

BIOGRAPHICAL SKETCH

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NAME: Robert M. Cole

eRA COMMONS USER NAME (credential, e.g., agency login):

POSITION TITLE: Associate Director, Mechanical Circulatory Support Research and Education Advanced Heart Disease; Assistant Professor of Medicine, Cedars-Sinai Medical Center

EDUCATION/TRAINING (*Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.*)

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY
Brown University, Providence Rhode Island	BA	05/2004	Biology
Boston University – Boston, Massachusetts	MA	05/2006	Medical Sciences– Honors in Research
Boston University School of Medicine	MD	2010	Medicine
UCLA Medical Center, Los Angeles, CA		2013	Internal Medicine Internship/Residency
Cedars-Sinai Medical Center, Los Angeles, CA		2016	General Cardiology Fellowship
Cedars-Sinai Medical Center, Los Angeles, CA		2017	Advanced Heart Failure/MCS/Transplant Cardiology Fellowship

A. Personal Statement

I am currently the Associate Director of Mechanical Circulatory Support (MCS) research and education at the Cedars-Sinai Heart Institute, and Assistant Professor of Medicine at Cedars Sinai Medical Center. I am actively involved in heart failure and mechanical circulatory support research, with multiple publications in journals such as The Journal of Heart and Lung Transplantation and ASAIO, as well as multiple book chapters including the use and management of the Total Artificial Heart. My research focus is predominantly on temporary and durable mechanical circulatory support devices for advanced heart failure, particularly their indications/outcomes as well as management of cardiogenic shock. I am also involved in a number of ongoing trials evaluating the etiology, diagnosis and management of congestive heart failure and cardiomyopathy.

B. Positions and HonorsPositions and Employment

2017 – Present	Attending, Advanced Heart Failure/Mechanical Circulatory Support/Transplant Cardiology California Heart Center, Cedars-Sinai Smidt Heart Institute, Los Angeles, CA
2017 – Present	Associate Director, Mechanical Circulatory Support Research and Education Cedars Sinai Smidt Heart Institute, Los Angeles, CA
2019 – Present	Assistant Professor Cedars-Sinai Medical Center, Los Angeles, CA

Other Experience and Professional Memberships

2014-present	Fellow, American College of Cardiology (ACC)
2016-present	International Society of Heart and Lung Transplantation (ISHLT)
2017-present	Heart Failure Society of America (HFSA)
2018-present	American Society of Artificial Internal Organs (ASAIO)
2019	Reviewer of the 2019 AATS/ISHLT Guidelines on Selected Topics in Mechanical Circulatory Support
2019	Reviewer for the Journal of Cardiac Failure
2019-2020	ISHLT 2020: Abstract Reviewer: Junior Faculty Clinical Case Reports: Mechanical Circulatory Support

Professional Committees

2017-present	Heart Transplant Executive Committee
2017-present	MCS Executive Committee
2019-2024	American College of Cardiology Performance Question Writer for Heart Failure SAP

Board Certifications

Board Certified in Advanced Heart Failure, MCS, and Transplant Cardiology
 Board Certified in Nuclear Cardiology
 Board Certified in Adult Comprehensive Echocardiography, NBE
 Board Certified in General Cardiology
 Board Certified in Internal Medicine

C. Contributions to Science

Temporary Mechanical Circulatory Support:

This rapidly growing field deals with advanced options for cardiovascular support using temporary MCS devices, including ECMO, Impellas, intra-aortic balloon pumps, and various other forms of intravascular and extracorporeal support systems. I have studied the outcomes and hemodynamic roles resulting from the use of these devices in end stage heart failure and cardiogenic shock.

- a) Chung JS, Emerson D, Ramzy D, Akhmerov A, Megna D, Esmailian F, Kobashigawa J, **Cole RM**, Moriguchi J, Trento A. A new paradigm in mechanical circulatory support: 100 patient experience. *Ann Thorac Surg*. 2019 Sep 26. [Epub ahead of print]
- b) M. Aguillon, C. Runyan, J. Hajj, N. Huie, M. Lindsay, E. Passano, L. S. Czer, **R. Cole**, J. Moriguchi, F. Esmailian, D. J. Megna, A. Trento, D. Ramzy. Acute Decompensated Heart Failure Therapy: Impella 5.0 versus Venous Arterial ECMO. *American Society of Artificial Internal Organs Journal*. Volume 68, Supplement 1, May/June 2019, Page 81.

- c) Hemodynamic Evaluation of Right Ventricular Function Before and After Impella 5.0 Placement for Cardiogenic Shock. Aaron Wolfson, **Robert M Cole**, et al, RV function, abstract and oral presentation, ISHLT 2019.
- d) A New Paradigm in Temporary Mechanical Circulatory Support: 100 Patient Experience with a Novel Minimally Invasive Temporary Left Ventricular Assist Device, Joshua Chung, Dominic Emerson, Akbarshakh Akhmerov, Dominick Megna, Mario Aguillon, Carmelita Runyan, **Robert M Cole**, Jaime Moriguchi, Danny Ramzy STS 55th Annual Meeting, San Diego, CA; January 27, 2019

Heart Transplantation:

The gold standard for the modern management of end stage heart failure remains heart transplantation in the appropriate setting. I have participated in a number of research studies, manuscripts, and abstracts investigating the utilization, outcomes, and medical/therapeutic options for heart transplant recipients and candidates.

- a) **Cole RM**, Kobashigawa JA. Desensitization strategies pre- and post- cardiac transplantation. *Curr Treatment Options in Cardiovascular Medicine*. 2016 Feb; 18 (2): 8. PMID: 26781656
- b) F. Esmailian, F. Arabia, L. Czer, M. Kittleson, D. Geft, **R. Cole**, G. Esmailian, M. Rafiei, E. Passano, H. Barone, J. Moriguchi, Does the Type of Mechanical Circulatory Support as a Bridge to Heart Transplant Affect Outcome after Transplant? *The Journal of Heart and Lung Transplantation*, Volume 37, Issue 4, Supplement, April 2018, Page S289
- c) M Kittleson, J. Patel, **R. Cole**, D. Geft, S. Dimbil, R. Levine, S. Mersola, L. Czer, B. Azarbal, R. Zabner, P. Zakowski, J.A. Kobashigawa. Does Thymoglobulin Induction Lead to Increased CMV Infection after Heart Transplantation in the Current Tacrolimus Era. *The Journal of Heart and Lung Transplantation*. Volume 38, Issue 4, Supplement, April 2019, Pages S310-S311
- d) J. Patel, M. Kittleson, D. Chang, E. Kransdorf, R. Levine, S. Dimbil, T. Kao, L. Czer, **R. Cole**, F. Esmailian, J. Kobashigawa. 5-Year Outcome of Photopheresis in Heart-Transplantation with Refractory/Persistent Rejection. *The Journal of Heart and Lung Transplantation*. Volume 38, Issue 4, Supplement, April 2019, Pages S276
- e) E. Kransdorf, M. Kittleson, J. Patel, **R. Cole**, S. Dimbil, R. Levine, M. Olymbios, T. Kao, L. Czer, B. Azarbal, J. Chung, J.A. Kobashigawa. Mixed Rejection: More Important Than Thought after Heart Transplantation. *The Journal of Heart and Lung Transplantation*. Volume 38, Issue 4, Supplement, April 2019, Pages S388
- f) A. Wolfson, M. Kittleson, J. Patel, E. Kransdorf, **R. Cole**, R. Levine, S. Dimbil, A. Lam, L. Czer, A. Hage, J. Chung, J. Moriguchi, J.A. Kobashigawa. Biopsy-Negative Rejection Late after Heart Transplantation: Impact on Long-Term Outcome. *The Journal of Heart and Lung Transplantation*. Volume 38, Issue 4, Supplement, April 2019, Pages S287-S288.

Left ventricular assist devices:

Left ventricular assist devices (LVAD) represent a progressive option for end stage heart failure. There are many nuances in selection of patients for such therapies, and outcomes/adverse events such as stroke, infection, and long term outcomes are important considerations. I have participated in extensive research evaluating the many facets of LVAD therapies.

- a) Setareh-Shenas S, Thomas F, **Cole RM**, Lemor A, Herzog E, Arabia FA, Moriguchi J; Evaluation of 30-Day Readmissions After Index Ventricular Assist Device Implantation in the United States; *American Society of Artificial Internal Organs Journal*; Aug 2019, doi 10.1097. PMID: 30299298
- b) H. Barone, C. Runyan, J. Hajj, N. Huie, M. Lindsay, E. Passano, M. Olman, A. Fishman, L. Olanisa, J. A. Kobashigawa, J. Moriguchi, **R. Cole**, F. Esmailian, J. Chung, D. Ramzy. Implanting Durable MCS in Non-Compliant Patients: Do the Outcomes Outweigh the Risks? *American Society of Artificial Internal Organs Journal*. Volume 68, Supplement 1, May/June 2019, Page 53.
- c) A. Akhmenrov, D. Emerson, D. Ramzy, D. Megna, Q. Chen, M. Burch, **R. Cole**, J. Moriguchi, J. Chung. Biliary Pathology and Cholecystectomy in Mechanical Circulatory Support Patients. *American Society of Artificial Internal Organs Journal*. Volume 68, Supplement 1, May/June 2019, Page 58.

Abbott

Ramzy (site PI)

11/11/2016 to present

MOMENTUM 3 CAP Multi-Center Study of Maglev Technology in Patients Undergoing MCS Therapy with HeartMate 3™ Continued Access Protocol: Post-Approval Continued Follow-up

Role: Co-Investigator