



## Barry H. Greenberg, MD, FHFSA

Director, Advanced Heart Failure Treatment Program  
Professor of Medicine

**Specialties:**

Cardiology (*Primary Specialty*)  
Heart Failure  
Transplantation  
Heart Transplantation

### Bio

Barry H. Greenberg, MD, is a board-certified cardiologist and internationally recognized pioneer in the field of heart failure. He directs the Advanced Heart Failure Treatment Program at UC San Diego Health.

Dr. Greenberg considers it a great privilege to get to know and help his patients and their families. He has been working in cardiology since 1971, including positions at the National Heart, Lung and Blood Institute (NHLBI), Oregon Health Sciences University, Royal Postgraduate Medical College, Hammersmith Hospital in London, and College de France in Paris.

He has been at UC San Diego since 1995, and is a professor in the Department of Medicine at UC San Diego School of Medicine, where he instructs medical students, residents and fellows.

In addition to his clinical activities, Dr. Greenberg leads an active research program investigating basic mechanisms involved in heart failure and the development of new drugs and strategies to treat patients with this condition. He serves on the editorial boards of numerous cardiology journals and is an associate editor of the *Journal of the American College of Cardiology*.

He completed a fellowship at UCSF School of Medicine and a residency at Yale School of Medicine. Dr. Greenberg earned his medical degree from SUNY Upstate Medical University. He is board-certified in internal medicine, cardiovascular disease and advanced heart failure and transplant cardiology

Dr. Greenberg is a fellow, founding member and past president of the Heart Failure Society of America (HFSA). He has been consistently selected as one of the "Best Doctors in America" since 1995. In 2017, he received the Heart Failure Society of America Lifetime Achievement Award for his exemplary career in scholarship, investigation, teaching, and leadership.

### UC San Diego Health Links

For more information, see [Cardiovascular Services](#).

## Education

### Medical Degree

SUNY Upstate Medical University, Syracuse, NY

### Residency

Yale School of Medicine, New Haven, CT

### Fellowship

UC San Francisco, School of Medicine, San Francisco, CA

## Certifications

Advanced Heart Failure and Transplant Cardiology

American Board of Internal Medicine

Cardiovascular Disease

## Clinical Expertise Areas

Cardiac Dysfunction

Cardiac Remodeling

Cardiac Transplant

Cardiomyopathy

Congestive Heart Failure

Heart Failure - Cardiology

Investigational Therapies

LV Dysfunction

## Publications

Publications listed below are automatically derived from MEDLINE/PubMed and other sources, which might result in incorrect or missing publications. Researchers can [login](#) to make corrections and additions, or [contact us for help](#).

List All | Timeline

1. **Greenberg B**, Fang J, Mehra M, Stevenson LW. Advanced heart failure: Trans-Atlantic perspectives on the Heart Failure Association of the European Society of Cardiology position statement. *Eur J Heart Fail*. 2018 Sep 18. PMID: 30225959.

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2. Gernhofer YK, Braun OO, Brambatti M, Bui QM, Jorge SE, **Greenberg BH**, Adler E, Pretorius V. Which advanced heart failure therapy strategy is optimal for patients over 60 years old? *J Cardiovasc Surg (Torino)*. 2018 Aug 29. PMID: 30168306.

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3. Zannad F, Anker SD, Byra WM, Cleland JGF, Fu M, Gheorghiade M, Lam CSP, Mehra MR, Neaton JD, Nessel CC, Spiro TE, van Veldhuisen DJ, **Greenberg B**. Rivaroxaban in Patients with

Heart Failure, Sinus Rhythm, and Coronary Disease. *N Engl J Med*. 2018 Aug 27. PMID: 30146935.

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4. **Greenberg B**. Mineralocorticoid receptor antagonists in heart failure: they work better when patients use them. *Eur J Heart Fail*. 2018 May 31. PMID: 29851224.

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5. Tran HA, Pollema TL, Silva Enciso J, **Greenberg BH**, Barnard DD, Adler ED, Pretorius VG. Durable Biventricular Support Using Right Atrial Placement of the HeartWare HVAD. *ASAIO J*. 2018 May/Jun; 64(3):323-327. PMID: 28841580.

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6. Metra M, Davison BA, Gimpelewicz C, Carubelli V, Felker GM, Filippatos G, **Greenberg BH**, Hua TA, Liu Z, Pang PS, Ponikowski P, Severin TM, Voors AA, Wang Y, Cotter G, Teerlink JR. Site enrollment rate, outcomes, and study drug effects in a multicenter trial. Results from RELAX-AHF. *Int J Cardiol*. 2018 02 15; 253:91-96. PMID: 29306479.

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7. Filippatos G, Farmakis D, Metra M, Cotter G, Davison BA, Felker GM, **Greenberg BH**, Hua TA, Pang PS, Ponikowski P, Qian M, Severin TA, Voors AA, Teerlink JR. Erratum to: Serelaxin in acute heart failure patients with and without atrial fibrillation: a secondary analysis of the RELAX-AHF trial. *Clin Res Cardiol*. 2017 11; 106(11):938. PMID: 28752374.

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8. **Greenberg B**. Jumping down the rabbit hole: unravelling the right ventricle in heart failure. *Eur J Heart Fail*. 2017 Dec; 19(12):1672-1674. PMID: 29027321.

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9. Cowling RT, Park JI, Sotimehin AE, **Greenberg BH**. Ascorbate starvation alters endoplasmic reticulum-resident enzymes in cardiac fibroblasts, priming them for increased procollagen secretion. *J Mol Cell Cardiol*. 2017 Dec; 113:1-8. PMID: 28923350.

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10. **Greenberg B**. Gene therapy for heart failure: time to go back to the drawing board. *Eur J Heart Fail*. 2017 Nov; 19(11):1542-1544. PMID: 28836313.

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11. Bloom MW, **Greenberg B**, Jaarsma T, Januzzi JL, Lam CSP, Maggioni AP, Trochu JN, Butler J. Heart failure with reduced ejection fraction. *Nat Rev Dis Primers*. 2017 Aug 24; 3:17058. PMID: 28836616.

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12. Gimpelewicz C, Metra M, Cleland JGF, Szecsödy P, Chang Wun CC, Boer-Martins L, Cotter G, Davison BA, Felker GM, Filippatos G, **Greenberg BH**, Pang P, Ponikowski P, Severin T, Voors AA, Teerlink JR. Effects of serelaxin on the outcome of patients with or without substantial peripheral edema: A subgroup analysis from the RELAX-AHF trial. *Am Heart J*. 2017 Aug; 190:113-122. PMID: 28760204.

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13. Teerlink JR, Voors AA, Ponikowski P, Pang PS, **Greenberg BH**, Filippatos G, Felker GM, Davison BA, Cotter G, Gimpelewicz C, Boer-Martins L, Wernsing M, Hua TA, Severin T, Metra M. Serelaxin in addition to standard therapy in acute heart failure: rationale and design of the RELAX-AHF-2 study. *Eur J Heart Fail*. 2017 06; 19(6):800-809. PMID: 28452195.

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14. Chow SL, Maisel AS, Anand I, Bozkurt B, de Boer RA, Felker GM, Fonarow GC, **Greenberg B**, Januzzi JL, Kiernan MS, Liu PP, Wang TJ, Yancy CW, Zile MR. Role of Biomarkers for the Prevention, Assessment, and Management of Heart Failure: A Scientific Statement From the American Heart Association. *Circulation*. 2017 May 30; 135(22):e1054-e1091. PMID: 28446515.

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15. Silva Enciso J, **Greenberg B**. Right ventricular failure after left ventricular assist device implant: 'towards finding common ground'. *Eur J Heart Fail*. 2017 Jul; 19(7):947-949. PMID: 28425168.

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16. Filippatos GS, de Graeff P, Bax JJ, Borg JJ, Cleland JG, Dargie HJ, Flather M, Ford I, Friede T, **Greenberg B**, Henon-Goburdhun C, Holcomb R, Horst B, Lekakis J, Mueller-Velten G, Papavassiliou AG, Prasad K, Rosano GM, Severin T, Sherman W, Stough WG, Swedberg K, Tavazzi L, Tousoulis D, Vardas P, Ruschitzka F, Anker SD. Independent academic Data Monitoring Committees for clinical trials in cardiovascular and cardiometabolic diseases. *Eur J Heart Fail*. 2017 04; 19(4):449-456. PMID: 28271595.

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18. Filippatos G, Farmakis D, Metra M, Cotter G, Davison BA, Felker GM, **Greenberg BH**, Hua TA, Pang PS, Ponikowski P, Qian M, Severin TA, Voors AA, Teerlink JR. Serelaxin in acute heart failure patients with and without atrial fibrillation: a secondary analysis of the RELAX-AHF trial. *Clin Res Cardiol*. 2017 Jun; 106(6):444-456. PMID: 28150186.

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19. Demissei BG, Cotter G, Prescott MF, Felker GM, Filippatos G, **Greenberg BH**, Pang PS, Ponikowski P, Severin TM, Wang Y, Qian M, Teerlink JR, Metra M, Davison BA, Voors AA. A multimarker multi-time point-based risk stratification strategy in acute heart failure: results from the RELAX-AHF trial. *Eur J Heart Fail*. 2017 Aug; 19(8):1001-1010. PMID: 28133908.

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20. Thomas I, EncisoSilva J, Schlueter M, **Greenberg B**. Anticoagulation Therapy and NOACs in Heart Failure. *Handb Exp Pharmacol*. 2017; 243:515-535. PMID: 28233177.

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21. Bristow MR, Sharma K, Assmann SF, Linas S, Gersh BJ, Grady C, Rice MM, Singh S, Boineau R, McKinlay SM, **Greenberg BH**. Data and Safety Monitoring Board evaluation and management of a renal adverse event signal in TOPCAT. *Eur J Heart Fail*. 2017 04; 19(4):457-465. PMID: 27873428.

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22. Meyer S, Teerlink JR, Metra M, Ponikowski P, Cotter G, Davison BA, Felker GM, Filippatos G, **Greenberg BH**, Hua TA, Severin T, Qian M, Voors AA. Sex differences in early dyspnea relief between men and women hospitalized for acute heart failure: insights from the RELAX-AHF study. *Clin Res Cardiol*. 2017 Apr; 106(4):280-292. PMID: 27838739.

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23. **Greenberg B**. Gene therapy for heart failure. *Trends Cardiovasc Med*. 2017 04; 27(3):216-222. PMID: 28063800.

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25. **Greenberg B**. Novel Therapies for Heart Failure - Where Do They Stand? *Circ J*. 2016 Aug 25; 80(9):1882-91. PMID: 27545139.

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26. **Greenberg B**. Defining the Obvious: Maybe It Is Not So Easy. *JACC Heart Fail*. 2016 09; 4(9):756-8. PMID: 27522628.

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27. Hsiao R, **Greenberg B**. Neprilysin Inhibition as a PARADIGM Shift in Heart Failure Therapy. *Curr Heart Fail Rep*. 2016 Aug; 13(4):172-80. PMID: 27271564.

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28. Redwine LS, Henry BL, Pung MA, Wilson K, Chinh K, Knight B, Jain S, Rutledge T, **Greenberg B**, Maisel A, Mills PJ. Pilot Randomized Study of a Gratitude Journaling Intervention on Heart Rate Variability and Inflammatory Biomarkers in Patients With Stage B Heart Failure. *Psychosom Med*. 2016 Jul-Aug; 78(6):667-76. PMID: 27187845; PMCID: PMC4927423 [Available on 07/01/17].

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29. Mentz RJ, Roessig L, **Greenberg BH**, Sato N, Shinagawa K, Yeo D, Kwok BW, Reyes EB, Krum H, Pieske B, Greene SJ, Ambrosy AP, Kelly JP, Zannad F, Pitt B, Lam CS. Heart Failure Clinical Trials in East and Southeast Asia: Understanding the Importance and Defining the Next Steps. *JACC Heart Fail*. 2016 06; 4(6):419-27. PMID: 27256745.

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30. Tran HA, Lin F, **Greenberg BH**. Potential new drug treatments for congestive heart failure. *Expert Opin Investig Drugs*. 2016 Jul; 25(7):811-26. PMID: 27104862.

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31. Bristow MR, Enciso JS, Gersh BJ, Grady C, Rice MM, Singh S, Sopko G, Boineau R, Rosenberg Y, **Greenberg BH**. Detection and Management of Geographic Disparities in the TOPCAT Trial:

Lessons Learned and Derivative Recommendations. *JACC Basic Transl Sci.* 2016 Apr; 1(3):180-189. PMID: 27747305.

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32. Pang PS, Teerlink JR, Voors AA, Ponikowski P, **Greenberg BH**, Filippatos G, Felker GM, Davison BA, Cotter G, Kriger J, Prescott MF, Hua TA, Severin T, Metra M. Use of High-Sensitivity Troponin T to Identify Patients With Acute Heart Failure at Lower Risk for Adverse Outcomes: An Exploratory Analysis From the RELAX-AHF Trial. *JACC Heart Fail.* 2016 07; 4(7):591-599. PMID: 27039129.

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33. Liu LC, Voors AA, Teerlink JR, Cotter G, Davison BA, Felker GM, Filippatos G, Chen Y, **Greenberg BH**, Ponikowski P, Pang PS, Prescott MF, Hua TA, Severin TM, Metra M. Effects of serelaxin in acute heart failure patients with renal impairment: results from RELAX-AHF. *Clin Res Cardiol.* 2016 Sep; 105(9):727-37. PMID: 27017514; PMCID: PMC4988995.

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36. Enciso JS, **Greenberg B**. Evolving Issues in Heart Failure Management. *Prog Cardiovasc Dis.* 2016 Jan-Feb; 58(4):365-6. PMID: 26774293.

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39. Maisel AS, Shah KS, Barnard D, Jaski B, Frivold G, Marais J, Azer M, Miyamoto MI, Lombardo D, Kelsay D, Iqbal N, Taub PR, Kupfer K, Lee E, Clopton P, Zile M, **Greenberg B**. How B-Type Natriuretic Peptide (BNP) and Body Weight Changes Vary in Heart Failure With Preserved Ejection Fraction Compared With Reduced Ejection Fraction: Secondary Results of the HABIT (HF Assessment With BNP in the Home) Trial. *J Card Fail*. 2016 Apr; 22(4):283-93. PMID: 26433086.

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40. Cork DP, Tran HA, Silva J, Barnard D, **Greenberg B**, Adler ED, Pretorius V. A Case Series of Biventricular Circulatory Support Using Two Ventricular Assist Devices: A Novel Operative Approach. *Ann Thorac Surg*. 2015 Oct; 100(4):e75-7. PMID: 26434483.

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41. Klein L, **Greenberg BH**, Konstam MA, Gregory D, Kociol RD, Johnson MR, de Marco T. Activities and Compensation of Advanced Heart Failure Specialists: Results of the Heart Failure Society of America (HFSA) Survey. *J Card Fail*. 2015 Nov; 21(11):924-9. PMID: 26362520.

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42. Cotter G, Voors AA, Prescott MF, Felker GM, Filippatos G, **Greenberg BH**, Pang PS, Ponikowski P, Milo O, Hua TA, Qian M, Severin TM, Teerlink JR, Metra M, Davison BA. Growth differentiation factor 15 (GDF-15) in patients admitted for acute heart failure: results from the RELAX-AHF study. *Eur J Heart Fail*. 2015 Nov; 17(11):1133-43. PMID: 26333529.

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45. Zannad F, **Greenberg B**, Cleland JG, Gheorghide M, van Veldhuisen DJ, Mehra MR, Anker SD, Byra WM, Fu M, Mills RM. Rationale and design of a randomized, double-blind, event-driven, multicentre study comparing the efficacy and safety of oral rivaroxaban with placebo for reducing the risk of death, myocardial infarction or stroke in subjects with heart failure and significant coronary artery disease following an exacerbation of heart failure: the COMMANDER HF trial. *Eur J Heart Fail.* 2015 Jul; 17(7):735-42. PMID: 25919061.

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