

# Stanford

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## Ioannis Karakikes

Associate Professor (Research) of Cardiothoracic Surgery

### Bio

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#### ACADEMIC APPOINTMENTS

- Associate Professor (Research), Cardiothoracic Surgery
- Member, Bio-X
- Member, Cardiovascular Institute
- Member, Maternal & Child Health Research Institute (MCHRI)

#### HONORS AND AWARDS

- K99/R00 Pathway to Independence Award, NIH/NHLBI (2012)

#### LINKS

- Lab Website: <http://med.stanford.edu/karakikeslab.html>

### Research & Scholarship

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#### CURRENT RESEARCH AND SCHOLARLY INTERESTS

The Karakikes Lab aims to uncover fundamental new insights into the molecular mechanisms and functional consequences of pathogenic mutations associated with familial cardiovascular diseases.

### Teaching

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#### COURSES

##### 2023-24

- Cardiovascular and Pulmonary Sciences Seminar: MED 223 (Aut, Win)

##### 2022-23

- Cardiovascular and Pulmonary Sciences Seminar: MED 223 (Aut, Win)

##### 2021-22

- Cardiovascular and Pulmonary Sciences Seminar: MED 223 (Aut, Win)

##### 2020-21

- Cardiovascular and Pulmonary Sciences Seminar: MED 223 (Aut, Win)

#### STANFORD ADVISEES

Postdoctoral Faculty Sponsor

Rachel Baum, Maryam Kay, Nirmal Vadgama

## Publications

### PUBLICATIONS

- **Integrative single-cell analysis of cardiogenesis identifies developmental trajectories and non-coding mutations in congenital heart disease.** *Cell*  
Ameen, M., Sundaram, L., Shen, M., Banerjee, A., Kundu, S., Nair, S., Shcherbina, A., Gu, M., Wilson, K. D., Varadarajan, A., Vadgama, N., Balsubramani, A., Wu, et al  
2022; 185 (26): 4937
- **Serine biosynthesis as a novel therapeutic target for dilated cardiomyopathy.** *European heart journal*  
Perea-Gil, I., Seeger, T., Bruyneel, A. A., Termglinchan, V., Monte, E., Lim, E. W., Vadgama, N., Furihata, T., Gavidia, A. A., Arthur Ataam, J., Bharucha, N., Martinez-Amador, N., Ameen, et al  
2022
- **The Unfolded Protein Response as a Compensatory Mechanism and Potential Therapeutic Target in PLN R14del Cardiomyopathy.** *Circulation*  
Feyen, D. A., Perea-Gil, I., Maas, R. G., Harakalova, M., Gavidia, A. A., Arthur Ataam, J., Wu, T., Vink, A., Pei, J., Vadgama, N., Suurmeijer, A. J., Te Rijdt, W. P., Vu, et al  
2021
- **Pharmacological Silencing of MicroRNA-152 Prevents Pressure Overload-Induced Heart Failure.** *Circulation. Heart failure*  
LaRocca, T. J., Seeger, T. n., Prado, M. n., Perea-Gil, I. n., Neofytou, E. n., Mechem, B. H., Ameen, M. n., Chang, A. C., Pandey, G. n., Wu, J. C., Karakikes, I. n.  
2020; 13 (3): e006298
- **Translating Genomic Insights into Cardiovascular Medicines: Opportunities and Challenges of CRISPR-Cas9.** *Trends in cardiovascular medicine*  
Zhang, Y. n., Karakikes, I. n.  
2020
- **A Novel Recessive Mutation in SPEG Causes Early Onset Dilated Cardiomyopathy.** *PLoS genetics*  
Levitas, A. n., Muhammad, E. n., Zhang, Y. n., Perea Gil, I. n., Serrano, R. n., Diaz, N. n., Arafat, M. n., Gavidia, A. A., Kapiloff, M. S., Mercola, M. n., Etzion, Y. n., Parvari, R. n., Karakikes, et al  
2020; 16 (9): e1009000
- **Activation of PDGF pathway links LMNA mutation to dilated cardiomyopathy.** *Nature*  
Lee, J. n., Termglinchan, V. n., Diecke, S. n., Itzhaki, I. n., Lam, C. K., Garg, P. n., Lau, E. n., Greenhaw, M. n., Seeger, T. n., Wu, H. n., Zhang, J. Z., Chen, X. n., Gil, et al  
2019
- **A Premature Termination Codon Mutation in MYBPC3 Causes Hypertrophic Cardiomyopathy via Chronic Activation of Nonsense-Mediated Decay.** *Circulation*  
Seeger, T., Shrestha, R., Lam, C. K., Chen, C., McKeithan, W. L., Lau, E., Wnorowski, A., McMullen, G., Greenhaw, M., Lee, J., Oikonomopoulos, A., Lee, S., Yang, et al  
2018
- **A Comprehensive TALEN-Based Knockout Library for Generating Human Induced Pluripotent Stem Cell-Based Models for Cardiovascular Diseases.** *Circulation research*  
Karakikes, I., Termglinchan, V., Cepeda, D. A., Lee, J., Diecke, S., Hendel, A., Itzhaki, I., Ameen, M., Shrestha, R., Wu, H., Ma, N., Shao, N., Seeger, et al  
2017
- **Efficient Genome Editing in Induced Pluripotent Stem Cells with Engineered Nucleases In Vitro.** *Methods in molecular biology (Clifton, N.J.)*  
Termglinchan, V., Seeger, T., Chen, C., Wu, J. C., Karakikes, I.  
2017; 1521: 55-68
- **Human Induced Pluripotent Stem Cell-Derived Cardiomyocytes: Insights Into Molecular, Cellular, and Functional Phenotypes.** *Circulation research*  
Karakikes, I., Ameen, M., Termglinchan, V., Wu, J. C.  
2015; 117 (1): 80-88
- **Correction of human phospholamban R14del mutation associated with cardiomyopathy using targeted nucleases and combination therapy** *NATURE COMMUNICATIONS*

- Karakikes, I., Stillitano, F., Nonnenmacher, M., Tzimas, C., Sanoudou, D., Termglinchan, V., Kong, C., Rushing, S., Hansen, J., Ceholski, D., Kolokathis, F., Kremastinos, D., Katoulis, et al  
2015; 6
- **Empagliflozin Attenuates Arrhythmias in an iPSC-Based Model of Hypertrophy Cardiomyopathy.** *Circulation. Genomic and precision medicine*  
Arthur Ataam, J., Belbachir, N., Perea-Gil, I., Termglinchan, V., Vadgama, N., Garg, P., Ramchandani, R., Gavidia, A. A., Roura, S., Gálvez-Montón, C., Wu, J. C., Bayés-Genis, A., Karakikes, et al  
2024: e004526
  - **Precision unleashed: tackling DNA mismatch repair for enhanced prime editing.** *Molecular therapy. Nucleic acids*  
Ramchandani, R., Bharucha, N., Karakikes, I.  
2023; 34: 102061
  - **Identification of constrained sequence elements across 239 primate genomes.** *Nature*  
Kuderna, L. F., Ulirsch, J. C., Rashid, S., Ameen, M., Sundaram, L., Hickey, G., Cox, A. J., Gao, H., Kumar, A., Aguet, F., Christmas, M. J., Clawson, H., Haeussler, et al  
2023
  - **Generation of human induced pluripotent stem cell lines derived from four patients with a pathogenic ALPK3 variant associated with adult-onset hypertrophic cardiomyopathy (HCM).** *Stem cell research*  
Cheawsamoot, C., Ramchandani, R., Ameen, M., Arthur Ataam, J., Khongphatthanayothin, A., Shotelersuk, V., Karakikes, I.  
2023; 73: 103233
  - **Transcription factor stoichiometry, motif affinity and syntax regulate single-cell chromatin dynamics during fibroblast reprogramming to pluripotency.** *bioRxiv : the preprint server for biology*  
Nair, S., Ameen, M., Sundaram, L., Pampari, A., Schreiber, J., Balsubramani, A., Wang, Y. X., Burns, D., Blau, H. M., Karakikes, I., Wang, K. C., Kundaje, A.  
2023
  - **Non-viral in vivo cytidine base editing in hepatocytes using focused ultrasound targeted microbubbles.** *Molecular therapy. Nucleic acids*  
Anderson, C. D., Arthur, J. A., Zhang, Y., Bharucha, N., Karakikes, I., Shohet, R. V.  
2023; 33: 733-737
  - **A deep learning platform to assess drug proarrhythmia risk.** *Cell stem cell*  
Serrano, R., Feyen, D. A., Bruyneel, A. A., Hnatiuk, A. P., Vu, M. M., Amatya, P. L., Perea-Gil, I., Prado, M., Seeger, T., Wu, J. C., Karakikes, I., Mercola, M.  
2022
  - **Isoform changes of action potential regulators in the ventricles of arrhythmogenic phospholamban-R14del humanized mouse hearts.** *Metabolism: clinical and experimental*  
Rogalska, M. E., Vafiadaki, E., Erpapazoglou, Z., Haghighi, K., Green, L., Mantzoros, C. S., Hajjar, R. J., Tranter, M., Karakikes, I., Kranias, E. G., Stillitano, F., Kafasla, P., Sanoudou, et al  
2022: 155344
  - **De novo and inherited variants in coding and regulatory regions in genetic cardiomyopathies.** *Human genomics*  
Vadgama, N., Ameen, M., Sundaram, L., Gaddam, S., Genomics England Research Consortium, Gifford, C., Nasir, J., Karakikes, I.  
2022; 16 (1): 55
  - **The potential of CRISPR-Cas9 prime editing for cardiovascular disease research and therapy.** *Current opinion in cardiology*  
Bharucha, N., Arias, A., Karakikes, I.  
2022
  - **Mutations in MINAR2 encoding membrane integral NOTCH2-associated receptor 2 cause deafness in humans and mice.** *Proceedings of the National Academy of Sciences of the United States of America*  
Bademci, G., Lachgar-Ruiz, M., Deokar, M., Zafeer, M. F., Abad, C., Yildirim Baylan, M., Ingham, N. J., Chen, J., Sineni, C. J., Vadgama, N., Karakikes, I., Guo, S., Duman, et al  
2022; 119 (26): e2204084119
  - **Generation of a dual edited human induced pluripotent stem cell Myl7-GFP reporter line with inducible CRISPRi/dCas9.** *Stem cell research*  
Metzl-Raz, E., Bharucha, N., Arthur Ataam, J., Gavidia, A. A., Greenleaf, W. J., Karakikes, I.  
2022; 61: 102754
  - **Targeting mAKAPbeta expression as a therapeutic approach for ischemic cardiomyopathy.** *Gene therapy*

- Martinez, E. C., Li, J., Ataam, J. A., Tokarski, K., Thakur, H., Karakikes, I., Dodge-Kafka, K., Kapiloff, M. S.  
1800
- **SARS-CoV-2 Susceptibility and ACE2 Gene Variations Within Diverse Ethnic Backgrounds.** *Frontiers in genetics*  
Vadgama, N., Kreymerman, A., Campbell, J., Shamardina, O., Brugger, C., Research Consortium, G. E., Deaconescu, A. M., Lee, R. T., Penkett, C. J., Gifford, C. A., Mercola, M., Nasir, J., Karakikes, et al  
2022; 13: 888025
  - **Insulin Growth Factor Phenotypes in Heart Failure with Preserved Ejection Fraction, an INSPIRE Registry and CATHGEN Study: IGF axis in HFpEF.** *Journal of cardiac failure*  
Haddad, F., Ataam, J. A., Amsallem, M., Cauwenberghs, N., Kuznetsova, T., Rosenberg-Hasson, Y., Zamanian, R. T., Karakikes, I., Horne, B. D., Muhlestein, J. B., Kwee, L., Shah, S., Maecker, et al  
1800
  - **Generation of AAVS1 integrated doxycycline-inducible CRISPR-Prime Editor human induced pluripotent stem cell line.** *Stem cell research*  
Bharucha, N., Ataam, J. A., Gavidia, A. A., Karakikes, I.  
2021; 57: 102610
  - **Small-molecule probe reveals a kinase cascade that links stress signaling to TCF/LEF and Wnt responsiveness.** *Cell chemical biology*  
Cheng, J. n., Tsuda, M. n., Okolotowicz, K. n., Dwyer, M. n., Bushway, P. J., Colas, A. R., Lancman, J. J., Schade, D. n., Perea-Gil, I. n., Bruyneel, A. A., Lee, J. n., Vadgama, N. n., Quach, et al  
2021
  - **Activation of CaMKII Signaling Pathway Contributes to the Pathogenesis of Genetic Hypertrophic Cardiomyopathy**  
Gil, I., Bellbachir, N., Gavidia, A. A., Arthur, J., Zhang, Y., Vadgama, N., Oikonomopoulos, A., Roura, S., Wu, J. C., Bayes-Genis, A., Karakikes, I.  
LIPPINCOTT WILLIAMS & WILKINS.2020
  - **Disruption of the Genome Architecture at the PRRX1 Locus is Associated With the Pathogenesis of LMNA-related Dilated Cardiomyopathy**  
Zhang, Y., Ameen, M., Gil, I., Arthur, J., Gavidia, A. A., Bharucha, N., Wang, K. C., Karakikes, I.  
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
  - **iPSC Modeling of RBM20-Deficient DCM Identifies Upregulation of RBM20 as a Therapeutic Strategy.** *Cell reports*  
Briganti, F. n., Sun, H. n., Wei, W. n., Wu, J. n., Zhu, C. n., Liss, M. n., Karakikes, I. n., Rego, S. n., Cipriano, A. n., Snyder, M. n., Meder, B. n., Xu, Z. n., Millat, et al  
2020; 32 (10): 108117
  - **Endogenous Retrovirus-Derived lncRNA BANCRC 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
  - **Concise Review: Precision Matchmaking: Induced Pluripotent Stem Cells Meet Cardio-Oncology** *STEM CELLS TRANSLATIONAL MEDICINE*  
Nair, P., Prado, M., Perea-Gil, I., Karakikes, I.  
2019; 8 (8): 758–67
  - **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
  - **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
  - **Concise Review: Precision Matchmaking: Induced Pluripotent Stem Cells Meet Cardio-Oncology.** *Stem cells translational medicine*  
Nair, P., Prado, M., Perea-Gil, I., Karakikes, I.  
2019

- **AlleleProfileR: A versatile tool to identify and profile sequence variants in edited genomes.** *PloS one*  
Bruyneel, A. A., Colas, A. R., Karakikes, I., Mercola, M.  
2019; 14 (12): e0226694
- **Treatment of volumetric muscle loss in mice using nanofibrillar scaffolds enhances vascular organization and integration.** *Communications biology*  
Nakayama, K. H., Quarta, M. n., Paine, P. n., Alcazar, C. n., Karakikes, I. n., Garcia, V. n., Abilez, O. J., Calvo, N. S., Simmons, C. S., Rando, T. A., Huang, N. F.  
2019; 2 (1): 170
- **High-Throughput Phenotypic Screening Using Induced Pluripotent Stem Cell Derived Cardiomyocytes Identifies Compounds That Rescue Genetic Dilated Cardiomyopathy**  
Perea-Gil, I., Prado, M., Bruyneel, A. A., McKeithan, W. L., Feyen, D. A., Nair, P., Mercola, M., Karakikes, I.  
LIPPINCOTT WILLIAMS & WILKINS.2018: E72
- **Mechanosensitive miR-376c Modulates Arrhythmia Susceptibility Via Regulation Of KCNJ2 In hiPSC-derived Cardiomyocytes**  
Wahlquist, C. A., Rojas-Munoz, A., Bruyneel, A. A., Greenhaw, M., Chung, R., Vu, M., Karakikes, I., Mercola, M.  
LIPPINCOTT WILLIAMS & WILKINS.2018: E79
- **Telomere shortening is a hallmark of genetic cardiomyopathies.** *Proceedings of the National Academy of Sciences of the United States of America*  
Chang, A. C., Chang, A. C., Kirillova, A., Sasagawa, K., Su, W., Weber, G., Lin, J., Termglinchan, V., Karakikes, I., Seeger, T., Dainis, A. M., Hinson, J. T., Seidman, et al  
2018
- **Recent Progress in Genome Editing Approaches for Inherited Cardiovascular Diseases.** *Current cardiology reports*  
Kaur, B., Perea-Gil, I., Karakikes, I.  
2018; 20 (7): 58
- **SETD7 Drives Cardiac Lineage Commitment through Stage-Specific Transcriptional Activation.** *Cell stem cell*  
Lee, J. n., Shao, N. Y., Paik, D. T., Wu, H. n., Guo, H. n., Termglinchan, V. n., Churko, J. M., Kim, Y. n., Kitani, T. n., Zhao, M. T., Zhang, Y. n., Wilson, K. D., Karakikes, et al  
2018; 22 (3): 428–44.e5
- **Patient-Specific iPSC-Derived Endothelial Cells Uncover Pathways that Protect against Pulmonary Hypertension in BMPR2 Mutation Carriers** *CELL STEM CELL*  
Gu, M., Shao, N., Sa, S., Li, D., Termglinchan, V., Ameen, M., Karakikes, I., Sosa, G., Grubert, F., Lee, J., Cao, A., Taylor, S., Ma, et al  
2017; 20 (4): 490-?
- **Mending a Broken Heart: The Evolution Of Biological Therapeutics.** *Stem cells*  
Chen, C., Termglinchan, V., Karakikes, I.  
2017
- **Modeling susceptibility to drug-induced long QT with a panel of subject-specific induced pluripotent stem cells** *ELIFE*  
Stillitano, F., Hansen, J., Kong, C., Karakikes, I., Faunck-Brentano, C., Geng, L., Scott, S., Reynier, S., Wu, M., Valogne, Y., Desseaux, C., Salem, J., Jeziorowska, et al  
2017; 6
- **Gene Transfer in Cardiomyocytes Derived from ES and iPS Cells.** *Methods in molecular biology (Clifton, N.J.)*  
Stillitano, F., Karakikes, I., Hajjar, R. J.  
2017; 1521: 183-193
- **Efficient Genome Editing in Induced Pluripotent Stem Cells with Engineered Nucleases In Vitro** *CARDIAC GENE THERAPY: METHODS AND PROTOCOLS*  
Termglinchan, V., Seeger, T., Chen, C., Wu, J. C., Karakikes, I., Ishikawa, K.  
2017; 1521: 55–68
- **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
- **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
- **Patient-Specific iPSC-Derived Endothelial Cells Uncover Pathways that Protect against Pulmonary Hypertension in BMPR2 Mutation Carriers.** *Cell stem cell*  
Gu, M., Shao, N., Sa, S., Li, D., Termglinchan, V., Ameen, M., Karakikes, I., Sosa, G., Grubert, F., Lee, J., Cao, A., Taylor, S., Ma, et al  
2016
  - **iPSC-derived cardiomyocytes reveal abnormal TGF- $\beta$  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
  - **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
  - **Genomic correction of familial cardiomyopathy in human engineered cardiac tissues.** *European heart journal*  
Stillitano, F., Turnbull, I. C., Karakikes, I., Nonnenmacher, M., Backeris, P., Hulot, J., Kranias, E. G., Hajjar, R. J., Costa, K. D.  
2016
  - **Cytokines profile in hypertensive patients with left ventricular remodeling and dysfunction.** *Journal of the American Society of Hypertension*  
Kuznetsova, T., Haddad, F., Knez, J., Rosenberg-Hasson, Y., Sung, J., Cauwenberghs, N., Thijs, L., Karakikes, I., Maecker, H., Mahaffey, K. W., Wu, J. C., Staessen, J. A.  
2015; 9 (12): 975-984 e3
  - **Cytokines profile in hypertensive patients with left ventricular remodeling and dysfunction** *JOURNAL OF THE AMERICAN SOCIETY OF HYPERTENSION*  
Kuznetsova, T., Haddad, F., Knez, J., Rosenberg-Hasson, Y., Sung, J., Cauwenberghs, N., Thijs, L., Karakikes, I., Maecker, H., Mahaffey, K. W., Wu, J. C., Staessen, J. A.  
2015; 9 (12): 975-984
  - **A Rapid, High-Quality, Cost-Effective, Comprehensive and Expandable Targeted Next-Generation Sequencing Assay for Inherited Heart Diseases.** *Circulation research*  
Wilson, K. D., Shen, P., Fung, E., Karakikes, I., Zhang, A., Inanloorahatloo, K., Odegaard, J., Sallam, K., Davis, R. W., Lui, G. K., Ashley, E. A., Scharfe, C., Wu, et al  
2015; 117 (7): 603-611
  - **Phospholamban as a Crucial Determinant of the Inotropic Response of Human Pluripotent Stem Cell-Derived Ventricular Cardiomyocytes and Engineered 3-Dimensional Tissue Constructs** *CIRCULATION-ARRHYTHMIA AND ELECTROPHYSIOLOGY*  
Chen, G., Li, S., Karakikes, I., Ren, L., Chow, M. Z., Chopra, A., Keung, W., Yan, B., Chan, C. W., Costa, K. D., Kong, C., Hajjar, R. J., Chen, et al  
2015; 8 (1): 193-U276
  - **Effectiveness of gene delivery systems for pluripotent and differentiated cells.** *Molecular therapy. Methods & clinical development*  
Rapti, K., Stillitano, F., Karakikes, I., Nonnenmacher, M., Weber, T., Hulot, J., Hajjar, R. J.  
2015; 2: 14067-?
  - **Cardiac I-1c Overexpression With Reengineered AAV Improves Cardiac Function in Swine Ischemic Heart Failure** *MOLECULAR THERAPY*  
Ishikawa, K., Fish, K. M., Tilemann, L., Rapti, K., Aguero, J., Santos-Gallego, C. G., Lee, A., Karakikes, L., Xie, C., Akar, F. G., Shimada, Y. J., Gwathmey, J. K., Asokan, et al  
2014; 22 (12): 2038-2045
  - **Human-induced pluripotent stem cell models of inherited cardiomyopathies.** *Current opinion in cardiology*  
Karakikes, I., Termglinchan, V., Wu, J. C.  
2014; 29 (3): 214-219
  - **Small Molecule-Mediated Directed Differentiation of Human Embryonic Stem Cells Toward Ventricular Cardiomyocytes** *STEM CELLS TRANSLATIONAL MEDICINE*  
Karakikes, I., Senyei, G. D., Hansen, J., Kong, C., Azeloglu, E. U., Stillitano, F., Lieu, D. K., Wang, J., Ren, L., Hulot, J., Iyengar, R., Li, R. A., Hajjar, et al  
2014; 3 (1): 18-31

- **Rapid and Efficient Conversion of Integration-Free Human Induced Pluripotent Stem Cells to GMP-Grade Culture Conditions.** *PLoS one*  
Durruthy-Durruthy, J., Briggs, S. F., Awe, J., Ramathal, C. Y., Karumbayaram, S., Lee, P. C., Heidmann, J. D., Clark, A., Karakikes, I., Loh, K. M., Wu, J. C., Hoffman, A. R., Byrne, et al  
2014; 9 (4)
- **Rapid and efficient conversion of integration-free human induced pluripotent stem cells to GMP-grade culture conditions.** *PLoS one*  
Durruthy-Durruthy, J., Briggs, S. F., Awe, J., Ramathal, C. Y., Karumbayaram, S., Lee, P. C., Heidmann, J. D., Clark, A., Karakikes, I., Loh, K. M., Wu, J. C., Hoffman, A. R., Byrne, et al  
2014; 9 (4)
- **Advancing functional engineered cardiac tissues toward a preclinical model of human myocardium.** *FASEB journal : official publication of the Federation of American Societies for Experimental Biology*  
Turnbull, I. C., Karakikes, I., Serrao, G. W., Backeris, P., Lee, J. J., Xie, C., Senyei, G., Gordon, R. E., Li, R. A., Akar, F. G., Hajjar, R. J., Hulot, J. S., Costa, et al  
2013
- **Therapeutic cardiac-targeted delivery of miR-1 reverses pressure overload-induced cardiac hypertrophy and attenuates pathological remodeling.** *Journal of the American Heart Association*  
Karakikes, I., Chaanine, A. H., Kang, S., Mukete, B. N., Jeong, D., Zhang, S., Hajjar, R. J., Lebeche, D.  
2013; 2 (2)
- **AAV9.I-1c delivered via direct coronary infusion in a porcine model of heart failure improves contractility and mitigates adverse remodeling.** *Circulation. Heart failure*  
Fish, K. M., Ladage, D., Kawase, Y., Karakikes, I., Jeong, D., Ly, H., Ishikawa, K., Hadri, L., Tilemann, L., Muller-Ehmsen, J., Samulski, R. J., Kranias, E. G., Hajjar, et al  
2013; 6 (2): 310-317
- **Interaction of HLA-DR and CD74 at the cell surface of antigen-presenting cells by single particle image analysis** *FASEB JOURNAL*  
Karakikes, I., Morrison, I. E., O'Toole, P., Metodieva, G., Navarrete, C. V., Gomez, J., Miranda-Sayago, J. M., Cherry, R. J., Metodiev, M., Fernandez, N.  
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