

## **Education**

- Sept 1990 - May 1994 University of Colorado, Boulder, Colorado  
BS in Chemical Engineering
- Sept 2000 – May 2005 Boston University, Boston, Massachusetts  
PhD in Biomedical Engineering: “Multiscale analysis of arterial bypass remodeling: Mechanical characterization and influence of endothelial injury on VSMC proliferation”. Advisor: Dr. Joyce Y. Wong, Associate Professor of Biomedical Engineering, Boston University.

## **Employment and Training**

- May 1993 – June 2000 Cobe Cardiovascular, Inc., Arvada, Colorado  
Product Engineer, Cardioplegia Products
- Oct 2000 – Sept 2002 Brigham & Women’s Hospital, Boston, Massachusetts  
Division of Vascular Surgery  
Research Fellow investigating bypass graft mechanics  
Advisor: Dr. Michael Conte, Vascular Surgeon, Brigham and Women’s Hospital and Assistant Professor of Surgery, Harvard Medical School
- Sept 2002 – June 2005 Boston University, Boston, Massachusetts  
Department of Biomedical Engineering Advisor: Dr. Joyce Wong  
Research Assistant in biomimetic materials engineering.
- July 2005 – July 2008 University of California, San Diego, California  
Postdoctoral Fellow in cardiac myocyte mechanics  
Advisors: Dr. Jeffrey H. Omens, Adjunct Professor of Medicine and Bioengineering  
Dr. Andrew D McCulloch, Professor of Bioengineering
- July 2008 – Mar 2015 Rice University, Houston, Texas  
Assistant Professor of Bioengineering
- July 2008 – June 2016 Texas Children’s Hospital, Houston, Texas  
Director, Pediatric Cardiac Bioengineering Laboratory
- Oct 2008 – June 2016 Baylor College of Medicine, Houston, Texas  
Adjunct Assistant Professor of Surgery
- Aug 2010 – June 2016 Baylor College of Medicine, Houston, Texas  
Adjunct Assistant Professor of Molecular Physiology and Biophysics
- Mar 2015 – June 2016 Rice University, Houston, Texas  
Associate Professor of Bioengineering
- July 2020 – July 2024 University of Colorado Denver | Anschutz Medical Campus, Aurora, CO  
Department of Bioengineering Graduate Program Director
- July 2016 – present University of Colorado Denver | Anschutz Medical Campus, Aurora, CO  
Associate Professor of Bioengineering
- July 2016 – present University of Colorado Denver | Anschutz Medical Campus, Aurora, CO  
Associate Professor of Pediatrics

## **Honors and Awards**

- 2000 President's Fellowship for Predoctoral Study, Boston University
- 2001 Research Fellowship in Surgery, Brigham & Women's Hospital
- 2009 Medical Innovations Award, Institute for Biosciences and Bioengineering, Rice University
- 2010 Collaborative Research Fund Award, Virginia & L.E. Simmons Family Foundation
- 2011 Early Career Development Award (CAREER), National Science Foundation
- 2012 Collaborative Research Award, John S. Dunn Foundation

- 2014 Young Innovators in Biomedical Engineering Award, Wallace H. Coulter Department of Biomedical Engineering at Georgia Tech and Emory University
- 2014 Pilot Award, Texas Medical Center Cardiovascular Research Institute

### **Other Experience and Professional Memberships**

- 2005 – present Member, Biomedical Engineering Society (BMES)
- 2020 - present Member, Ethics Education Committee, BMES
- 2009 – present Member, Tissue Engineering and Regenerative Medicine International Society (TERMIS)
- 2015 – 2017 Membership Committee, TERMIS
- 2017 – 2021 Chair, Biomaterials Working Group, TERMIS
- 2009 – present Member, Society for Biomaterials (SFB)
- 2013 – 2017 Secretary/Treasurer, Tissue Engineering Special Interest Group, SFB
- 2017 – 2019 Vice Chair, Tissue Engineering Special Interest Group, SFB
- 2019 – 2021 Chair, Tissue Engineering Special Interest Group, SFB
- 2010 - Associate Member, Society of Thoracic Surgeons

### **Research**

#### **Publications H-index = 27**

1. **Jacot JG**, Abdullah I, Belkin M, Gerhard-Herman M, Gaccione P, Polak JF, Donaldson MC, Whittemore AD & Conte MS. Early adaptation of human lower extremity vein grafts: Wall stiffness changes accompany geometric remodeling. *Journal of Vascular Surgery*. 39:547 (2004).
2. **Jacot JG**, Dianis S, Schnall J & Wong JY. A simple microindentation technique for mapping the microscale compliance of soft hydrated materials and tissues. *Journal of Biomedical Materials Research*. 79(3):485-94. (2006).
3. Owens CD, Wake N, **Jacot JG**, Gerhard-Herman M, Belkin M, Creager MA & Conte MS. Early biomechanical changes in lower extremity vein grafts – Distinct temporal phases of remodeling and wall stiffness. *Journal of Vascular Surgery*. 44(4):740-6. (2006).
4. Leach JB, Brown XQ, **Jacot JG**, DiMilla PA & Wong JY. Neurite outgrowth and branching of PC12 cells on very soft substrates sharply decreases below a threshold of substrate rigidity. *Journal of Neural Engineering*. 4:26-34. (2007).
5. **Jacot JG** & Wong JY. Endothelial injury induces vascular smooth muscle cell proliferation in highly localized regions of a direct contact co-culture system. *Cell Biochemistry and Biophysics*. 52(1):37-46. (2008)
6. **Jacot JG**, McCulloch AD & Omens JH. Substrate stiffness affects the functional maturation of neonatal rat ventricular myocytes. *Biophysical Journal*. 95(7):3479-3487 (2008).
7. Kita-Matsui H, Barcova M, Prigozhina N, Salomonis N, Wei K, **Jacot JG**, Nelson B, Haverlsag R, McCulloch A, Conklin B, Price JH, Chen HSV & Mercola M. Lentiviral vectors and protocols for creation of stable hESC lines for fluorescent tracking and drug resistance selection of cardiomyocytes. *PLoS ONE*. 4(4):e5046. (2009).
8. **Jacot JG**, Raskin AJ, Omens JH, McCulloch AD & Tung L. Mechanotransduction in Cardiac and Stem Cell Derived Cardiac Cells. Book Chapter In: Mechanosensitivity in Cells and Tissues 3<sup>rd</sup> ed., eds. Kamkin A. & Kiseleva I. (2009).
9. **Jacot JG**, Kita-Matsuo H, Wei K, Chen HSV, Omens JH, Mercola M, & McCulloch AD. Cardiac myocyte force development during differentiation and maturation. *Annals of the New York Academy of Sciences*. 1188:121-127 (2010).
10. **Jacot JG\***, Martin JC & Hunt DL (\*Corresponding Author). Mechanobiology of cardiac differentiation and development. *Journal of Biomechanics*. 43:93-98 (2010).

11. Pok S & **Jacot JG**. Biomaterials Advances in Patches for Congenital Heart Defect Repair. *Journal of Cardiovascular Translational Research*. 4(5):646-654 (2011).
12. Benavides OM, Petsche JJ, Moise Jr KJ, Johnson A & **Jacot JG**. Evaluation of endothelial cells differentiated from amniotic fluid-derived stem cells. *Tissue Engineering Part A*. 18(11-12):1123-1131 (2012). PMID 22250756.
13. Pok S, Myers JD, Madihally SV & **Jacot JG**. A multi-layered scaffold of a chitosan and gelatin hydrogel supported by a PCL core for cardiac tissue engineering. *Acta Biomaterialia*. 9:5630-5642 (2013). PMID: 23128158.
14. Petsche Connell JJ, Augustini E, Moise Jr KJ, Johnson A & **Jacot JG**. Formation of functional gap junctions in amniotic fluid-derived stem cells induced by neonatal rat cardiomyocytes. *Journal of Cellular and Molecular Medicine*. 17(6):774-81. (2013) PMID: 23634988
15. Petsche Connell JJ, Camci-Unal G, Khademhosseini A, **Jacot JG**. Amniotic fluid-derived stem cells for cardiovascular tissue engineering applications. *Tissue Engineering Part B*. 19(4):368-79. (2013) PMID: 23350771.
16. Mondy WL, Casteleyn C, van Loo D, Raja M, Singleton C & **Jacot JG**. Osmium Tetroxide Enhancement of Micro-CT Vascular Corrosion Cast Images for use in the Computer Aided Design of Microvasculature. *Microscopy and Microanalysis*. 19(6):1416-27. (2013) PMID 24103507.
17. Pok S, Benavides OM, Hallal P & **Jacot JG**. Use of myocardial matrix in a chitosan-based full thickness heart patch. *Tissue Engineering Part A*. 20(13-14):1877-87. (2014). PMID 24433519.
18. Klouda L, Tsao C & **Jacot JG**. Tissue Engineering in Congenital Heart Defects. *Challenges in Regenerative Medicine*. 1(1):2-21. (2014)
19. Pok S & **Jacot JG**. New Evidence that Strain Energy in Adherent Cells Depends Only on Cell Area. *Biophysical Journal*. 107(4):798-99. (2014).
20. Gao Y, Petsche Connell J, Wadhwa L, Ruano R & **Jacot JG**. Amniotic fluid-derived stem cells demonstrated cardiogenic potential in indirect co-culture with human cardiac cells. *Annals of Biomedical Engineering*. Dec;42(12):2490-500. (2014). Note: Cover image.
21. Pok S, Vitale F, Eichmann SL, Benavides OM, Pasquali M & **Jacot JG**. Biocompatible Carbon Nanotube – Chitosan Scaffold Matching the Electrical Conductivity of the Heart. *ACS Nano*. 8(10):9822-9832. (2014)
22. Weia B, Adachi I & **Jacot JG**. Clinical and Molecular Traits of Reverse Remodeling with Ventricular Assist Device in Children in Comparison to Adults. *Artificial Organs*. 39(8):691-700. (2015).
23. Benavides OM, Quinn JP, Pok S, Petsche Connell JJ, Ruano R & **Jacot JG**. Capillary-like Network Formation by Human Amniotic Fluid-Derived Stem Cells within Fibrin/Poly(Ethylene Glycol) Hydrogel. *Tissue Engineering Part A*. 21(7-8):1185-1194 (2014).
24. Benavides OM, Brooks A, Cho S, Connell JP, Ruano R & **Jacot JG**. *In Situ* Vascularization of Injectable Fibrin/Poly(Ethylene Glycol) Hydrogels by Human Amniotic Fluid-Derived Stem Cells. *Journal of Biomaterials Research, Part A*. 103(8):2645-2653. (2015).
25. Gao Y & **Jacot JG**. Stem cells and progenitor cells for tissue engineered solutions to congenital heart defects. *Biomarker Insights*. 10(1):139-146. (2015).
26. Agrawal A, Adetiba O, Kim H, Chen H, **Jacot JG** & Verduzco R. Liquid Crystal Elastomers for *in vitro* Strain Induced Alignment of Cardiomyocytes. *Journal of Materials Research*. 30(4):452-462 (2014).
27. Petsche Connell J, Ruano R & **Jacot JG**. Amniotic fluid-derived stem cells demonstrate limited cardiac differentiation following small molecule-based modulation of Wnt signaling pathway. *Biomedical Materials* 10(3):034103. (2015).
28. Scully BB, Fan C, Grigoryan B, **Jacot JG**, Vick GW III, Kim J, Fraser CD Jr., Grande-Allen KJ & Morales DLS. In Vivo Remodeling of a Small Intestinal Submucosa Patch into Functional Myocardium in an Ovine Model. *Journal of Biomaterials Research, Part B*. 104(8) 1713–1720. (2016).
29. Connell JP, Augustini E, Cheng S, Benavides OM, Ruano R & **Jacot JG**. Effect of passage, isolation, and media on differentiation capacity and stem cell marker expression in amniotic fluid-derived stem cells. *Cellular and Molecular Bioengineering*. 9 (1), 139-150 (2016)

30. Kim H, Zhu B, Chen H, Adetiba O, Agrawal A, Ajayan P, **Jacot JG** & Verduzco R. Preparation of monodomain liquid crystal elastomers and liquid crystal elastomer nanocomposites. *Journal of Visualized Experiments (JoVE)*. 108:e53688-e53688. (2015). Cited by 1.
31. Boothe SD, Myers JD, Pok S, Sun J, Xi Y, Cheng J & **Jacot JG**. The Effect of Substrate Stiffness on Cardiomyocyte Action Potentials. *Cell Biochemistry and Biophysics*. 74(4):527-535. (2016)
32. Krishnamurthy R, Lantin-Hermoso MM, Noel CV, Pignatelli RH, **Jacot JG** & Krishnamurthy R. "Ventricular coupling in single ventricle patients: a MRI study of cardiac biomechanics." *Journal of Cardiovascular Magnetic Resonance*, 18:422 (2016).
33. Del Bufalo F, Manzo T, Hoyos V, Shigeki Y, Caruana I, **Jacot JG**, Benavides OM, Rosen D & Brenner MK. 3D modeling of human cancer: A hydrogel system to study the role of tumor microenvironment and recapitulate the *in vivo* effect of oncolytic adenovirus. *Biomaterials*. 84:76-85. (2016)
34. Ponniah JK, Chen H, Adetiba O, Verduzco R & **Jacot JG**. Mechanoactive Materials in Cardiac Science. *Journal of Materials Chemistry B*, 4:7350-7362. (2016)
35. Agrawal A, Chen H, Kim H, Zhu B, Adetiba O, Miranda A, Chipara AC, Ajayan PM, **Jacot JG** & Verduzco R. Electromechanically Responsive Liquid Crystal Elastomer Nanocomposites for Active Cell Culture. *ACS Macro Letters*. . 5:1386-1390. (2016).
36. Pok S, Stupin IV, Tsao C, Pautler RG, Gao Y, Nieto RM, Tao Z-W, Fraser CD Jr., Annappagada AV & **Jacot JG**. Full thickness heart repair with an engineered multi-functional myocardial patch in a rat model. *Advanced Healthcare Materials*. 6(5): 1600549. (2017).
37. Velasquez-Mao AJ, Tsao CJ, Monroe MN, Legras X, Bissig-Choisat B, Bissig KD, Ruano R, **Jacot JG**. Differentiation of spontaneously contracting cardiomyocytes from non-virally reprogrammed human amniotic fluid stem cells. *PLoS ONE* 12(5): e0177824. (2017).
38. Beck EC & **Jacot JG**. Vascular Formation by Perinatal Stem Cells. Book Chapter in *Perinatal Stem Cells: Research and Therapy*. Eds Atala A, Cetrulo K, Taghizadeh R, Cetrulo C & Murphy S. p65-84. (2018)
39. Tao Z, Mohamed M, **Jacot JG** & Birla R. Bioengineering Cardiac Tissue Constructs with Adult Rat Cardiomyocytes. *ASAIO Journal*. 64(5):e105-e114. (2018)
40. Tsao CJ, Taraballi F, Pandolfi L, Velasquez-Mao AJ, Ruano R, Tasciotti E & **Jacot JG**. Controlled release of small molecules for cardiac differentiation of pluripotent stem cells. *Tissue Engineering Part A*. 24 (23-24), 1798-1807. (2018).
41. Jarrell DK, Lennon ML & **Jacot JG**. Epigenetics and Mechanobiology in Heart Development and Congenital Heart Disease. *Diseases*. 7(3):52 (2019)
42. Bailey KE, Pino C, Lennon ML, Lyons A, **Jacot JG**, Lammers SR, Koenigshoff M & Magin CM. Embedding of Precision-Cut Lung Slices in Engineered Hydrogel Biomaterials Supports Extended *ex vivo* Culture. *American Journal of Respiratory Cell and Molecular Biology*. 62(1):14-22. (2019). doi: 10.1165/rcmb.2019-0232MA. PMID: 31513744
43. Tao ZW, Wu S, Cosgriff-Hernandez EM & **Jacot JG**. Evaluation of a polyurethane-reinforced hydrogel patch in a rat right ventricle wall replacement model. *Acta Biomaterialia*. 101:206-218. doi: 10.1016/j.actbio.2019.10.026. (2020). PMID: 31654774
44. Jarell DK, Vanderslice EJ, VeDepo MC, **Jacot JG**. Engineering Myocardium for Heart Regeneration - Advancements and Future Directions. *Frontiers in Cardiovascular Medicine*. In Press. doi: 10.3389/fcvm.2020.586261 (2020)
45. Ferrari MR, Di Maria MV, **Jacot JG**. Review on Mechanical Support and Cell-Based Therapies for the Prevention and Recovery of the Failed Fontan-Kreutzer Circulation. *Frontiers in Pediatrics*. 8: 627660. doi: 10.3389/fped.2020.627660. PMID: 33575233. (2021)
46. Beck EC, Jarrell DK, Lyons AC, Vanderslice EJ, VeDepo MC, **Jacot JG**. Assessment of electrospun cardiac patches made with sacrificial particles and polyurethane-polycaprolactone blends. *Journal of Biomedical Materials Research Part A*. 109(11):2154-63. (2021)
47. Jarrell DK, Vanderslice EJ, Lennon ML, Lyons AC, VeDepo MC, **Jacot JG**. Increasing salinity of fibrinogen solvent generates stable fibrin hydrogels for cell delivery or tissue engineering. *PLoS One*. 16(5):e0239242. (2021)

48. VeDepo MC, Flores K, **Jacot JG**. Chemokine-Induced PBMC and Subsequent MSC Migration Toward Decellularized Heart Valve Tissue. *Cardiovascular Engineering and Technology*. 12(3):325-38. (2021).
49. Tao ZW, Jarrell DK, Robinson A, Cosgriff-Hernandez EM, **Jacot JG**. A Prevascularized Polyurethane-Reinforced Fibrin Patch Improves Regenerative Remodeling in a Rat Right Ventricle Replacement Model. *Advanced Healthcare Materials*. 10 (23), 2101018. <https://doi.org/10.1002/adhm.202101018> (2021)
50. Jarrell DK, Jacot JG. An In Vitro Characterization of a PCL-Fibrin Scaffold for Myocardial Repair. *Mater Today Commun*. Dec;37 PubMed Central PMCID: PMC10732481. (2023)
51. Ibarra, D. E., Jewett, M. E., Jarrell, D. K., Pinales, A., VeDepo, M. C., & **Jacot, J. G.**. Bioreactor Design for Culturing Vascularized Engineered Tissue in Flow Conditions. *Tissue Engineering Part A*, 30(11-12), 304-313. (2024)
52. Vanderslice, E. J., Golding, S. G., & **Jacot, J. G.** Vascularization of PEGylated fibrin hydrogels increases the proliferation of human iPSC-cardiomyocytes. *Journal of Biomedical Materials Research Part A*, 112(4), 625-634. (2024)
53. Coughlan, C., Lindenberger, J., **Jacot, J. G.**, Johnson, N. R., Anton, P., Bevers, S., ... & Potter, H. Specific Binding of Alzheimer's A $\beta$  Peptides to Extracellular Vesicles. *International Journal of Molecular Sciences*, 25(7), 3703. (2024)
54. Reeser, R. S., Salazar, A. K., Prutton, K. M., Roede, J. R., VeDepo, M. C., & **Jacot, J. G.** Trisomy 21 Alters Cell Proliferation and Migration of iPSC-Derived Cardiomyocytes on Type VI Collagen. *Cellular and Molecular Bioengineering*, 17(1), 25-34. (2024)
55. Lennon, M.L., Frieman, A., Salazar, A.K., Kogut, I., Bilousova, G., Jacot, J.G. Amniotic Fluid Collected from Vaginal Birth as a Source of Stem Cells for Clinical Applications and Disease Modeling. *Stem Cells Translational Medicine*. (In Press) Doi: 10.1093/stcltm/szaf017.

## Presentations

### Invited National/International Talks

1. **Jacot JG** Tissue Engineering for the Bioartificial Heart. Keynote lecture at the Texas Heart Institute Cardiovascular Regeneration Seminar and Workshop. December, 2008.
2. **Jacot JG**. Cardiac Tissue Engineering for Repair of Congenital Heart Defects. University of California, San Diego department of Bioengineering departmental seminar. May, 2012
3. **Jacot JG**. Cardiac Tissue Engineering for Congenital Heart Defect Repair. University of Colorado, Boulder, Department of Chemical and Biological Engineering. August, 2012.
4. **Jacot JG**. Pediatric Cardiac Tissue Engineering. Monterrey Technical University, Monterrey, Mexico. November, 2012. Over internet.
5. **Jacot JG**. Tissue Engineering Strategies for Correction of Congenital Heart Defects. University of South Carolina, School of Medicine. August, 2013.
6. **Jacot JG**. Tissue Engineering Strategies for Correction of Congenital Heart Defects. Washington University, Department of Bioengineering. October, 2013.
7. **Jacot JG**. Engineered Heart Tissue for Correction of Heart Defects. Georgia Tech and Emory University, Department of Biomedical Engineering. April, 2014.
8. **Jacot JG**. Engineered Heart Tissue For Correction Of Heart Defects. Boston University, Department of Biomedical Engineering. May, 2014.
9. **Jacot JG**. Engineered Heart Tissue Using Amniotic Fluid Stem Cells. University of Sao Paulo School of Medicine. July, 2014.
10. **Jacot JG**. Engineered Heart Tissue For Correction Of Heart Defects. University of Delaware, Department of Biomedical Engineering. December, 2014.
11. **Jacot JG**. Engineered Heart Tissue For Correction Of Heart Defects. Johns Hopkins University, Department of Biomedical Engineering. December, 2014.
12. **Jacot JG**. Engineered Heart Tissue For Correction Of Heart Defects. University of Texas at Austin. Department of Biomedical Engineering. April, 2015.

13. **Jacot JG.** Engineered Heart Tissue For Correction Of Heart Defects. Colorado State University. Department of Bioengineering. September, 2015.
14. **Jacot JG.** Engineered Heart Tissue For Correction Of Heart Defects. Keynote speaker at the “Bridging the Outcome from TERM (Tissue Engineering and Regenerative Medicine) to Childhood Diseases” conference. Cincinnati Children’s Hospital and University of Cincinnati. August, 2016.

### Patents and Disclosures

- 1) Ventricular Assist Devices based on Stimuli Responsive Liquid Crystal Elastomers. Jacot JG, Verduzco R & Heinle JS. Invention Disclosure. December, 2013.
- 2) Multi-Layered, Biomimetic And Degradable Patch For Repair In Congenital Heart Defects. Jacot JG & Pok S. Rice Tech ID 2014-063. Provisional Patent 14-21002-US-PV. January, 2014.
- 3) Responsive Liquid Crystal Elastomers for Enhanced Cell Sheet Alignment. Jacot JG, Verduzco R, Agrawal A & Adetiba O. United States Patent US9625752 B1. Filed June, 2014. Published April, 2017.
- 4) Methods of forming cardiomyocytes. Jacot JG, Tsao CJ, Tasciotti E. Provisional patent 2848-257-PROV. CU TTO Ref. CU4423H-PPA1. January, 2018.
- 5) Polyurethane-reinforced hydrogel cardiac patch. Jacot JG, Tao Z, Lyons AC, Beck EC. Patent application number 17634676. August, 2022.

### Research Support

#### Active

1	Jacot (PI)	Crnic Grand Challenges	Effect of Col VI in Mechanotransduction in Trisomy 21 Cardiomyocytes	9/1/21-8/31/23	\$50,000 direct
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#### Past Funded

1	Jacot	Rice University Brown Undergraduate Research Internship	Brown Undergraduate Research Internship for Bioengineering Junior Alex Siller	5/11/09-8/7/09	\$2,400 total
2	Jacot	Rice Institute for Biosciences and Bioengineering Medical Innovations Grant	Voltage Mapping of Cardiac Patch Integration	7/1/09	\$25,000 total
3	Jacot	Rice University Brown Undergraduate Research Internship	Brown Undergraduate Research Internship for Bioengineering Junior Abraham Segura	6/7/10-8/7/10	\$1,800 total
3	Jacot	NIH R21 NHLBI 1R21HL110330-01	Dependence of Cardiomyocyte Electrophysiology Development on Contractile Strain	4/1/11-3/31/13	\$428,412 (275,000 in direct funds)

4	Jacot Fraser	Virginia and L.E. Simmons Family Foundation Collaborative Research Fund	Differentiation of Amniotic Fluid Stem Cells into Cardiac Cells Through the Use of Novel Hydrogels and Applied Strain	12/31/09-12/30/10	\$143,500 (all direct)
5	Jacot Grande-Allen	NIH R13 R13HD071726-01	Tissue Engineering for Pediatric Applications	9/1/11 – 3/30/12	\$16,000 (no direct funds to Jacot lab)
6	Jacot Suggs Cosgriff- Hernandez Gruden	Society for Biomaterials Event Grant	Texas Regional Biomaterials Day	10/27/11-10/27/12	\$5,000
7	Adachi Heinle Morales Jacot	Baylor College of Medicine Seed Funding	Ex-Vivo Lung Perfusion for Pediatric Lung Transplantation	4/1/12-3/31/13	\$5,000 total
8	Jacot	Brasil@Rice	Rice Brazil Travel Grant	7/1/14-12/13/14	\$3,500
9	Jacot Pautler	Baylor College of Medicine Cardiovascular Research Institute Pilot Grant	Cardiac Magnetic Resonance Imaging to Assess Diffuse Myocardial Fibrosis in a Rat Model of a Right Ventricle Patch	1/1/15-6/30/15	\$25,000 direct
10	Jacot Suggs Cosgriff- Hernandez Gruden	Society for Biomaterials Event Grant	Texas Regional Biomaterials Day	10/27/14-10/27/15	\$5,000
11	Jacot	NSF CAREER Award CBET-1055942	CAREER: Generation of Cardiac Tissue Using Stem Cells Derived from Human Amniotic Fluid	7/1/11-6/30/16	\$450,000 (\$352,391 in direct funds)
12	Jacot	AHA South Central Affiliate 11BGIA7360017	Coculture of human heart cells with amniotic fluid-derived cells to generate cardiomyocytes for congenital heart repair	7/1/11-6/30/14	\$140,000 (\$127,272 in direct funds)
13	Jacot Verduzco Adachi	Dunn Grant	Multi-layered cardiac patches from dynamic surfaces	1/1/13-12/31/13	\$98,000 (all direct)
14	Grande-Allen Jacot	March of Dimes	Generation of Hybrid Bioprostheses for Treating Congenitally Diseased Heart Valves	6/1/13-5/31/16	\$342,312 (Includes 1 co-supervised student with Jacot & Grande-Allen labs)

15	Jacot	AHA BGIA 14BGIA1875000 4	Use of liquid crystal elastomer substrates to condition human cardiomyocyte precursors and generate 3-D layered tissues	1/1/14- 12/31/15	\$140,000 direct. \$154,000 total
16	Jacot (PI)	NSF EAGER CBET-1547838	EAGER: Biomufacturing: Cell Differentiation Bioreactor For Cardiac Tissue Engineering	9/1/15-8/31/17	\$227,283 direct \$300,000 total
17	Jacot (PI)	NIH R01 1R01HL130436- 01	Degradable Engineered Patch for Correction of Congenital Heart Defects	9/1/15-5/30/22	\$1,449,480 direct \$2,210,457 total

## **Teaching and Mentoring**

### **Instructor**

- 1) BIOE322/BIOS332. Fundamentals of Systems Physiology. Rice University. Spring 2009 – Spring 2012  
Average Evaluations: Effectiveness: 2.01/5.0 (1.0 is best rating) Overall: 2.25/5.0 (1.0 is best rating)
- 2) BIOE698. Departmental Seminar Series and Course. Rice University. Fall 2012. – Spring 2013  
Average Evaluations: Effectiveness: 2.18/5.0 (1.0 is best rating) Overall: 2.66/5.0 (1.0 is best rating)
- 3) BIOE431/631. Biomaterials Engineering. Rice University. Fall 2013 – Fall 2015  
Average Evaluations: Effectiveness: 1.95/5.0 (1.0 is best rating) Overall: 1.95/5.0 (1.0 is best rating)
- 4) BIOE4085 Tissue Engineering. University of Colorado Denver. Fall 2016.  
Evaluations: Instructor overall 5.0/6.0 (6 is best rating) Course overall 2.7/6.0 (6 is best rating)
- 5) BIOE5011. Systems Physiology for Bioengineers. University of Colorado Denver. Spring 2017 – Spring 2025  
Average Evaluations: Instructor overall 3.8/5.0 (5 is best rating) Course overall 3.6/5.0 (5 is best rating)
- 6) BIOE3070. Bioengineering Lab I (Biomaterials and Biomechanics) Fall 2017 – Fall 2024  
Average Evaluations: Instructor overall 4.387/5.0 (5 is best rating) Course overall 4.12/5.0 (5 is best rating)
- 7) BIOE5063. 3D Modeling for Bioengineers. Fall 2020 – Fall 2024  
Average Evaluations: Instructor overall 3.625/5.0 (5 is best rating) Course overall 3.575/5.0 (5 is best rating)
- 8) BIOE3090. Introduction to Design. Spring 2024 – Spring 2025  
Evaluations: Instructor overall 4.21/5.0 (5 is best rating) Course overall 4.43/5.0 (5 is best rating)

### **Single lectures each year in the following courses:**

- 1) CVS-411 Cardiovascular Physiology. Baylor College of Medicine. 2009 – 2015
- 2) Texas Heart Institute School of Perfusion Technology. 2009 – 2011.
- 3) Advances in Tissue Engineering short course. 2009 – 2015.
- 4) Cardiovascular Sciences. Baylor College of Medicine. 2009 – 2015.
- 5) CVS-412 Cardiovascular Pathology. Baylor College of Medicine. 2011 – 2015.
- 6) BIOE322/BIOS332. Fundamentals of Systems Physiology. Rice University. 2011 – 2012.
- 7) BIOE330 Biochemistry. Rice University. Spring 2014.
- 8) IDPT7810 Stem Cell Biology. University of Colorado Anschutz. 2017-2021.
- 9) BIOE 5420. Stem Cells and Regenerative Medicine. University of Colorado Denver. 2017-2024.
- 10) BMSC7810. Stem Cell Biology to Regenerative Medicine. University of Colorado Anschutz. 2022 – 2024.

### **Mentoring/Leadership Training:**

- 1) Attended Rice University School of Engineering Junior Faculty Mentoring Workshop. Sept 2009.
- 2) Attended Teaching With Technology: Faculty Showcase of Favorite Technologies. Rice University, April, 2009.
- 3) Completed Research Program Development and Managing the Research Enterprise Cycle by Lesya Crumpton-Young March, 2010.



- 4) Completed Teaching to Stimulate Learning at the College Level workshop. Rice University and Baylor College of Medicine. August 2011.
- 5) Completed Entering Mentoring Research Mentoring Workshop from Wisconsin Center for Education Research. December 2011.
- 6) Served as a facilitator at Mentoring in an Interdisciplinary Context: A Gulf Coast Consortia Research Mentor Training Workshop. January 2012
- 7) Attended Mentee-Mentor Training Workshop at Gulf Coast Consortia. May, 2012
- 8) Attended Colorado Clinical Translational Science Institute Innovation-Corps (CCTSI I-Corps) mini-course, April-May 2017
- 9) Completed Leadership for Innovative Team Science (LITeS) training program. University of Colorado Denver | Anschutz Medical Campus. October 2018 – April 2019.
- 10) Completed the University of Colorado at Denver online course Hybrid Flexible Teaching. June, 2020
- 11) Completed the University of Colorado at Denver Equity Certificate Program. Jan, 2021
- 12) Completed training in Developing an Equity Lens for Inclusive Achievement. Sept, 2021
- 13) Completed the University of Colorado at Denver Certificate in Multicultural Mentoring Program. May, 2022
- 14) Attained Certified SolidWorks Professional in Mechanical Design
- 15) Scientific Communication Advances Research Excellence (SCOARE) Workshop. May 2024.
- 16) Facilitator training from the Center for the Improvement of Mentored Experiences in Research (CIMER). May 2024 (Facilitated CIMER training April 2025).

#### Student Awards

- 1) National Science Foundation Graduate Research Fellowship awarded to graduate student Jennifer Petsche, April, 2010.
- 2) NIH Biotechnology Training Program Fellowship through the Rice Institute for Bioengineering and Biotechnology awarded to Omar Benavides, June, 2010.
- 3) Best Oral Presentation awarded to graduate student Omar Benavides for Benavides OM, Petsche JJ, Johnson A, Moise KJ, Jr. & **Jacot JG**. VEGF induces differentiation of amniotic fluid-derived stem cells. Southern Biomedical Engineering Conference. April, 2011.
- 4) Outstanding Service Award, Rice Bioengineering Department, awarded to Adriana Gamboa, May 2012.
- 5) Outstanding Teaching Assistant, Rice Bioengineering department, awarded to Omar Benavides, May, 2012.
- 6) Outstanding Graduate Student Service Award, Rice Bioengineering Department, awarded to Jennifer Petsche, May, 2011.
- 7) Outstanding Contributions to Research, Rice Bioengineering Department, awarded to Alejandro Siller, May, 2010.
- 8) IBB Travel Grant awarded to Omar Benavides, February, 2013.
- 9) Best poster awarded to graduate student Jennifer Petsche Connell. Texas Medical Center Cardiovascular Research Institute Symposium. April, 2013.
- 10) Departmental travel grant awarded to Yang Gao. October, 2014.
- 11) Best poster awarded to postdoc Seokwon Pok. Texas Medical Center Cardiovascular Research Institute Symposium. February, 2015.
- 12) Featured abstract for postdoc Seokwon Pok. Texas Children's Hospital Surgical Research Day. May, 2015.
- 13) Christiaan Scholtz Memorial Student Award for top Masters of Biomedical Engineering student awarded to Huiying Chen. May, 2015.
- 14) National Science Foundation Graduate Research Fellowship awarded to graduate student Dillon Jarrell, April, 2017.
- 15) Colorado Clinical Translation Science Institute (CCTSI) Team Oriented Training across the Translational Sciences Spectrum (TOTTS) fellowship awarded to graduate student Mallory Lennon. May, 2017.
- 16) National Science Foundation Graduate Research Fellowship awarded to graduate student Mallory Lennon, April, 2018.

- 17) National Science Foundation Graduate Research Fellowship awarded to undergraduate student AJ Mao, April, 2018.
- 18) Colorado Clinical Translation Science Institute (CCTSI) Team Oriented Training across the Translational Sciences Spectrum (TOTTS) fellowship awarded to graduate student Meg Ferrari. May, 2018
- 19) American Heart Association postdoctoral fellowship awarded to postdoc Mitch VeDepo, November, 2018.
- 20) Goldwater Scholarship awarded to undergraduate student Anne Lyons. March, 2019.
- 21) Colorado Clinical Translation Science Institute (CCTSI) Team Oriented Training across the Translational Sciences Spectrum (TOTTS) fellowship awarded to graduate student Emily Burtch. May, 2019.
- 22) American Heart Association predoctoral fellowship awarded to graduate student Meg Ferrari. November, 2019.
- 23) National Science Foundation Graduate Research Fellowship awarded to Undergraduate Anne Lyons, April, 2020.
- 24) National Science Foundation Graduate Research Fellowship awarded to summer undergraduate researcher Maggie Jewett, April, 2020.
- 25) NIH F31 Predoctoral Fellowship awarded to graduate student Dillon Jarrell, August, 2020.
- 26) Crnic Institute Blumenthal Fellowship awarded to PhD student Rachel Reeser, August, 2021.

## **Service**

### **Member:**

1. Biomedical Engineering Society (2004-present)  
Ethics Committee (2020-present)
2. American Society for Cell Biology (2005-2008)
3. Biophysical Society (2005-2017)
4. American Institute of Chemical Engineers (2007-2017)
5. Houston Society for Engineering in Medicine and Biology (2008-2016)
6. Rice Institute for Bioengineering and Biosciences (2008-2016)
7. Tissue Engineering and Regenerative Medicine International Society (2009-present)  
Planning committee member for 2011 annual meeting  
Scientific Advisory Council member for 2016 annual meeting  
Member of the TERMIS-Americas Membership Committee (2015-2016)  
Chair of the Biomaterials TWIG (2016-2020)
8. Society for Biomaterials (2009-present)  
Secretary/Treasurer for the Tissue Engineering Special Interest Group (2013-2016)  
Vice-chair for the Tissue Engineering Special Interest Group (2016-2019)  
Chair of the Tissue Engineering Special Interest Group (2019-present)
9. Society of Thoracic Surgeons Associate member (2010-present)
10. Gulf Coast Consortia for Qualitative Medical Sciences (2011-2016)

### **Editorial Board:**

*Challenges in Regenerative Medicine* (2013-2018)  
*Science Advances* (2024-present)

### **University and Departmental Committees**

- 1) Member of Rice University Bioengineering Graduate Admissions Committee, 2008-2016.
- 2) Member of Rice University Bioengineering Undergraduate Academic Affairs Committee, 2009-2016
- 3) Member of Baylor College of Medicine MD/PhD Faculty Operating Committee, 2009-2016
- 4) Organizer of Rice University Bioengineering Seminar Series. 2012-2014.
- 5) Member of University of Colorado Bioengineering ABET Committee. 2016-2017.
- 6) Member of University of Colorado Anschutz Medical Campus MSTP Admissions Committee. 2017-2020.

- 7) Member of University of Colorado Denver School of Engineering and Applied Sciences First Level Review Committee. 2017-2018.
- 8) Organizer of University of Colorado Bioengineering Seminar Series. 2017-2020.
- 9) Member of the University of Colorado Denver | Anschutz Graduate School Graduate Council 2018-2022.
- 10) Member of the University of Colorado Bioengineering Graduate Admissions Committee. 2016-2018.
- 11) Member of the Bioengineering Primary Unit Committee 2017-present
- 12) Chair of the University of Colorado Bioengineering Graduate Affairs Committee. 2018-2024.
- 13) Chair of the search committee for Bioengineering Department Graduate Coordinator. 2018.
- 14) Member of the Bioengineering Academic Integrity Committee 2019-2021.
- 15) Member of the CU Denver graduate council 2022-present.