature in the development of cardiac diseases, including those due to inherited genetic variants or environmental insults such as type 2 diabetes or hypertension. The lab employs the human induced pluripotent stem cell (iPSC) technology to generate patient-specific vascular cells (endothelial and vascular smooth muscle cells) as an alternative to animal models providing a human tissue surrogate for research that is scalable and sustainable. By employing this unique platform, the lab also investigates the role of chemotherapeutic agents (anti-cancer drugs) on the vasculature. Dr. Sayed's lab has also established an endothelial regeneration program, where they leverage the innate immune system to regenerate endothelial cells from human fibroblasts.

Work from the lab has led to seminal discoveries in the areas of 1) Nitric oxide (NO) biology, (2) vascular biology, (3) stem cell biology, (4) cardiovascular disease modeling (5) cardio-oncology.

Teaching

STANFORD ADVISEES

Postdoctoral Faculty Sponsor

Lu Liu, Chikage Noishiki

Publications

PUBLICATIONS

- **Harnessing iPSCs to Dissect Causality in Anthracycline-Induced Cardiotoxicity: All That Fits Are Not Hits.** *JACC. CardioOncology*
Thomas, D., Manhas, A., Sayed, N.
2024; 6 (1): 51-54
- **Statins improve endothelial function via suppression of epigenetic-driven EndMT.** *Nature cardiovascular research*
Liu, C., Shen, M., Tan, W. L., Chen, I. Y., Liu, Y., Yu, X., Yang, H., Zhang, A., Liu, Y., Zhao, M. T., Ameen, M., Zhang, M., Gross, et al
2023; 2 (5): 467-485
- **An Alternate Explanation.** *The New England journal of medicine*
Alsaigh, T., Dhaliwal, G., Fukaya, E., Leeper, N. J., Sayed, N.
2023; 388 (14): 1318-1324
- **An evidence appraisal of heart organoids in a dish and commensurability to human heart development in vivo.** *BMC cardiovascular disorders*
Thomas, D., de Jesus Perez, V. A., Sayed, N.
2022; 22 (1): 122
- **An inflammatory aging clock (iAge) based on deep learning tracks multimorbidity, immunosenescence, frailty and cardiovascular aging.** *Nature aging*
Sayed, N., Huang, Y., Nguyen, K., Krejciova-Rajaniemi, Z., Grawe, A. P., Gao, T., Tibshirani, R., Hastie, T., Alpert, A., Cui, L., Kuznetsova, T., Rosenberg-Hasson, Y., Ostan, et al
2021; 1: 598-615
- **A protocol for transdifferentiation of human cardiac fibroblasts into endothelial cells via activation of innate immunity.** *STAR protocols*
Liu, C., Medina, P., Thomas, D., Chen, I. Y., Sallam, K., Sayed, D., Sayed, N.
2021; 2 (2): 100556
- **Building Multi-Dimensional Induced Pluripotent Stem Cells-Based Model Platforms to Assess Cardiotoxicity in Cancer Therapies.** *Frontiers in pharmacology*
Thomas, D. n., Shenoy, S. n., Sayed, N. n.
2021; 12: 607364
- **Generation of Human iPSCs by Protein Reprogramming and Stimulation of TLR3 Signaling.** *Methods in molecular biology (Clifton, N.J.)*
Liu, C., Ameen, M., Himmati, S., Thomas, D., Sayed, N.
2021; 2239: 153-62
- **An inflammatory aging clock (iAge) based on deep learning tracks multimorbidity, immunosenescence, frailty and cardiovascular aging** *Nature Aging*
Sayed, N., Huang, Y., Nguyen, K., Krejciova-Rajaniemi, Z., Grawe, A. P., Gao, T., Tibshirani, R., Hastie, T., Alpert, A., Cui, L., Kuznetsova, T., Rosenberg-Hasson, Y., Ostan, et al
2021: 598-615
- **Clinical trial in a dish using iPSCs shows lovastatin improves endothelial dysfunction and cellular cross-talk in LMNA cardiomyopathy.** *Science translational medicine*
Sayed, N., Liu, C., Ameen, M., Himmati, F., Zhang, J. Z., Khanamiri, S., Moonen, J., Wnorowski, A., Cheng, L., Rhee, J., Gaddam, S., Wang, K. C., Sallam, et al
2020; 12 (554)
- **HIF1# Regulates Early Metabolic Changes due to Activation of Innate Immunity in Nuclear Reprogramming.** *Stem cell reports*

- Liu, C. n., Ruan, H. n., Himmati, F. n., Zhao, M. T., Chen, C. C., Makar, M. n., Chen, I. Y., Sallam, K. n., Mocarski, E. S., Sayed, D. n., Sayed, N. n.
2020; 14 (2): 192–200
- **Personalized medicine in cardio-oncology: the role of induced pluripotent stem cell** *CARDIOVASCULAR RESEARCH*
Sayed, N., Ameen, M., Wu, J. C.
2019; 115 (5): 949–59
 - **Marked Vascular Dysfunction in a Case of Peripartum Cardiomyopathy.** *Journal of vascular research*
Khanamiri, S. n., Rhee, J. W., Paik, D. T., Chen, I. Y., Liu, C. n., Sayed, N. n.
2019; 56 (1): 11–15
 - **Human Induced Pluripotent Stem Cell Model of Trastuzumab-Induced Cardiac Dysfunction in Breast Cancer Patients.** *Circulation*
Kitani, T. n., Ong, S. G., Lam, C. K., Rhee, J. W., Zhang, J. Z., Oikonomopoulos, A. n., Ma, N. n., Tian, L. n., Lee, J. n., Telli, M. L., Witteles, R. M., Sharma, A. n., Sayed, et al
2019
 - **Determining the Pathogenicity of a Genomic Variant of Uncertain Significance Using CRISPR/Cas9 and Human-Induced Pluripotent Stem Cells.** *Circulation*
Ma, N., Zhang, J., Itzhaki, I., Zhang, S. L., Chen, H., Haddad, F., Kitani, T., Wilson, K. D., Tian, L., Shrestha, R., Wu, H., Lam, C. K., Sayed, et al
2018
 - **Cancer therapy-induced cardiomyopathy: can human induced pluripotent stem cell modelling help prevent it?** *European heart journal*
Stack, J. P., Moslehi, J. n., Sayed, N. n., Wu, J. C.
2018
 - **Paying the Toll in Nuclear Reprogramming.** *Frontiers in cell and developmental biology*
Liu, C., Himmati, F., Sayed, N.
2017; 5: 70
 - **Retinoic Acid Inducible Gene 1 Protein (RIG1)-Like Receptor Pathway Is Required for Efficient Nuclear Reprogramming** *STEM CELLS*
Sayed, N., Ospino, F., Himmati, F., Lee, J., Chanda, P., Mocarski, E. S., Cooke, J. P.
2017; 35 (5): 1197-1207
 - **Towards Cardio-Precision medicine** *EUROPEAN HEART JOURNAL*
Sayed, N., Wu, J. C.
2017; 38 (14): 1014–16
 - **Translation of Human-Induced Pluripotent Stem Cells From Clinical Trial in a Dish to Precision Medicine** *JOURNAL OF THE AMERICAN COLLEGE OF CARDIOLOGY*
Sayed, N., Liu, C., Wu, J. C.
2016; 67 (18): 2161-2176
 - **Transdifferentiation of human fibroblasts to endothelial cells: role of innate immunity.** *Circulation*
Sayed, N., Wong, W. T., Ospino, F., Meng, S., Lee, J., Jha, A., Dexheimer, P., Aronow, B. J., Cooke, J. P.
2015; 131 (3): 300-309
 - **Therapeutic transdifferentiation: can we generate cardiac tissue rather than scar after myocardial injury?** *Methodist DeBakey cardiovascular journal*
Sayed, N., Wong, W. T., Cooke, J. P.
2013; 9 (4): 210-212
 - **Activation of Innate Immunity Is Required for Efficient Nuclear Reprogramming** *CELL*
Lee, J., Sayed, N., Hunter, A., Au, K. F., Wong, W. H., Mocarski, E. S., Pera, R. R., Yakubov, E., Cooke, J. P.
2012; 151 (3): 547-558
 - **Nitroglycerin-induced S-nitrosylation and desensitization of soluble guanylyl cyclase contribute to nitrate tolerance** *CIRCULATION RESEARCH*
Sayed, N., Kim, D. D., Fioramonti, X., Iwahashi, T., Duran, W. N., Beuve, A.
2008; 103 (6): 606-614
 - **Desensitization of soluble guanylyl cyclase, the NO receptor, by S-nitrosylation** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
Sayed, N., Baskaran, P., Ma, X., van den Akker, F., Beuve, A.

2007; 104 (30): 12312-12317

- **Understanding Cardiovascular Risk in Prostate Cancer: Role of Disparities, Diabetes, and Aging** *CURRENT TREATMENT OPTIONS IN CARDIOVASCULAR MEDICINE*
Nain, P., Seth, L., Patel, V., Jiang, S., Gopu, G., Singh, R., Stabellini, N., Reddy, R., Weintraub, N. L., Harris, R. A., Cullen, J., Agarwal, N., Moore, et al
2024
- **Generation of induced pluripotent stem cell line from a patient suffering from arterial calcification due to deficiency of CD73 (ACDC).** *Stem cell research*
Tripathi, D., Manhas, A., Noishiki, C., Wu, D., Adkar, S., Sallam, K., Fukaya, E., Leeper, N. J., Sayed, N.
2023; 75: 103285
- **Utilizing an induced pluripotent stem cell platform to model arterial calcification resulting from deficiency of CD73**
Noishiki, C., Alsaigh, T., Wu, D., Adkar, S., Chandra, V., Klarin, D., Lee, J., Fukaya, E., Leeper, N., Sayed, N.
SAGE PUBLICATIONS LTD.2023: 499-500
- **An Alternate Explanation. Reply.** *The New England journal of medicine*
Alsaigh, T., Leeper, N. J., Sayed, N.
2023; 389 (13): 1251
- **Cardiovascular Toxicities Associated with Tyrosine Kinase Inhibitors.** *Current cardiology reports*
Sayegh, N., Yirerong, J., Agarwal, N., Addison, D., Fradley, M., Cortes, J., Weintraub, N. L., Sayed, N., Raval, G., Guha, A.
2023
- **A novel in vitro stem cell model to study maternal endothelial function in preeclampsia**
Wu, Y., Sun, T., Medina, P., Iyer, P., Stevenson, D. K., Wu, J., Sayed, N., Winn, V. D.
MOSBY-ELSEVIER.2023: S10
- **Biodegradable external wrapping promotes favorable adaptation in an ovine vein graft model.** *Acta biomaterialia*
Ramachandra, A. B., Wang, H., Wnorowski, A., Schwarz, E. L., Pickering, J., Heiler, J. C., Lucian, H. J., Hironaka, C. E., Tran, N. A., Liu, Y., Khan, M. O., Obafemi, O., Tada, et al
2022
- **HMOX1 Genetic Polymorphisms Display Ancestral Diversity and May Be Linked to Hypertensive Disorders in Pregnancy.** *Reproductive sciences (Thousand Oaks, Calif.)*
Sun, T., Cruz, G. I., Mousavi, N., Maric, I., Brewer, A., Wong, R. J., Aghaeepour, N., Sayed, N., Wu, J. C., Stevenson, D. K., Leonard, S. A., Gymrek, M., Winn, et al
2022
- **Cannabinoid receptor 1 antagonist genistein attenuates marijuana-induced vascular inflammation.** *Cell*
Wei, T. T., Chandy, M., Nishiga, M., Zhang, A., Kumar, K. K., Thomas, D., Manhas, A., Rhee, S., Justesen, J. M., Chen, I. Y., Wo, H. T., Khanamiri, S., Yang, et al
2022
- **Modeling Effects of Immunosuppressive Drugs on Human Hearts Using Induced Pluripotent Stem Cell-Derived Cardiac Organoids and Single-Cell RNA Sequencing.** *Circulation*
Sallam, K., Thomas, D., Gaddam, S., Lopez, N., Beck, A., Beach, L., Rogers, A. J., Zhang, H., Chen, I. Y., Ameen, M., Hiesinger, W., Teuteberg, J. J., Rhee, et al
2022; 145 (17): 1367-1369
- **G3bp1 - microRNA-1 axis regulates cardiomyocyte hypertrophy.** *Cellular signalling*
Alikunju, S., Niranjan, N., Mohsin, M., Sayed, N., Sayed, D.
1800: 110245
- **Preoperative Computed Tomography Angiography Reveals Leaflet-Specific Calcification and Excursion Patterns in Aortic Stenosis.** *Circulation. Cardiovascular imaging*
Chen, I. Y., Vedula, V., Malik, S. B., Liang, T., Chang, A. Y., Chung, K. S., Sayed, N., Tsao, P. S., Giacomini, J. C., Marsden, A. L., Wu, J. C.
1800: CIRCIMAGING121012884
- **Coronary Artery Vasospasm Requiring Cardiac Autotransplantation Yet Controlled With Tobacco.** *JACC. Case reports*
Tran, M. V., Marceau, E., Liu, Y., Sallam, K., Medina, P., Liu, C., Sayed, N., Muller, M. D., Liang, D. H., Chen, I. Y.
2021; 3 (9): 1177-1181

- **Author Correction: An inflammatory aging clock (iAge) based on deep learning tracks multimorbidity, immunosenescence, frailty and cardiovascular aging.** *Nature aging*
Sayed, N., Huang, Y., Nguyen, K., Krejciova-Rajaniemi, Z., Grawe, A. P., Gao, T., Tibshirani, R., Hastie, T., Alpert, A., Cui, L., Kuznetsova, T., Rosenberg-Hasson, Y., Ostan, et al
2021; 1 (8): 748
- **HO-1 Genetic Variants Display Racial Diversity and May Impact Hypertensive Disorders in Pregnancy.**
Sun, T., Mousavi, N., Wong, R. J., Sayed, N., Wu, J. C., Stevenson, D. K., Gymrek, M., Winn, V. D.
SPRINGER HEIDELBERG.2021: 105A
- **In situ differentiation of human-induced pluripotent stem cells into functional cardiomyocytes on a coaxial PCL-gelatin nanofibrous scaffold.** *Materials science & engineering. C, Materials for biological applications*
Sridharan, D., Palaniappan, A., Blackstone, B. N., Dougherty, J. A., Kumar, N., Seshagiri, P. B., Sayed, N., Powell, H. M., Khan, M.
2021; 118: 111354
- **De novo Drug Delivery Modalities for Treating Damaged Hearts: Current Challenges and Emerging Solutions.** *Frontiers in cardiovascular medicine*
Alvi, S. B., Ahmed, S., Sridharan, D., Naseer, Z., Pracha, N., Wang, H., Boudoulas, K. D., Zhu, W., Sayed, N., Khan, M.
2021; 8: 742315
- **Pathogenic LMNA variants disrupt cardiac lamina-chromatin interactions and de-repress alternative fate genes.** *Cell stem cell*
Shah, P. P., Lv, W. n., Rhoades, J. H., Poleshko, A. n., Abbey, D. n., Caporizzo, M. A., Linares-Saldana, R. n., Heffler, J. G., Sayed, N. n., Thomas, D. n., Wang, Q. n., Stanton, L. J., Bedi, et al
2021
- **Arrhythmogenic Mechanisms in Hypokalaemia: Insights From Pre-clinical Models.** *Frontiers in cardiovascular medicine*
Tse, G., Li, K. H., Cheung, C. K., Letsas, K. P., Bhardwaj, A., Sawant, A. C., Liu, T., Yan, G., Zhang, H., Jeevaratnam, K., Sayed, N., Cheng, S. H., Wong, et al
2021; 8: 620539
- **Single-Cell Transcriptional Profiling Reveals Sex and Age Diversity of Gene Expression in Mouse Endothelial Cells.** *Frontiers in genetics*
Huang, X. n., Shen, W. n., Veizades, S. n., Liang, G. n., Sayed, N. n., Nguyen, P. K.
2021; 12: 590377
- **The Regulation of Endothelial Function Through Hmgcr/mevalonate Pathway Mediated Yap Activity**
Liu, C., Liu, Y., Chen, C., Ameen, M., Yang, H., Shen, M., Rhee, J., Chen, I. Y., Sayed, N., Wu, J. C.
LIPPINCOTT WILLIAMS & WILKINS.2020
- **Molecular Signatures of Beneficial Class Effects of Statins on Human Induced Pluripotent Stem Cell-Derived Cardiomyocytes.** *Circulation*
Tian, L., Oikonomopoulos, A., Liu, C., Kitani, T., Shrestha, R., Chen, C. L., Ong, S., Smeets, M., Karakikes, I., Sayed, N., Wu, J. C.
2020; 141 (14): 1208–10
- **Modeling Secondary Iron Overload Cardiomyopathy with Human Induced Pluripotent Stem Cell-Derived Cardiomyocytes.** *Cell reports*
Rhee, J. W., Yi, H. n., Thomas, D. n., Lam, C. K., Belbachir, N. n., Tian, L. n., Qin, X. n., Malisa, J. n., Lau, E. n., Paik, D. T., Kim, Y. n., Choi, B. S., Sayed, et al
2020; 32 (2): 107886
- **Effects of Spaceflight on Human Induced Pluripotent Stem Cell-Derived Cardiomyocyte Structure and Function.** *Stem cell reports*
Wnorowski, A., Sharma, A., Chen, H., Wu, H., Shao, N., Sayed, N., Liu, C., Countryman, S., Stodieck, L. S., Rubins, K. H., Wu, S. M., Lee, P. H., Wu, et al
2019
- **Vismione B Interferes with Trypanosoma cruzi Infection of Vero Cells and Human Stem Cell-Derived Cardiomyocytes.** *The American journal of tropical medicine and hygiene*
Sass, G., Tsamo, A. T., Chounda, G. A., Nangmo, P. K., Sayed, N., Bozzi, A., Wu, J. C., Nkengfack, A. E., Stevens, D. A.
2019
- **Adiponectin Receptor 3 is Associated With Endothelial Nitric Oxide Synthase Dysfunction and Predicts Insulin Resistance in South Asians**
Chandy, M., Sayed, N., Lau, E., Liu, C., Wei Tzu-Tang, Chen, I. Y., Thomas, D., Rhee, J., Oh, B., Pepic, L., Husain, M., Quertermous, T., Nallamshetty, S., et al
LIPPINCOTT WILLIAMS & WILKINS.2019
- **Studying Cardiovascular Effects of Marijuana on Healthy Individuals Using Human Derived Induced Pluripotent Stem Cells**
Wei, T., Chandy, M., Chen, I. Y., Wo, H., Khanamiri, S., Nishiga, M., Seidl, F., Sayed, N., Liu, C., Rhee, J., Obal, D., Chour, T., Wu, et al
LIPPINCOTT WILLIAMS & WILKINS.2019

- **Human-induced Pluripotent Stem Cell-derived Cardiomyocytes as a Model for Trastuzumab-Induced Cardiac Dysfunction**
Kitani, T., Ong, S., Lam, C. K., Rhee, J., Zhang, J. Z., Oikonomopoulos, A., Ma, N., Tian, L., Lee, J., Telli, M. L., Witteles, R. M., Sharma, A., Sayed, et al
LIPPINCOTT WILLIAMS & WILKINS.2019
- **A Combination of Itraconazole and Amiodarone Is Highly Effective against Trypanosoma cruzi Infection of Human Stem Cell-Derived Cardiomyocytes.** *The American journal of tropical medicine and hygiene*
Sass, G., Madigan, R. T., Joubert, L., Bozzi, A., Sayed, N., Wu, J. C., Stevens, D. A.
2019
- **Cancer therapy-induced cardiomyopathy: can human induced pluripotent stem cell modelling help prevent it?** *EUROPEAN HEART JOURNAL*
Stack, J. P., Moslehi, J., Sayed, N., Wu, J. C.
2019; 40 (22): 1764–70
- **Human-Induced Pluripotent Stem Cell Model of Trastuzumab-Induced Cardiac Dysfunction in Patients With Breast Cancer** *CIRCULATION*
Kitani, T., Ong, S., Lam, C., Rhee, J., Zhang, J. Z., Oikonomopoulos, A., Ma, N., Tian, L., Lee, J., Telli, M. L., Witteles, R. M., Sharma, A., Sayed, et al
2019; 139 (21): 2451–65
- **A Human iPSC Double-Reporter System Enables Purification of Cardiac Lineage Subpopulations with Distinct Function and Drug Response Profiles** *CELL STEM CELL*
Zhang, J. Z., Termglinchan, V., Shao, N., Itzhaki, I., Liu, C., Ma, N., Tian, L., Wang, V. Y., Chang, A. Y., Guo, H., Kitani, T., Wu, H., Lam, et al
2019; 24 (5): 802–+
- **Glucocorticoid Receptor-Binding and Transcriptome Signature in Cardiomyocytes** *JOURNAL OF THE AMERICAN HEART ASSOCIATION*
Severinova, E., Alikunju, S., Deng, W., Dhawan, P., Sayed, N., Sayed, D.
2019; 8 (6)
- **Using Human Induced Pluripotent Stem Cell-Derived Cardiomyocytes as a Model to Study Trypanosoma cruzi Infection.** *Stem cell reports*
Bozzi, A. n., Sayed, N. n., Matsa, E. n., Sass, G. n., Neofytou, E. n., Clemons, K. V., Correa-Oliveira, R. n., Stevens, D. A., Wu, J. C.
2019
- **Glucocorticoid Receptor-Binding and Transcriptome Signature in Cardiomyocytes.** *Journal of the American Heart Association*
Severinova, E. n., Alikunju, S. n., Deng, W. n., Dhawan, P. n., Sayed, N. n., Sayed, D. n.
2019; 8 (6): e011484
- **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
- **Large-Scale Single-Cell RNA-Seq Reveals Molecular Signatures of Heterogeneous Populations of Human Induced Pluripotent Stem Cell-Derived Endothelial Cells.** *Circulation research*
Paik, D. T., Tian, L., Lee, J., Sayed, N., Chen, I. Y., Rhee, S., Rhee, J., Kim, Y., Wirka, R. C., Buikema, J. W., Wu, S. M., Red-Horse, K., Quertermous, et al
2018
- **IMMUNE PROFILE OF HEALTHY CARDIOVASCULAR AGING: INSIGHTS FROM A POPULATION-BASED STUDY AND NETWORK MODELING**
Bouajila, S., Moneghetti, K., Kobayashi, Y., Gomari, F. A., Abbasi, F., Davis, M. M., Wu, J. C., Kuznetsova, T., Sayed, N., Haddad, F.
ELSEVIER SCIENCE INC.2018: 1657
- **REVERSING LMNA MUTATION PHENOTYPE IN CARDIOMYOCYTES WITH OLMESARTAN: CONNECTING MONOGENIC DISEASE TO DRUGS VIA TRANSCRIPTIONAL SIGNATURES**
Kort, E., Sayed, N., Wu, J., Jovinge, S.
ELSEVIER SCIENCE INC.2018: 897
- **Modeling human diseases with induced pluripotent stem cells: from 2D to 3D and beyond.** *Development (Cambridge, England)*
Liu, C. n., Oikonomopoulos, A. n., Sayed, N. n., Wu, J. C.
2018; 145 (5)
- **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

- **Generation of Endothelial Cells from Human Induced Pluripotent Stem Cells.** *Bio-protocol Bio101*
Liu, C., Linling, C., Chen, C. L., Sayed, N.
2018
- **High-throughput screening of tyrosine kinase inhibitor cardiotoxicity with human induced pluripotent stem cells.** *Science translational medicine*
Sharma, A., Burridge, P. W., McKeithan, W. L., Serrano, R., Shukla, P., Sayed, N., Churko, J. M., Kitani, T., Wu, H., Holmström, A., Matsa, E., Zhang, Y., Kumar, et al
2017; 9 (377)
- **Molecular and functional resemblance of differentiated cells derived from isogenic human iPSCs and SCNT-derived ESCs.** *Proceedings of the National Academy of Sciences of the United States of America*
Zhao, M. T., Chen, H. n., Liu, Q. n., Shao, N. Y., Sayed, N. n., Wo, H. T., Zhang, J. Z., Ong, S. G., Liu, C. n., Kim, Y. n., Yang, H. n., Chour, T. n., Ma, et al
2017
- **Getting to the Heart of the Matter: A Perspective on Cardiomyocyte Biology** *Annals of Vascular Medicine & Research*
Chen, F. M., Tse, G., Ma, S., Sayed, N., Wong, W. T.
2017; 4 (4): 1067
- **Vascular Aging: Implications for Cardiovascular Disease and Therapy.** *Translational medicine (Sunnyvale, Calif.)*
Ghebre, Y. T., Yakubov, E., Wong, W. T., Krishnamurthy, P., Sayed, N., Sikora, A. G., Bonnen, M. D.
2016; 6 (4)
- **Transcriptome Profiling of Patient-Specific Human iPSC-Cardiomyocytes Predicts Individual Drug Safety and Efficacy Responses In Vitro.** *Cell stem cell*
Matsa, E., Burridge, P. W., Yu, K., Ahrens, J. H., Termglinchan, V., Wu, H., Liu, C., Shukla, P., Sayed, N., Churko, J. M., Shao, N., Woo, N. A., Chao, et al
2016; 19 (3): 311-325
- **Vascular Aging: Implications for Cardiovascular Disease and Therapy** *Translational Medicine*
Ghebre, Y. T., Yakubov, E., Wong, W., Krishnamurthy, P., Sayed, N., Sikora, A. G., Bonnen, M. D., et al
2016
- **Response to Letter Regarding Article "Transdifferentiation of Human Fibroblasts to Endothelial Cells: Role of Innate Immunity"** *CIRCULATION*
Cooke, J. P., Meng, S., Wong, W. T., Sayed, N., Ospino, F., Lee, J., Jha, A., Dexheimer, P., Aronow, B.
2015; 132 (15): E197-E197
- **Innate immunity and epigenetic plasticity in cellular reprogramming** *CURRENT OPINION IN GENETICS & DEVELOPMENT*
Cooke, J. P., Sayed, N., Lee, J., Wong, W. T.
2014; 28: 89-91
- **Induced pluripotent stem cells: how they will change the practice of cardiovascular medicine.** *Methodist DeBakey cardiovascular journal*
Wong, W. T., Sayed, N., Cooke, J. P.
2013; 9 (4): 206-209
- **Hypothalamic S-Nitrosylation Contributes to the Counter-Regulatory Response Impairment following Recurrent Hypoglycemia** *PLOS ONE*
Fioramonti, X., Deak, A., Deshpande, S., Carneiro, L., Zhou, C., Sayed, N., Orban, B., Berlin, J. R., Penicaud, L., Leloup, C., Beuve, A., Routh, V. H.
2013; 8 (7)
- **Leveraging the innate immunity pathway for transdifferentiation of fibroblasts to endothelial cells**
Sayed, N., Wong, W. T., Cooke, J. P.
SAGE PUBLICATIONS LTD.2013: 153-54
- **Endothelial Cells Derived From Nuclear Reprogramming** *CIRCULATION RESEARCH*
Wong, W. T., Huang, N. F., Botham, C. M., Sayed, N., Cooke, J. P.
2012; 111 (10): 1363-1375
- **Toll-Like Receptor 3 Activation Promotes Efficient Nuclear Reprogramming and Endothelial Differentiation** *Basic Cardiovascular Sciences Scientific Session*
Sayed, N., Lee, J., Hunter, A., Au, K. F., Wong, W., Mocarski, E., Pera, R. R., Cooke, J. P.
LIPPINCOTT WILLIAMS & WILKINS.2012
- **NaHS relaxes rat cerebral artery in vitro via inhibition of L-type voltage-sensitive Ca²⁺ channel** *PHARMACOLOGICAL RESEARCH*

Tian, X. Y., Wong, W. T., Sayed, N., Luo, J., Tsang, S. Y., Bian, Z. X., Lu, Y., Cheang, W. S., Yao, X., Chen, Z. Y., Huang, Y.
2012; 65 (2): 239-246

- **Protein kinase G phosphorylates soluble guanylyl cyclase on serine 64 and inhibits its activity** *ARTERIOSCLEROSIS THROMBOSIS AND VASCULAR BIOLOGY*
Zhou, Z., Sayed, N., Pyriochou, A., Roussos, C., Fulton, D., Beuve, A., Papapetropoulos, A.
2008; 28 (10): 1803-1810
- **PAS-mediated dimerization of soluble guanylyl cyclase revealed by signal transduction histidine kinase domain crystal structure** *JOURNAL OF BIOLOGICAL CHEMISTRY*
Ma, X., Sayed, N., Baskaran, P., Beuve, A., van den Akker, F.
2008; 283 (2): 1167-1178
- **NO and CO differentially activate soluble guanylyl cyclase via a heme pivot-bend mechanism** *EMBO JOURNAL*
Ma, X., Sayed, N., Beuve, A., van den Akker, F.
2007; 26 (2): 578-588
- **Protein kinase G phosphorylates soluble guanylyl cyclase and inhibits its activity**
Papapetropoulos, A.
2007: P45
- **S-nitrosylation of soluble guanylyl cyclase: a novel mechanism of nitrate tolerance?**
Sayed, N.
2007: 1-1
- **NO-CGMP Pathway Modulates Actin Remodeling during Neuronal Differentiation** *AMER SOC CELL BIOLOGY*
Sayed, N.
2006