

November 19, 2018

Ronen Beeri, MD, FACC, FESC- Curriculum Vitae

Personal details

Marital status	Married plus three children.
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Higher Education and Certifications

1984-1991	MD. Hebrew University Hadassah Medical School, Jerusalem.
March 1991-February 1992	Intern, Hadassah-Hebrew University Medical Center, Jerusalem
March 1992-February 1996	Resident in Internal Medicine, Hadassah-Hebrew University Medical Center, Mt. Scopus, Jerusalem.
March 1996	Board certified in Internal Medicine- Israel Medical Association
March 1996-December 1998	Fellow in Cardiology, Hadassah-Hebrew University Medical Center, Ein-Karem, Jerusalem
December 1998	Board certified in Cardiology- Israel Medical Association
December 1998- July 2000	Staff Cardiologist- Cardiology Department- Echocardiography Unit, Hadassah-Hebrew University Medical Center, Ein-Karem, Jerusalem
July 2000- August 2002	Research Fellow in Medicine- Harvard Medical School, Cardiac Ultrasound Lab, Massachusetts General Hospital, Boston, MA
August 2002-	Staff Cardiologist- Cardiology Department- Echocardiography Unit, Hadassah-Hebrew University Medical Center, Jerusalem
August 2005-	Visiting Scientist, Harvard Medical School, Cardiac Ultrasound Lab, Massachusetts General Hospital, Boston, MA
January 2007-	Director, Cardiovascular research Center, Heart Institute, Hadassah-Hebrew University Medical Center, Ein-Kerem, Jerusalem

Hebrew University Appointments

October 1994-1999	Clinical instructor in internal medicine- Hebrew University-Hadassah Medical School, Jerusalem
January 2002- February 2010	Lecturer in Medicine (Cardiology)- Hebrew University-Hadassah Medical School, Jerusalem
February 2010- July 2012	Senior Lecturer in Medicine (Cardiology)- Hebrew University-Hadassah Medical School, Jerusalem
July 2012-	Associate Professor in Medicine (Cardiology)- Hebrew University-Hadassah Medical School, Jerusalem

Grant support

2001-2002, American Society of Echocardiography (Grant-In-Aid), "Influence of Mitral Regurgitation on Myocardial Remodeling after Myocardial Infarction: Echocardiographic and Cellular Assessment". Role: PI.

2002-2006, USA-Israel Binational Science Foundation (BSF). "Influence of Mitral Regurgitation on Myocardial Remodeling after Myocardial Infarction" (grant no. 2001037. Role: PI.

2003-2005 American Heart Association. "Influence of Mitral Regurgitation on Myocardial Remodeling after Myocardial Infarction" (grant no. 0350422N). Role: investigator

2009-2013 National Institutes of Health (NIH/NHLBI). "Influence of Mitral Regurgitation on Myocardial Remodeling after Myocardial Infarction" (grant no. R01 HL072265). Role: investigator

2003-2005 National Institutes of Health (NIH/NIBIB). "SV40 As a Cardiac Gene Therapy Vector" (grant no. R21 EB002982). Role: PI.

2004-2009 National Institutes of Health (NIH/NHLBI). "Integrated Mechanism of Ischemic Mitral Regurgitation" (grant no. R01 HL 38176). Role: investigator.

2006-2011 USA-Israel Binational Science Foundation (BSF). "Myocardial Remodeling in Ischemic Mitral Regurgitation- From Mechanisms to Potential Therapies" (grant no. 2005250). Role: PI.

2008 Israel Cancer Association. "New Echocardiographic Parameters for Early Detection of Trastuzumab Cardiotoxicity in Patients with Breast Carcinoma". (grant no. 20080065C). Role:investigator.

2008 Israel Cancer Association. "Peri-operative Administration of Beta-blockers and COX2 inhibitors in Patients Undergoing Removal of a Primary Breast Tumor". (grant no. 20080104C). Role:investigator.

2010-2014 National Institutes of Health (NIH/NHLBI). "Effect of Mitral Regurgitation on Ischemic LV Remodeling" (grant no. R01 HL072265-06). sub-contract. Role: Co-PI.

2015-2017 Moxie Foundation. "Resident Cardiac Progenitor Cells". Role:PI

Membership in Professional Societies

Member – Israel Medical Association; Fellow- Israel Heart Society; Fellow , American College of Cardiology; Fellow- European Society of Cardiology; Member- American Society of Echocardiography; Member, Council on basic cardiovascular sciences, American Heart Association. Member- Israeli Society of Gene Therapy. Member- International Society of Heart Research- European section, Israeli Subsection. Member- Heart Valve Society of America.

Publications list**Chapters in Books**

1. Hung J, Shahzad K, **Beeri R**, Levine RA. Ventricular Remodeling and Secondary Valvular Dysfunction in Heart Failure Progression. In: Dec GW, editor. Heart Failure: A Comprehensive Guide to Diagnosis and Treatment. 1 ed. New-York: Marcel Dekker Inc.; 2004.
2. **Beeri R**, Otsuji Y, Schwammenthal E, Levine R. Ischemic Mitral Regurgitation. In Valvular Heart Disease: A Companion to Braunwald's Heart Disease. 3.ed. New York: Saunders; 2009.

Peer reviewed original articles (ONLY PAPERS PUBLISHED AFTER 2002- w/o case reports)

1. **Beeri R**, Guerrero JL, Supple G, Sullivan S, Levine RA, Hajjar RJ (2002). A New Efficient Catheter-Based System for Myocardial Gene Delivery. *Circulation*; 106:1756-59..
2. Han B, Fixler R, **Beeri R**, Wang Y, Bachrach U, Hasin Y (2003). The opposing effects of endothelin-1 and C-type natriuretic peptide on apoptosis of neonatal rat cardiac myocytes. *Eur J Pharmacol*; 474:15-20.
3. Raphael J, Abedat S, Rivo J, Meir K, **Beeri R**, Pugatsch T, Zuo Z, Gozal Y (2006). Volatile anesthetic preconditioning attenuates myocardial apoptosis in rabbits after regional ischemia and reperfusion via Akt signaling and modulation of Bcl-2 family proteins. *J Pharmacol Exp Ther*; 318(1):186-94.
4. Pugatsch T, Abedat S, Lotan C, **Beeri R**. (2006). Anti-erbB2 treatment induces cardiotoxicity by interfering with cell survival pathways. *Breast Cancer Res*. 13;8(4):R35.
5. Tshori S, Gilon D, **Beeri R**, Nechushtan H, Kaluzhny D, Pikarsky E, Razin E. (2006) Transcription factor MITF regulates cardiac growth and hypertrophy. *J Clin Invest*; 116(10):2673-81.
6. Zwirn G, **Beeri R**, Gilon D, Akselrod S (2006) . Automatic endocardial-boundary detection in low mechanical-index contrast echocardiography. *IEEE Trans Biomed Eng*;53(11):2310-22.
7. **Beeri R** , Streckenbach SC , Isselbacher EM , Akins CW , Vlahakes GJ , Adams MS , Levine, RA (2007). The Crossed Swords sign: insights into the dilemma of repair in bileaflet mitral valve prolapse. *J Am Soc Echocardiogr*; 20(6): 698-702.
8. Alcalai R, Viola N, Mosseri M, **Beeri R**, Leibowitz D, Lotan C, Gilon D (2007). The value of percutaneous coronary intervention in patients with symptomatic aortic stenosis and coronary artery disease. *Am J Med*; 120:185.
9. **Beeri R**, Yosefy C, Guerrero JL, Abeidat S, Handschumacher MD, Stroud R, Sullivan S, Chaput M, Gilon D, Vlahakes GJ, Spinale FG, Hajjar RJ, Levine RA (2007). Early Repair of Moderate Ischemic MR Reverses LV Remodeling: A Functional and Molecular Study. *Circulation*; 116(11):1288-93.
10. Kogan NM, Schlesinger M, Marincheva G, **Beeri R**, Mechoulam R. (2007) A Cannabinoid Anticancer Quinone, HU-331, is More Potent and Less Cardiotoxic than Doxorubicin – a Comparative In-Vivo Study. *J Pharmacol Exp Ther*; 322(2):646-53
11. Durst R, Danenberg H, Gallily R, Mechoulam R, Meir K, Grad E, **Beeri R**, Pugatsch T, Tarsish E, Lotan C (2007). Cannabidiol, a nonpsychoactive Cannabis constituent, protects against myocardial ischemic reperfusion injury. *Am J Physiol Heart Circ Physiol*. 293(6):H3602-7.
12. **Beeri R**, Yosefy C, Guerrero JL, Nesta F, Abeidat S , del Monte F, Handschumacher M, Stroud R, Sullivan S, Pugatsch T, Gilon D, Vlahakes GJ, Spinale FG, Hajjar RJ, Levine RA. (2008) Mitral Regurgitation Worsens Post-Infarct LV Remodeling: Failure of Hypertrophic Compensation. *J Am Coll Cardiol*;51(4):476-86.
13. Raphael J, Zuo Z, Abedat S, **Beeri R**, Gozal Y. (2008). Isoflurane pre-conditioning decreases myocardial infarction in rabbits via up-regulation of hypoxia inducible factor 1 that is mediated by mammalian target of rapamycin. *Anesthesiology*;108(3):415-25.
14. Shuvy M, Abedat S, **Beeri R**, Danenberg HD, Planer D, Ben-Dov IZ, Meir K, Sosna J, Lotan C (2008). Uraemic hyperpara-thyroidism causes a reversible inflammatory process of aortic valve calcification in rats. *Cardiovasc Res*;79(3):492-9.
15. Zwirn G, **Beeri R**, Gilon D, Friedman Z, Akselrod S (2009). Quantitative evaluation of local myocardial blood volume in contrast echocardiography. *Med Image Anal*;13(1):62-79.

16. Durst R, Neumark Y, Meiner V, Friedlander Y, Sharon N, Polak A, **Beeri R**, Danenberg H, Erez G, Spitzen S, Ben-Avi L, Leitersdorf E, Lotan C (2009). Increased risk for atherosclerosis of various macrophage scavenger receptor 1 alleles. *Genet Test Mol Biomarkers*; 13(5): 583-7.
17. Gavish L, Rubinstein C, Bulut A, Berlatzky Y, **Beeri R**, Gilon D, Gavish L, Harlev M, Reissman P, Gertz SD (2009). Low-level laser irradiation inhibits abdominal aortic aneurysm progression in apolipoprotein E-deficient mice. *Cardiovasc Res*; 83(4): 785-92.
18. Rajamannan NM, Antonini-Canterin F, Moura L, Zamorano JL, Rosenhek RA, Best PJ, Lloyd MA, Rocha-Goncalves F, Chandra S, Alfieri O, Lancellotti P, Tornos P, Baliga RR, Wang A, Bashore T, Ramakrishnan S, Spargias K, Shuvy M, **Beeri R**, Lotan C, Suwaidi JA, Bahl V, Pierard LA, Maurer G, Nicolosi GL, Rahimtoola SH, Chopra K, Pandian NG (2009). Medical therapy for rheumatic heart disease: is it time to be proactive rather than reactive? *Indian Heart J*. 2009 Jan-Feb ; 61(1): 14-23; Not rated. {Review Article}
19. Liel-Cohen N, Tsadok Y, **Beeri R**, Lysyansky P, Agmon Y, Feinberg MS, Fehske W, Gilon D, Hay I, Kuperstein R, Leitman M, Deutsch L, Rosenmann D, Sagie A, Shimoni S, Vaturi M, Friedman Z, Blondheim DS (2010). A new tool for automatic assessment of segmental wall motion based on longitudinal 2D strain: a multicenter study by the Israeli Echocardiography Research Group. *Circ Cardiovasc Imaging*; 3(1): 47-53;
20. Bachner-Hinenzon N , Ertracht O , Leitman M , Vered Z , Shimoni S , **Beeri R** , Binah O , Adam D (2010). Layer-specific strain analysis by speckle tracking echocardiography reveals differences in left ventricular function between rats and humans. *Am J Physiol Heart Circ Physiol*; 299(3):H664-72.
21. Blondheim DS , **Beeri R** , Feinberg MS , Vaturi M , Shimoni S , Fehske W , Sagie A , Rosenmann D , Lysyansky P , Deutsch L , Leitman M , Kuperstein R , Hay I , Gilon D , Friedman Z , Agmon Y , Tsadok Y , Liel-Cohen N (2010). Reliability of visual assessment of global and segmental left ventricular function: a multicenter study by the Israeli Echocardiography Research Group. *J Am Soc Echocardiogr*;23(3):265-6. 3
22. **Beeri R** , Chaput M , Guerrero JL , Kawase Y, Yosefy C , Abedat S, Karakikes I , Morel C , Tisosky A , Sullivan S , Handschumacher MD , Gilon D , Vlahakes GJ , Hajjar RJ , Levine RA (2010). Gene delivery of sarcoplasmic reticulum calcium ATPase inhibits ventricular remodeling in ischemic mitral regurgitation. *Circ Heart Fail*;3(5):627-34.
23. Shuvy M , Abedat S , **Beeri R** , Valitsky M , Daher S , Kott-Gutkowski M , Gal-Moscovici A , Sosna J , Rajamannan NM , Lotan C (2011). Raloxifene attenuates Gas6 and apoptosis in experimental aortic valve disease in renal failure. *Am J Physiol Heart Circ Physiol*; 300(5):H1829-40.
24. Shuvy M , Nyska A , **Beeri R** , Abedat S , Gal-Moscovici A , Rajamannan NM , Lotan C (2011). Histopathology and apoptosis in an animal model of reversible renal injury. *Exp Toxicol Pathol*;63(4):303-6.
25. Yosefy C* , **Beeri R** * , Vaturi M , Scherrer-Crosbie M , Handschumacher MD , Levine RA (2011) . Mitral regurgitation after anteroapical myocardial infarction: new mechanistic insights. *Circulation*;123(14):1529-36. (* Equal Contributors)
26. Landesberg G , Gilon D , Meroz Y , Georgieva M , Levin PD , Goodman S , Avidan A , **Beeri R** , Weissman C , Jaffe AS, Sprung CL (2011). Diastolic dysfunction and mortality in severe sepsis and septic shock. *Eur Heart J*. (In Press).
27. Kodesh E , Neshar N , Simaan A, Hochner B, **Beeri R**, Gilon D, Stern M, Gerstenblith G, Horowitz M (2011). Heat acclimation and exercise training interact when combined in an overriding and tradeoff manner: Physiologic-genomic linkage. *Am J Physiol-Regul Integr Comp Physiol*; 301(6):R1786-97.
28. Blondheim D , Friedman Z,Lysyansky P, PhD, Kuperstein R, Hay I, Feinberg MS, **Beeri R**, Vaturi M, Sagie A, Shimoni S, Fehske W, Deutsch L,, Leitman M, Gilon D, Agmon Y, Tsadok Y, Rosenmann D, Liel-Cohen, N (2011). Use of an automatic application for wall motion classification based on longitudinal strain: is it affected by operator expertise in echocardiography? A multicenter study by the Israeli Echocardiography Research Group. *Eur Heart J Cardiovasc Imaging*. 2012 Mar;13(3):257-62.
29. Gavish L, Rubinstein C, Berlatzky Y, Gavish LY, **Beeri R**, Gilon D, Bulut A, Harlev M, Reissman P, Gertz SD. Low level laser arrests abdominal aortic aneurysm by collagen matrix reinforcement in apolipoprotein E-deficient mice. *Lasers Surg Med*. Oct;44(8):664-74
30. Beaudoin J, Levine RA, Yosefy C, **Beeri R**, Neary JH, Morgan NV, Passeri JJ. (2012) Severe ischemic mitral regurgitation despite normally contracting subpapillary myocardium. *Circulation* Jul 3;126(1):138-41.
31. Leinonen JV, Emanuelov AK, Platt Y, Helman Y, Feinberg Y, Lotan C, **Beeri R**. (2013)Left atrial appendages from adult hearts contain a reservoir of diverse cardiac progenitor cells. *PLoS One* ;8(3):e59228.
32. Beaudoin J, Levine RA, Guerrero, JL, Yosefy C, Sullivan S, Abedat S, Handschumacher M, Szymansky C, Gilon, D, Palmeri N, Vlahakes, G, Hajjar, RJ, **Beeri R**. (2013). Late Repair of Ischemic Mitral Regurgitation does not Prevent Left Ventricular Remodeling: Importance of Timing for Beneficial Repair. *Circulation* Sep 10;128(26):S248-52

33. Landesberg G, Jaffe AS, Gilon D, Levin PD, Goodman S, Abu-Baih A, **Beeri R**, Weissman C, Sprung CL, Landesberg A (2014). Troponin Elevation in Severe Sepsis and Septic Shock: The Role of Left Ventricular Diastolic Dysfunction and Right Ventricular Dilatation. *Crit Care Med*. 2014 Apr;42(4):790-800
34. Gavish L, **Beeri R**, Gilon D, Rubinstein C, Berlatzky Y, Gavish LY, Bulut A, Harlev M, Reissman P, Gertz SD (2014). Inadequate Reinforcement of Transmedial Disruptions at Branch Points Subtends Aortic Aneurysm Formation in Apolipoprotein-E-Deficient Mice. *Cardiovasc Pathol*. 2014 Jan 3. pii: S1054-8807(13)00222-6
35. Shuvy M, Abedat S, **Beeri R**, Valitzki M, Stein Y, Meir K, Lotan C. (2014). Electromagnetic fields promote severe and unique vascular calcification in an animal model of ectopic calcification. *Exp Toxicol Pathol*. 2014 Sep;66(7):345-50.
36. Gavish L, **Beeri R**, Gilon D, Rubinstein C, Berlatzky Y, Bulut A, Reissman P, Gavish LY, Gertz SD. Arrest of progression of pre-induced abdominal aortic aneurysm in apolipoprotein E-deficient mice by low level laser phototherapy. *Lasers Surg Med*. 2014 Dec;46(10):781-90
37. Gertz SD, Gavish L, Mintz Y, **Beeri R**, Rubinstein C, Gavish LY, Berlatzky Y, Appelbaum L, Gilon D. Contradictory effects of hypercholesterolemia and diabetes mellitus on the progression of abdominal aortic aneurysm. *Am J Cardiol*. 2015 Feb 1;115(3):399-401.
38. Rachmin I, Amsalem E, Golomb E, **Beeri R**, Gilon D, Fang P, Nechushtan H, Kay G, Guo M, Yiqing PL, Foo RS, Fisher DE, Razin E, Tshori S. FHL2 switches MITF from activator to repressor of Erbin expression during cardiac hypertrophy. *Int J Cardiol*. 2015 Sep 15;195:85-94
39. Shuvy M, Abedat S, Mustafa M, Duvdevan N, Meir K, **Beeri R**, Lotan C. Cellular Changes during Renal Failure-Induced Inflammatory Aortic Valve Disease. *PLoS One*. 2015 Jun 12;10(6):e0129725.
40. Leinonen JV, Korkus-Emanuelov A, Wolf Y, Milgrom-Hoffman M, Lichtstein D, Hoss S, Lotan C, Tzahor E, Jung S, **Beeri R**. Macrophage precursor cells from the left atrial appendage of the heart spontaneously reprogram into a C-kit+/CD45- stem cell-like phenotype. *Int J Cardiol*. 2016 Apr 15;209:296-306.
41. Shiran A, Blondheim DS, Shimoni S, Jabarren M, Rosenmann D, Sagie A, Leibowitz D, Leitman M, Feinberg M, **Beeri R**, Adawi S, Shotan A, Goland S, Bloch L, Kobal SL, Liel-Cohen N. Two-dimensional strain echocardiography for diagnosing chest pain in the emergency room: a multicentre prospective study by the Israeli echo research group. *Eur Heart J Cardiovasc Imaging*. 2016 Aug 26.
42. **Beeri R**, Korach A. Ischemic Mitral Regurgitation: The Value of Flexibility in the Quest for a Perfect Repair. *Semin Thorac Cardiovasc Surg*. 2016 Summer;28(2):269-270.
43. Tyomkin V, Vered Z, Mor M, Blondheim DS, Carasso S, Shimoni S, Goland S, **Beeri R**, Gilon D, Ben Zekry S, Sagie A, Liel Cohen N, Yosefy C, Pery M, Leitman M. Is It Time to Revise the Guidelines and Recommendations for Digital Echocardiography? *J Am Soc Echocardiogr*. 2018 May;31(5):634-636.
44. Chen S, Zeniou V, Gilon D, Planer D, **Beeri R**, Lotan C, Danenberg HD. Long Term Follow-Up of Transcatheter Self Expandable Aortic Valve Implantation. *Harefuah*. 2018 Mar;157(3):167-169
45. Kindya B, Ouzan E, Lerakis S, Gonen E, Babaliaros V, Karayel E, Thourani VH, Gotsman I, Devireddy CM, Danenberg HD, Leshnowar BG, **Beeri R**, Ko YA, Gilon D, Ahmed H, Liu C, Lotan C, Mavromatis K. Degenerative mitral regurgitation predicts worse outcomes in patients undergoing transcatheter aortic valve replacement. *Catheter Cardiovasc Interv*. 2018 Sep 1;92(3):574-582.
46. Tonchev IR, Turyan A, **Beeri R**, Shuvy M. MitraClip Technique Five Years after Alfieri Stitch Mitral Valve Repair. *J Heart Valve Dis*. 2017 Sep;26(5):595-596
47. Buzaglo N, Golomb M, Rosen H, **Beeri R**, Ami HC, Langane F, Pierre S, Lichtstein D. Augmentation of Ouabain-Induced Increase in Heart Muscle Contractility by Akt Inhibitor MK-2206. *J Cardiovasc Pharmacol Ther*. 2018 Jan 1:1074248418788301
48. Kotecha D, Bax JJ, Carrera C, Casadei B, Merkely B, Anker SD, Vardas PE, Kearney PP, Roffi M, Ros M, Vahanian A, Weidinger F, **Beeri R**, Budaj A, Calabrò P, Czerwinska-Jelonkiewicz K, D'Ascenzi F, De Potter T, Fox KF, Hartikainen J, McAdam B, Milicic D, Pasquet AA, Sionis A, Sohaib SMA, Tsioufis C, Verhorst PMJ, Kirchhof P; ESC Scientific Document Group ; 2016 ESC Education Conference. Roadmap for cardiovascular education across the European Society of Cardiology: inspiring better knowledge and skills, now and for the future. *Eur Heart J*. 2018 Jan 31. doi: 10.1093/eurheartj/ehy058.
49. Shiran A, Blondheim DS, Shimoni S, Jabarren M, Rosenmann D, Sagie A, Leibowitz D, Leitman M, Feinberg MS, **Beeri R**, Adawi S, Asmer I, Ganaeem M, Friedman Z, Liel-Cohen N. Effect of image quality on accuracy of two-dimensional strain echocardiography for diagnosing ischemic chest pain: a 2DSPEER multicenter trial substudy. *Int J Cardiovasc Imaging*. 2018 Nov 14. doi: 10.1007/s10554-018-1495-x

Research Interests

1. Chronic Mitral Regurgitation: Models of chronic mitral regurgitation in large and small animals; Influence of mitral regurgitation on post myocardial infarction remodeling; Mechanism of mitral regurgitation in anterior myocardial infarction.
2. Cardiac Gene and Cell Therapy: Development of closed-chest delivery systems for myocardial gene therapy; Cardiac resident stem cells from the left atrial appendage (LAA). Cardiac resident progenitor cells homing mechanisms.
3. Aortic Stenosis: Development of an animal model.
4. Functional Imaging Using Echo
5. Finite-element modeling of the heart