

Stanford



Phillip C. Yang, MD

Professor of Medicine (Cardiovascular Medicine)

Medicine - Cardiovascular Medicine

 Curriculum Vitae available Online

CLINICAL OFFICES

- **Cardiovascular Medicine Clinic**

300 Pasteur Dr Rm H2157

Stanford, CA 94305

Tel (650) 498-8008 **Fax** (650) 724-4034

240 Pasteur Dr Rm 3053

Stanford, CA 94304

Tel (650) 498-3937 **Fax** (650) 724-4034

ACADEMIC CONTACT INFORMATION

- **Administrative Contact**

Kat Gallagher - Administrative Associate

Tel (650) 498-8008

Bio

BIO

Phillip C. Yang is a Professor of Medicine (Cardiovascular Medicine) at the Stanford University School of Medicine. He directs the Cardiovascular Stem Cell Laboratory (Yang Lab) and Stanford Cardiothoracic MRI Program. Dr. Yang received degrees from Stanford University and Yale University School of Medicine, and completed post-graduate training at UCLA and Stanford University Medical Centers. Dr. Yang is a physician-scientist whose research interest focuses on clinical translation of the fundamental molecular and cellular processes of myocardial restoration. His research employs novel in vivo multi-modality molecular and cellular imaging technology to translate the basic innovation in pluripotent stem cell biology. Novel intracellular molecules and organelles are discovered and studied for functional improvement. Dr. Yang is currently a PI on the NIH/NHLBI funded CCTRN UM1 grant, which is designed to conduct multi-center clinical trial on novel biological therapy. In addition, he is a PI on 3 NIH research grants, 1 CIRM grant, and leads 6 stem cell clinical trials. Currently, he is pioneering the Cardiovascular Regeneration Program at Stanford. Dr. Yang has been the recipient of several prestigious awards including NIH Career Development Award, NIH Career Enhancement Award, and NIH Patient Oriented Research. To find out more, please visit the Yang Lab website: <http://med.stanford.edu/cvmedicine/research/faculty-labs-link/yanglab.html>

CLINICAL FOCUS

- Cardiology (Heart)
- Cardiovascular Disease
- Cardiovascular Imaging
- Cardiovascular Biologics

ACADEMIC APPOINTMENTS

- Professor - University Medical Line, Medicine - Cardiovascular Medicine
- Member, Bio-X
- Member, Cardiovascular Institute

- Member, Wu Tsai Human Performance Alliance

ADMINISTRATIVE APPOINTMENTS

- Cardiology Fellow, Stanford Division of Cardiovascular Medicine, (1994-1999)
- Clinical Instructor & Staff Physician, Stanford Division of Cardiovascular Medicine, (1999-2005)
- Assistant Professor, Stanford Division of Cardiovascular Medicine, (2005-2012)
- Director, Cardiovascular Stem Cell Laboratory, Stanford Division of Cardiovascular Medicine, (2005- present)
- Director, Cardiothoracic MRI Program, Stanford Division of Cardiovascular Medicine, (2012- present)
- Associate Professor, Stanford Division of Cardiovascular Medicine, (2012-2020)
- Professor, Stanford Division of Cardiovascular Medicine, (2020- present)

HONORS AND AWARDS

- Translational and Basic Science YIA, Finalist, Senior Author, American College of Cardiology (2020)
- Bissett Lecture, University of Arkansas School of Medicine (2018)
- Melvin Marcus YIA, Finalist, Senior Author, American Heart Association (2018)
- K24 Mid-Career Award in Patient-Oriented Research, National Institute of Health (2016-2021)
- Co-Chair and Organizer, Frontiers in Cardiovascular Medicine, Stanford-Gachon 2nd Annual Session,, Gachon University (2016-2019)
- Activation of patient-specific endogenous myocardial repair through the exosomes, California Institute for Regenerative Medicine (2016-2017)
- Tracking cardiac engraftment and viability of cell biologics by MRI, National Institutes of Health (2016-2017)
- Visiting Professor in Molecular Medicine, Jinan University, Guangzhou, China (2015)
- Young Investigator Award Finalist, senior author, American College of Cardiology (2015)
- Co-Chair, Frontiers in Cardiovascular Medicine, Gachon University, Incheon, Korea (2014)
- Cell Characterization and Imaging for Molecular Therapies in Ischemic Diseases, National Institutes of Health (2012-2019)
- Cardiovascular Molecular Biologic Therapy Research Network Principal Investigator, National Institutes of Health (2012)
- Melvin Judkins Young Investigator Award, 1st Place, senior author, American Heart Association (2012)
- Melvin Judkins Young Investigator Award, 1st Place, senior author, American Heart Association (2011)
- Melvin Judkins Young Investigator Award, 1st Place, senior author, American Heart Association (2010)
- Melvin Judkins Young Investigator Award, 1st Place, senior author, American Heart Association (2009)
- Judge, Young Investigator Awards Competition: Physiology, Pharmacology, and Pathology, American College of Cardiology (2008)
- K18 Career Enhancement Award, National Institutes of Health (2007)
- Young Investigator Award, Finalist, American College of Cardiology (2007)
- Vivien Thomas Young Investigator Award, American Heart Association (2005)
- Young Investigator Award, Finalist, American College of Cardiology (Senior Author) (2005)
- Teaching Award, Stanford University School of Medicine (2004)
- Young Investigator Award, Finalist, American College of Cardiology (Senior Author) (2004)
- Glaxo Smith Kline Scholar, American Federation of Medical Research (2003)
- Career Development Award, National Institute of Health (2000)
- K23 Career Development Award, National Institute of Health (2000)
- Edwin L Alderman Award for Excellence in Research, Stanford Cardiovascular Medicine (1999)
- Young Investigator Award, American College of Cardiology (1998)

- Physiology & Pharmacology Research Award, Stanford Cardiovascular Medicine (1997)
- Solomon's Scholarship, UCLA Dept of Medicine (1993)
- Cum Laude, Yale University School of Medicine (1989)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Reviewer, National Institute of Health Myocardial Ischemia and Metabolism (MIM) Study Section (2016 - present)
- Co-Chair, American Heart Association Stem Cell Working Group (2015 - present)
- Reviewer, Veterans Affairs, Cardiovascular Studies – A (CARA) panel, Merit Review meeting (2015 - 2016)
- Reviewer, National Institute of Health Clinical and Integrative Cardiovascular Sciences (CICS) Study Section, (2015 - 2016)
- Reviewer, National Institute of Health Cardiovascular and Respiratory Sciences IRG Special Emphasis (2015 - 2016)
- Reviewer, Department of Defense, Cardiovascular Health of the Defense Health Program, Investigator-Initiated Research Award (2015 - 2015)
- Reviewer, Veterans Affairs Office of Research and Development proposal (2015 - 2015)
- Member, American College of Cardiology, Annual Scientific Session Program Committee (2010 - 2012)
- Reviewer, National Institute Health, ARRA Challenge Grant Study Section (2009 - 2009)
- Reviewer, American Heart Association, National Center Grant Study Section – Radiology and Surgery (2004 - 2009)
- Reviewer, American Heart Association, Western Regional Grant Study Section – Cardiovascular Molecular and Cellular Imaging (2004 - 2009)

PROFESSIONAL EDUCATION

- Fellowship: Stanford University Cardiovascular Medicine Fellowship (1998) CA
- Residency: UCLA Medical Center Internal Medicine (1993) CA
- Medical Education: Yale School Of Medicine (1989) CT
- Board Certification: Echocardiography, National Board of Echocardiography (2008)
- Board Certification: Cardiovascular Disease, American Board of Internal Medicine (1999)
- Resident, UCLA Department of Medicine , Internal Medicine (1993)
- MD, Yale University , MD, Cum Laude (1989)
- MA, Stanford University , East Asian Studies (1984)
- BAS, Stanford University , Biology and East Asian Studies (1984)

COMMUNITY AND INTERNATIONAL WORK

- Editor, Circulation Research
- Editor, Journal of Cardiovascular Magnetic Resonance
- Member, American Heart Association, National Grant Study Committee
- Member, American Heart Association, Western Regional Grant Study Committee
- Board Member, National Center for Space Biological Technologies (NASA)
- Language Background

PATENTS

- Yang PC, Dash R. "United States Patent 14/992,847 MRI Evaluation of Heterogeneous Tissue.", Leland Stanford Junior University, Jun 1, 2016
- Liang DH, Yang PC, Koolwal A, Park B.. "United States Patent US2006030777-A-1 Ultrasound image generation method in medical application, involves calculating t-statistic value for each image point and producing enhance image without ultrasound echo amplitudes.", Leland Stanford Junior University, Feb 2, 2006
- Liang DH, Yang PC, Koolwal A, Park B.. "United States Patent S04-114/PROV, US2006030777-A1 T-statistic method for suppressing blood artifact in ultrasound imaging", Leland Stanford Junior University, Aug 1, 2004

- Yang PC. "United States Patent PO3 4625 Protective Cover for Hypodermic Needle.", Sep 1, 1989
- Yang PC. "United States Patent PO3 5125 Protective Cover and Connector for Hypodermic Needle.", Sep 1, 1989

LINKS

- Yang Lab: The Cardiovascular Stem Cell Lab: <http://med.stanford.edu/cvmedicine/research/faculty-labs-link/yanglab.html>
- Get a Second Opinion: <https://stanfordhealthcare.org/second-opinion/overview.html>

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

The emergence of cardiovascular pluripotent stem cells created a paradigm shift in how we approach cardiovascular diseases. This innovation has required a careful evaluation of the interaction between the recipient tissue and small molecules at a fundamental cellular level. Dr. Yang's laboratory is discovering the cellular and molecular biologics of pluripotent stem cells, employing advanced imaging technology. His research effort characterizes the injured myocardium as a biological niche for small molecule and cellular organelle therapy to discover their novel action of mechanism to cure heart failure.

As a physician-scientist, Dr. Yang's research focuses on the translational effort of novel small molecules and cellular organelles from pluripotent stem cells. His laboratory combines restorative molecular biology with novel imaging technology to advance clinical implementation of extracellular vesicles and their molecular content. High sensitivity and exquisite resolution enable robust evaluation of regional cardiovascular restoration and the underlying mechanism of action. Precision medicine, employing endogenous biologics, will create a paradigm shift. His research will provide a requisite validation of the role of the small molecules and personalized therapy to heal the failing heart. Through this focused programmatic effort, he is pioneering the Cardiovascular Regeneration Program at Stanford.

Dr. Yang is a PI of NIH funded Cardiovascular Cell Therapy Research Network designed to conduct multi-center clinical trial of novel biologics. In addition, he leads 3 NIH and 1 CIRM research grants and 4 clinical trials. He has received several prestigious awards, including NIH Career Development Award, NIH Career Enhancement Award, NIH Midcareer Award, and multiple awards from both AHA and ACC. He is a frequent guest speaker and session chair at national and international meetings.

CLINICAL TRIALS

- Combination of Mesenchymal and C-kit+ Cardiac Stem Cells as Regenerative Therapy for Heart Failure, Recruiting
- Efficacy and Safety of Allogeneic Mesenchymal Precursor Cells (Rexlemestrocel-L) for the Treatment of Heart Failure., Recruiting
- Patients With Intermittent Claudication Injected With ALDH Bright Cells, Recruiting
- Efficacy of EVP 1001-1 (SeeMore) in the Assessment of Myocardial Viability in Patients With Cardiovascular Disease, Not Recruiting
- Stem Cell Injection in Cancer Survivors, Not Recruiting
- Study of Dutoglipatin in Combination With Filgrastim in Post-Myocardial Infarction, Not Recruiting
- Transendocardial Injection of Allogeneic-MSC in Patients With Non-Ischemic Dilated Cardiomyopathy, Not Recruiting

Teaching

STANFORD ADVISEES

Postdoctoral Faculty Sponsor

Hiroyuki Inoue, Connor O'Brien

Postdoctoral Research Mentor

Connor O'Brien

Publications

PUBLICATIONS

- **Microvascular Obstruction Identifies a Subgroup of Patients Who Benefit from Stem Cell Therapy Following ST-Elevation Myocardial Infarction.** *American heart journal*
Davidson, S. J., Roncalli, J., Surder, D., Corti, R., Chugh, A. R., Yang, P. C., Henry, T. D., Stanberry, L., Lemarchand, P., Beregi, J. P., Traverse, J. H.
2023
- **Extracellular vesicle-derived circCEBPZOS attenuates postmyocardial infarction remodeling by promoting angiogenesis via the miR-1178-3p/PDPK1 axis.** *Communications biology*
Yu, L., Liang, Y., Zhang, M., Yang, P. C., Hinek, A., Mao, S.
2023; 6 (1): 133
- **Current challenges and future directions for engineering extracellular vesicles for heart, lung, blood and sleep diseases.** *Journal of extracellular vesicles*
Li, G., Chen, T., Dahlman, J., Eniola-Adefeso, L., Ghiran, I. C., Kurre, P., Lam, W. A., Lang, J. K., Marbán, E., Martín, P., Momma, S., Moos, M., Nelson, et al
2023; 12 (2): e12305
- **High-resolution, respiratory-resolved coronary MRA using a Phyllotaxis-reordered variable-density 3D cones trajectory.** *Magnetic resonance imaging*
Koundinyan, S. P., Baron, C. A., Malavé, M. O., Ong, F., Addy, N. O., Cheng, J. Y., Yang, P. C., Hu, B. S., Nishimura, D. G.
2023
- **Angiogenic stem cell delivery platform to augment post-infarction neovasculature and reverse ventricular remodeling.** *Scientific reports*
Shin, H. S., Thakore, A., Tada, Y., Pedroza, A. J., Ikeda, G., Chen, I. Y., Chan, D., Jaatinen, K. J., Yajima, S., Pfrender, E. M., Kawamura, M., Yang, P. C., Wu, et al
2022; 12 (1): 17605
- **Spinning-enabled wireless amphibious origami millirobot.** *Nature communications*
Ze, Q., Wu, S., Dai, J., Leanza, S., Ikeda, G., Yang, P. C., Iaccarino, G., Zhao, R. R.
2022; 13 (1): 3118
- **Regenerating Endothelium and Restoring Microvascular Endothelial Function.** *JACC. Cardiovascular imaging*
Hare, J. M., Yang, P.
2022; 15 (5): 825-827
- **Stem Cell and Exosome Therapy in Pulmonary Hypertension.** *Korean circulation journal*
Oh, S., Jung, J., Ahn, K., Jang, A. Y., Byun, K., Yang, P. C., Chung, W.
2022; 52 (2): 110-122
- **Recommendations for Nomenclature and Definition Of Cell Products Intended for Human Cardiovascular Use.** *Cardiovascular research*
Taylor, D. A., Chacon-Alberty, L., Sampaio, L. C., Del Hierro, M. G., Perin, E. C., Mesquita, F. C., Henry, T. D., Traverse, J. H., Pepine, C. J., Hare, J. M., Murphy, M. P., Yang, P. C., March, et al
2021
- **Dual Contrast Manganese-Enhanced MRI and Gadolinium Delayed-Enhanced MRI Detect Heterogenous Myocardial Viability in Ischemic Cardiomyopathy** *JACC-CARDIOVASCULAR IMAGING*
Tada, Y., Santoso, M. R., Heidary, S., Sano, H., Tachibana, A., Matsuura, Y., Harnish, P., Yang, P. C.
2021; 14 (7): 1474-1476
- **EXOSOMES FROM HUMAN INDUCED PLURIPOTENT STEM CELL-DERIVED CARDIOMYOCYTES (ICMS) AND MESENCHYMAL STEM CELLS (MSCS) RECOVER HEART FUNCTION IN PORCINE ACUTE MYOCARDIAL INFARCTION (MI) MODEL**
Bayardo, N., O'Brien, C., Vaskova, E., Lyons, J., Tada, Y., Yang, P.
ELSEVIER SCIENCE INC.2021: 19
- **MIR-20B AND-92A ENHANCES CARDIOMYOCYTE CELL CYCLE RE-ENTRY AND PROLIFERATION IN THE ISCHEMIC MYOCARDIUM**
Jung, J., Ikeda, G., Tada, Y., Yang, P.
ELSEVIER SCIENCE INC.2021: 175
- **A Phase II Study of Autologous Mesenchymal Stromal Cells and c-kit Positive Cardiac Cells, Alone or in Combination, in Patients with Ischemic Heart Failure: The CCTRN CONCERT-HF Trial.** *European journal of heart failure*

- Bolli, R., Mitrani, R. D., Hare, J. M., Pepine, C. J., Perin, E. C., Willerson, J. T., Traverse, J. H., Henry, T. D., Yang, P. C., Murphy, M. P., March, K. L., Schulman, I. H., Ikram, et al
2021
- **Comparative analysis on the anti-inflammatory/immune effect of mesenchymal stem cell therapy for the treatment of pulmonary arterial hypertension.** *Scientific reports*
Oh, S. n., Jang, A. Y., Chae, S. n., Choi, S. n., Moon, J. n., Kim, M. n., Spiekerkoetter, E. n., Zamanian, R. T., Yang, P. C., Hwang, D. n., Byun, K. n., Chung, W. J.
2021; 11 (1): 2012
 - **Mitochondria-Rich Extracellular Vesicles Rescue Patient-Specific Cardiomyocytes From Doxorubicin Injury: Insights Into the SENECA Trial.** *JACC CardioOncology*
O'Brien, C. G., Ozen, M. O., Ikeda, G., Vaskova, E., Jung, J. H., Bayardo, N., Santoso, M. R., Shi, L., Wahlquist, C., Jiang, Z., Jung, Y., Zeng, Y., Egan, et al
2021; 3 (3): 428-440
 - **Therapeutic Applications of Extracellular Vesicles for Myocardial Repair.** *Frontiers in cardiovascular medicine*
Liu, C., Bayado, N., He, D., Li, J., Chen, H., Li, L., Li, J., Long, X., Du, T., Tang, J., Dang, Y., Fan, Z., Wang, et al
1800; 8: 758050
 - **Peripheral Blood Biomarkers Associated With Improved Functional Outcome in Patients With Chronic Left Ventricular Dysfunction: A Biorepository Evaluation of the FOCUS-CCTRN Trial.** *Frontiers in cardiovascular medicine*
Chacon Alberty, L., Perin, E. C., Willerson, J. T., Gahremanpour, A., Bolli, R., Yang, P. C., Traverse, J. H., Lai, D., Pepine, C. J., Taylor, D. A.
2021; 8: 698088
 - **miR-106a-363 cluster in extracellular vesicles promotes endogenous myocardial repair via Notch3 pathway in ischemic heart injury.** *Basic research in cardiology*
Jung, J. H., Ikeda, G. n., Tada, Y. n., von Bornstädt, D. n., Santoso, M. R., Wahlquist, C. n., Rhee, S. n., Jeon, Y. J., Yu, A. C., O'brien, C. G., Red-Horse, K. n., Appel, E. A., Mercola, et al
2021; 116 (1): 19
 - **Mitochondria-Rich Extracellular Vesicles From Autologous Stem Cell-Derived Cardiomyocytes Restore Energetics of Ischemic Myocardium.** *Journal of the American College of Cardiology*
Ikeda, G. n., Santoso, M. R., Tada, Y. n., Li, A. M., Vaskova, E. n., Jung, J. H., O'Brien, C. n., Egan, E. n., Ye, J. n., Yang, P. C.
2021; 77 (8): 1073–88
 - **Precise Measurement of Physical Activities and High-Impact Motion: Feasibility of Smart Activity Sensor System** *IEEE SENSORS JOURNAL*
Liu, H., Chuang, Y., Liu, C., Yang, P. C., Fuh, C.
2021; 21 (1): 568–80
 - **Allogeneic Mesenchymal Cell Therapy in Anthracycline-Induced Cardiomyopathy Heart Failure Patients: The CCTRN SENECA Trial.** *JACC CardioOncology*
Bolli, R., Perin, E. C., Willerson, J. T., Yang, P. C., Traverse, J. H., Henry, T. D., Pepine, C. J., Mitrani, R. D., Hare, J. M., Murphy, M. P., March, K. L., Ikram, S., Lee, et al
2020; 2 (4): 581–95
 - **A Phase I Study of Allogeneic Mesenchymal Stem Cell Therapy in Patients with Heart Failure Secondary to Anthracycline-induced Cardiomyopathy: The Cctrn Stem Cell Injection in Cancer Survivors (Seneca) Trial**
Bolli, R., Perin, E. C., Willerson, J. T., Yang, P. C., Traverse, J. H., Henry, T. D., Pepine, C. J., Mitrani, R. D., Hare, J. M., Murphy, M. P., Lima, J. A., Gee, A. P., Taylor, et al
CHURCHILL LIVINGSTONE INC MEDICAL PUBLISHERS.2020: S97
 - **SULFATED DEXTRAN-COATED IRON OXIDE NANOPARTICLES DETECT INFLAMMATION IN THE PERI-INFARCT REGION POST-ACUTE MYOCARDIAL INFARCTION**
Tada, Y., Ikeda, G., Louie, A., Yang, P.
ELSEVIER SCIENCE INC.2020: 1792
 - **MITOCHONDRIA CONTAINING EXTRACELLULAR VESICLES FROM AUTOLOGOUS INDUCED PLURIPOTENT STEM CELL DERIVED CARDIOMYOCYTES RESTORE BIOENERGETICS IN ISCHEMIC MYOCARDIUM**
Ikeda, G., Santoso, M., Tada, Y., Vaskova, E., O'Brien, C. G., Jung, J., Yang, P. C.
ELSEVIER SCIENCE INC.2020: 3659
 - **Exosomes From Induced Pluripotent Stem Cell-Derived Cardiomyocytes Promote Autophagy for Myocardial Repair.** *Journal of the American Heart Association*

- Santos, M. R., Ikeda, G., Tada, Y., Jung, J., Vaskova, E., Sierra, R. G., Gati, C., Goldstone, A. B., von Bornstaedt, D., Shukla, P., Wu, J. C., Wakatsuki, S., Woo, et al
2020; 9 (6): e014345
- **Manganese-enhanced T1 mapping to quantify myocardial viability: validation with 18F-fluorodeoxyglucose positron emission tomography.** *Scientific reports*
Spath, N. n., Tavares, A. n., Gray, G. A., Baker, A. H., Lennen, R. J., Alcaide-Corral, C. J., Dweck, M. R., Newby, D. E., Yang, P. C., Jansen, M. A., Semple, S. I.
2020; 10 (1): 2018
 - **Sacubitril/Valsartan Improves Cardiac Function and Decreases Myocardial Fibrosis Via Downregulation of Exosomal miR-181a in a Rodent Chronic Myocardial Infarction Model.** *Journal of the American Heart Association*
Vaskova, E. n., Ikeda, G. n., Tada, Y. n., Wahlquist, C. n., Mercola, M. n., Yang, P. C.
2020: e015640
 - **Ferumoxylol-enhanced cardiovascular magnetic resonance detection of early stage acute myocarditis.** *Journal of cardiovascular magnetic resonance : official journal of the Society for Cardiovascular Magnetic Resonance*
Tada, Y., Tachibana, A., Heidary, S., Yang, P. C., McConnell, M. V., Dash, R.
2019; 21 (1): 77
 - **Iron Oxide Labeling and Tracking of Extracellular Vesicles** *MAGNETOCHEMISTRY*
Tada, Y., Yang, P. C.
2019; 5 (4)
 - **Meta-analysis of short- and long-term efficacy of mononuclear cell transplantation in patients with myocardial infarction.** *American heart journal*
Yang, D., O'Brien, C. G., Ikeda, G., Traverse, J. H., Taylor, D. A., Henry, T. D., Bolli, R., Yang, P. C.
2019; 220: 155–75
 - **Combined T2 -preparation and multidimensional outer volume suppression for coronary artery imaging with 3D cones trajectories.** *Magnetic resonance in medicine*
Zeng, D. Y., Baron, C. A., Malave, M. O., Kerr, A. B., Yang, P. C., Hu, B. S., Nishimura, D. G.
2019
 - **Broad Genetic Testing in a Clinical Setting Uncovers a High Prevalence of Titin Loss-of-Function Variants in Very Early-Onset Atrial Fibrillation.** *Circulation. Genomic and precision medicine*
Goodyer, W. R., Dunn, K., Caleshu, C., Jackson, M., Wylie, J., Moscarello, T., Platt, J., Reuter, C., Smith, A., Trela, A., Ceresnak, S. R., Motonaga, K. S., Ashley, et al
2019
 - **Stem Cell-Derived Exosomes Protect Astrocyte Cultures From in vitro Ischemia and Decrease Injury as Post-stroke Intravenous Therapy.** *Frontiers in cellular neuroscience*
Sun, X., Jung, J. H., Arvola, O., Santos, M. R., Giffard, R. G., Yang, P. C., Stary, C. M.
2019; 13: 394
 - **Stem Cell-Derived Exosomes Protect Astrocyte Cultures From in vitro Ischemia and Decrease Injury as Post-stroke Intravenous Therapy** *FRONTIERS IN CELLULAR NEUROSCIENCE*
Sun, X., Jung, J., Arvola, O., Santos, M. R., Giffard, R. G., Yang, P. C., Stary, C. M.
2019; 13
 - **Myocardial viability of the peri-infarct region measured by T1 mapping post manganese-enhanced MRI correlates with LV dysfunction** *INTERNATIONAL JOURNAL OF RADIOLOGY*
Tada, Y., Heidary, S., Tachibana, A., Zaman, J., Neofytou, E., Dash, R., Wu, J. C., Yang, P. C.
2019; 281: 8–14
 - **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., Santos, M., Jung, J., Ikeda, G., Demirci, U., Yang, P.
ELSEVIER SCIENCE INC.2019: 688
 - **Whole-heart coronary MR angiography using a 3D cones phyllotaxis trajectory** *MAGNETIC RESONANCE IN MEDICINE*
Malave, M. O., Baron, C. A., Addy, N., Cheng, J. Y., Yang, P. C., Hu, B. S., Nishimura, D. G.
2019; 81 (2): 1092–1103

- **Myocardial viability of the peri-infarct region measured by T1 mapping post manganese-enhanced MRI correlates with LV dysfunction.** *International journal of cardiology*
Tada, Y., Heidary, S., Tachibana, A., Zaman, J., Neofytou, E., Dash, R., Wu, J. C., Yang, P. C.
2019
- **Defining genotype-phenotype relationships in patients with hypertrophic cardiomyopathy using cardiovascular magnetic resonance imaging.** *PLoS one*
Miller, R. J., Heidary, S. n., Pavlovic, A. n., Schlachter, A. n., Dash, R. n., Fleischmann, D. n., Ashley, E. A., Wheeler, M. T., Yang, P. C.
2019; 14 (6): e0217612
- **Exosomal miR-106a-363 Cluster Repairs the Injured Myocardium**
Jung, J., Tada, Y., Wahlquist, C., Bornstadt, D., Santoso, M., Woo, J., Mercola, M., Yang, P.
LIPPINCOTT WILLIAMS & WILKINS.2018
- **Microvesicles Rescue Cardiomyocytes From Doxorubicin Injury in a Patient Specific Model of Anthracycline Induced Cardiomyopathy**
O'Brien, C. G., Shi, L., Santoso, M. R., Jung, J., Vaskova, E., Ikeda, G., Ozen, M. O., Demirci, U., Yang, P. C.
LIPPINCOTT WILLIAMS & WILKINS.2018
- **Mitochondria-Containing Extracellular Vesicles Restore Intracellular ATP Production and Promote Viability in Injured Induced Pluripotent Stem Cell-Derived Cardiomyocytes**
Ikeda, G., Santoso, M. R., Tada, Y., Vaskova, E., Jung, J., Galen, C. O., Shi, L., Yang, P.
LIPPINCOTT WILLIAMS & WILKINS.2018
- **Exosomes From Induced Pluripotent Stem Cell-Derived Cardiomyocytes Salvage the Injured Myocardium by Modulation of Autophagy**
Santoso, M. R., Tada, Y., Ikeda, G., Jung, J., Vaskova, E., Sierra, R. G., Gati, C., Goldstone, A. B., Bornstaedt, D., Shukla, P., Wu, J. C., Wakatsuki, S., Woo, et al
LIPPINCOTT WILLIAMS & WILKINS.2018
- **Whole-heart coronary MR angiography using a 3D cones phyllotaxis trajectory.** *Magnetic resonance in medicine*
Malave, M. O., Baron, C. A., Addy, N. O., Cheng, J. Y., Yang, P. C., Hu, B. S., Nishimura, D. G.
2018
- **Rationale and Design of the SENECA (StEm cell iNjECTION in cAnCer survivors) Trial** *AMERICAN HEART JOURNAL*
Bolli, R., Hare, J. M., Henry, T. D., Lenneman, C. G., March, K. L., Miller, K., Pepine, C. J., Perin, E. C., Traverse, J. H., Willerson, J. T., Yang, P. C., Gee, A. P., Lima, et al
2018; 201: 54–62
- **Rationale and Design of the CONCERT-HF Trial (Combination of Mesenchymal and c-kit(+) Cardiac Stem Cells As Regenerative Therapy for Heart Failure)** *CIRCULATION RESEARCH*
Bolli, R., Hare, J. M., March, K. L., Pepine, C. J., Willerson, J. T., Perin, E. C., Yang, P. C., Henry, T. D., Traverse, J. H., Mitrani, R. D., Khan, A., Hernandez-Schulman, I., Taylor, et al
2018; 122 (12): 1703–15
- **MANGANESE-ENHANCED T1 MAPPING IN MYOCARDIAL INFARCTION: VALIDATION WITH F-18-FDG PET/MR**
Spath, N. B., Tavares, A., Gray, G. A., Dweck, M. R., Newby, D. E., Yang, P. C., Jansen, M. A., Semple, S. I.
BMJ PUBLISHING GROUP.2018: A9
- **EXOSOMES PRODUCED BY HUMAN AMNIOTIC MESENCHYMAL STEM CELL-DERIVED INDUCED PLURIPOTENT STEM CELLS MODULATE IMMUNE RESPONSE IN MURINE MYOCARDIAL INJURY MODEL**
Jang, A., Seo, H., Bornstaedt, D., Jung, J., Vaskova, E., Yang, P.
ELSEVIER SCIENCE INC.2018: 82
- **EXOSOMAL MIR-106A-363 CLUSTER FROM THE HYPOXIC HUMAN IPSC-DERIVED CARDIOMYOCYTES RESTORE THE ISCHEMIC MYOCARDIUM**
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PRESENTATIONS

- Biological Molecular Therapy using Exosomes - Stanford Cardiology Grand Rounds (10/1/2016)
- Personalized Biological Medicine - Frontiers in Cardiovascular Medicine 3rd Annual International Symposium
- Exosomes as a model of disease and potential therapy for the failing heart - AHA Scientific Sessions (11/2016)
- Exosomes to restore the injured heart - Anesthesiology Conference (5/1/2016)
- Research Progress of Molecular Biologics and Precision Medicine in USA - First International Stem Cell and Precision Medicine Summit (3/1/2016)
- Cardiovascular MRI: Myth or Truth - Department of Cell Biology and Molecular Medicine Seminar Series Rutgers University (12/2015)

- Cardiac MRI and Stem Cell Therapy - Molecular Medicine of the Heart Master Program in the Graduate School of Biomedical Sciences, Rutgers University (12/2012)
- Regenerative Medicine: iPSC Derived Cardiomyocytes - Frontiers in Cardiovascular Medicine 2nd Annual Session (July 2015)
- Myocardial Viability in Cell Therapy - AHA Scientific Sessions (November 2009)
- Clinical and Commercial Promise of Stem Cell Therapy - Saliat, Inc (6/2015)
- Translation of Cardiovascular Stem Cells - Jinan University (June 2015)