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CLINICAL OFFICES

- **Thoracic Surgery**

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ACADEMIC CONTACT INFORMATION

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Bio

CLINICAL FOCUS

- Thoracic Surgery

ACADEMIC APPOINTMENTS

- Assistant Professor - Med Center Line, Cardiothoracic Surgery
- Member, Cardiovascular Institute

PROFESSIONAL EDUCATION

- Fellowship: Stanford University Thoracic Surgery Fellowship (2018) CA
- Board Certification: Thoracic Surgery, American Board of Thoracic Surgery (2019)
- Board Certification, Cardiothoracic Surgery , American Board of Thoracic Surgery (2019)
- Fellowship: Stanford University Dept of Cardiothoracic Surgery (2018) CA
- Board Certification: General Surgery, American Board of Surgery (2016)
- Residency: Hospital of University of Pennsylvania Surgery Residency (2016) PA
- Medical Education: Columbia University College of Physicians and Surgeons (2008) NY

Teaching

COURSES

2020-21

- Introduction to Cardiothoracic Surgery: CTS 203 (Spr)

Publications

PUBLICATIONS

- **Bioengineered analog of stromal cell-derived factor 1# preserves the biaxial mechanical properties of native myocardium after infarction.** *Journal of the mechanical behavior of biomedical materials*
  Wang, H. n., Wisneski, A. n., Paulsen, M. J., Imbrie-Moore, A. n., Wang, Z. n., Xuan, Y. n., Hernandez, H. L., Lucian, H. J., Eskandari, A. n., Thakore, A. D., Farry, J. M., Hironaka, C. E., von Bornstaedt, et al
  2019; 96: 165–71

- **SDF 1-alpha Attenuates Myocardial Injury Without Altering the Direct Contribution of Circulating Cells.** *Journal of cardiovascular translational research*
  Goldstone, A. B., Burnett, C. E., Cohen, J. E., Paulsen, M. J., Eskandari, A., Edwards, B. E., Ingason, A. B., Steele, A. N., Patel, J. B., MacArthur, J. W., Shizuru, J. A., Woo, Y. J.
  2018

- **The tip of the iceberg: Evaluating the mechanism behind dehiscence of mitral annuloplasty rings.** *The Journal of thoracic and cardiovascular surgery*
  MacArthur, J. W., Boyd, J.
  2017

- **Stem Cell Therapy: Healing or Hype? Why Stem Cell Delivery Doesn't Work** *CIRCULATION RESEARCH*
  Steele, A. N., MacArthur, J. W., Woo, Y.
  2017; 120 (12): 1868–70

- **Injectable Bioengineered Hydrogel Therapy in the Treatment of Ischemic Cardiomyopathy.** *Current treatment options in cardiovascular medicine*
  MacArthur, J. W., Steele, A. N., Goldstone, A. B., Cohen, J. E., Hiesinger, W., Woo, Y. J.
  2017; 19 (4): 30-?

- **An innovative biologic system for photon-powered myocardium in the ischemic heart.** *Science advances*
  Cohen, J. E., Goldstone, A. B., Paulsen, M. J., Shudo, Y. n., Steele, A. N., Edwards, B. B., Patel, J. B., MacArthur, J. W., Hopkins, M. S., Burnett, C. E., Jaatinen, K. J., Thakore, A. D., Farry, et al
  2017; 3 (6): e1603078

- **Biochemically engineered stromal cell-derived factor 1-alpha analog increases perfusion in the ischemic hind limb.** *Journal of vascular surgery*
  Edwards, B. B., Fairman, A. S., Cohen, J. E., Macarthur, J. W., Goldstone, A. B., Woo, J. B., Hiesinger, W., Woo, Y. J.
  2016; 64 (4): 1093-1099

- **Cell transplantation in heart failure: where do we stand in 2016?** *EUROPEAN JOURNAL OF CARDIO-THORACIC SURGERY*
  MacArthur, J. W., Goldstone, A. B., Cohen, J. E., Hiesinger, W., Woo, Y.
  2016; 50 (3): 396–99

- **Isolation and trans-differentiation of mesenchymal stromal cells into smooth muscle cells: Utility and applicability for cell-sheet engineering.** *Cytotherapy*
  Shudo, Y., Cohen, J. E., Goldstone, A. B., MacArthur, J. W., Patel, J., Edwards, B. B., Hopkins, M. S., Steele, A. N., Joubert, L., Miyagawa, S., Sawa, Y., Woo, Y. J.
  2016; 18 (4): 510-517

- **A Tissue-Engineered Chondrocyte Cell Sheet Induces Extracellular Matrix Modification to Enhance Ventricular Biomechanics and Attenuate Myocardial Stiffness in Ischemic Cardiomyopathy** *TISSUE ENGINEERING PART A*
  Shudo, Y., Cohen, J. E., MacArthur, J. W., Goldstone, A. B., Otsuru, S., Trubelja, A., Patel, J., Edwards, B. B., Hung, G., Fairman, A. S., Brusalis, C., Hiesinger, W., Atluri, et al
  2015; 21 (19-20): 2515-2525

- **Evaluation of late aortic insufficiency with continuous flow left ventricular assist device†.** *European journal of cardio-thoracic surgery*
  Hiraoka, A., Cohen, J. E., Shudo, Y., Macarthur, J. W., Howard, J. L., Fairman, A. S., Atluri, P., Kirkpatrick, J. N., Woo, Y. J.
  2015; 48 (3): 400-406

- **A "Repair-All" Strategy for Degenerative Mitral Valve Disease Safely Minimizes Unnecessary Replacement** *ANNALS OF THORACIC SURGERY*
  Goldstone, A. B., Cohen, J. E., Howard, J. L., Edwards, B. B., Acker, A. L., Hiesinger, W., MacArthur, J. W., Atluri, P., Woo, Y. J.
  2015; 99 (6): 1983-1991

- **A "Repair-All" Strategy for Degenerative Mitral Valve Disease Safely Minimizes Unnecessary Replacement.** *Annals of thoracic surgery*

Goldstone, A. B., Cohen, J. E., Howard, J. L., Edwards, B. B., Acker, A. L., Hiesinger, W., Macarthur, J. W., Atluri, P., Woo, Y. J.
2015; 99 (6): 1983-1990

- **Non-resectional leaflet remodeling mitral valve repair preserves leaflet mobility: A quantitative echocardiographic analysis of mitral valve configuration** *INTERNATIONAL JOURNAL OF CARDIOLOGY*
  Shudo, Y., Cohen, J. E., MacArthur, J. W., Goldstone, A. B., Hiraoka, A., Howard, J., Fairman, A. S., Patel, J., Edwards, B. B., Atluri, P., Woo, Y. J.
  2015; 186: 16-18

- **Shear-Thinning Supramolecular Hydrogels with Secondary Autonomous Covalent Crosslinking to Modulate Viscoelastic Properties In Vivo** *ADVANCED FUNCTIONAL MATERIALS*
  Rodell, C. B., MacArthur, J. W., Dorsey, S. M., Wade, R. J., Wang, L. L., Woo, Y. J., Burdick, J. A.
  2015; 25 (4): 636-644

- **Shear-Thinning Supramolecular Hydrogels with Secondary Autonomous Covalent Crosslinking to Modulate Viscoelastic Properties In Vivo.** *Advanced functional materials*
  Rodell, C. B., MacArthur, J. W., Dorsey, S. M., Wade, R. J., Wang, L. L., Woo, Y. J., Burdick, J. A.
  2015; 25 (4): 636–44

- **Natural history of coexistent tricuspid regurgitation in patients with degenerative mitral valve disease: Implications for future guidelines** *JOURNAL OF THORACIC AND CARDIOVASCULAR SURGERY*
  Goldstone, A. B., Howard, J. L., Cohen, J. E., MacArthur, J. W., Atluri, P., Kirkpatrick, J. N., Woo, Y. J.
  2014; 148 (6): 2802-2809

- **Tissue-engineered, hydrogel-based endothelial progenitor cell therapy robustly revascularizes ischemic myocardium and preserves ventricular function.** *journal of thoracic and cardiovascular surgery*
  Atluri, P., Miller, J. S., Emery, R. J., Hung, G., Trubelja, A., Cohen, J. E., Lloyd, K., Han, J., Gaffey, A. C., MacArthur, J. W., Chen, C. S., Woo, Y. J.
  2014; 148 (3): 1090-1098

- **Combined heart and liver transplantation can be safely performed with excellent short- and long-term results.** *Annals of thoracic surgery*
  Atluri, P., Gaffey, A., Howard, J., Phillips, E., Goldstone, A. B., Hornsby, N., MacArthur, J. W., Cohen, J. E., Gutsche, J., Woo, Y. J.
  2014; 98 (3): 858-862

- **Bioengineered Stromal Cell- Derived Factor-1 alpha Analogue Delivered as an Angiogenic Therapy Significantly Restores Viscoelastic Material Properties of Infarcted Cardiac Muscle** *JOURNAL OF BIOMECHANICAL ENGINEERING-TRANSACTIONS OF THE ASME*
  Trubelja, A., MacArthur, J. W., Sarver, J. J., Cohen, J. E., Hung, G., Shudo, Y., Fairman, A. S., Patel, J., Edwards, B. B., Damrauer, S. M., Hiesinger, W., Atluri, P., Woo, et al
  2014; 136 (8)

- **A bioengineered hydrogel system enables targeted and sustained intramyocardial delivery of neuregulin, activating the cardiomyocyte cell cycle and enhancing ventricular function in a murine model of ischemic cardiomyopathy.** *Circulation. Heart failure*
  Cohen, J. E., Purcell, B. P., Macarthur, J. W., Mu, A., Shudo, Y., Patel, J. B., Brusalis, C. M., Trubelja, A., Fairman, A. S., Edwards, B. B., Davis, M. S., Hung, G., Hiesinger, et al
  2014; 7 (4): 619-626

- **Preclinical evaluation of the engineered stem cell chemokine stromal cell-derived factor 1a analog in a translational ovine myocardial infarction model.** *Circulation research*
  Macarthur, J. W., Cohen, J. E., McGarvey, J. R., Shudo, Y., Patel, J. B., Trubelja, A., Fairman, A. S., Edwards, B. B., Hung, G., Hiesinger, W., Goldstone, A. B., Atluri, P., Wilensky, et al
  2014; 114 (4): 650-659