STEVE BIBEVSKI M.D/PH.D

SECTION OF PEDIATRIC AND CONGENITAL CARDIAC SURGERY
THE HEART INSTITUTE
JOE DIMAGGIO CHILDREN'S HOSPITAL

1150 N. 35TH AVE | SUITE 575 | HOLLYWOOD, FL 33021
STEVE.BIBEVSKI@YAHOO.COM

CITIZENSHIP: AUSTRALIAN/USA DUAL CITIZEN

EDUCATION

La Trobe University, Melbourne, Australia.
B.App.Sc. (Honors) - 1994

Case Western Reserve University, Cleveland, OH
Ph.D. - 2000

Case Western Reserve University, Cleveland, OH
M.D. - 2004

INTERNSHIPS, RESIDENCIES, FELLOWSHIPS

2012-2012	**The Royal Children's Hospital Melbourne, Congenital Cardiac Surgery Fellowship.**
2011-2012	**University of Michigan, Congenital Cardiac Surgery Fellowship**
2009-2011	**University of Michigan, Cardiothoracic Surgery Fellowship**
2004-2009	Case Western Reserve University, General Surgery Residency
1998-1998	International DAAD Scholar for Science & Medicine, Dept. Physiology, Ruhr Universitat, Bochum, Germany, *Peter Scheid* & *David Ballantyne (Advisors)*

PROFESSIONAL APPOINTMENTS

Clinical Appointments:

2012- current	**Staff Surgeon in Pediatric and Congenital Cardiac Surgery, Joe DiMaggio Children's Hospital, Hollywood, FL**

Academic Appointments:

2012-current	**Assistant Professor, Florida Atlantic University**
2012-current	**Assistant Professor, Florida International University**
2002-2007	**Research Associate, Dept, Physiology & Biophysics, Case Western Reserve University**
2000-2002	**Post-doctoral Fellow, Dept. Physiology & Biophysics, Case Western Reserve University**

LICENSURE & BOARD CERTIFICATION

2009-2011	**Ohio, State Medical Board License #092708**
2009-2012	**Michigan, Board of Health License #4301093655**
2012-current	**Florida State Medical License #ME 114052**
Current	**American Board of Thoracic Surgery-Thoracic and Cardiac Surgery**
Current	**American Board of Thoracic Surgery-Congenital Cardiac Surgery**

HONORS & AWARDS

4/1998	**John Diggle Award for Excellence in Human Anatomy, Lincoln Institute of Health Sciences, La Trobe University**
4/2000	**Finalist, The Michael J. Brody Young Investigator Award of the American Physiologial Society, Neural Control of Cardiovascular Function Section**
8/2003	**tumSUDEN/Hellebrandt Award, American Physiological Society**
5/2004	**Myron F. Kanter and Lawrence J. Kanter Endowment Fund Award for "Outstanding student specializing in Cardiology or Cardiovascular Surgery", Case Western Reserve University**
9/2005	**Travel Award, Heart Failure Society of America**
4/2006	**Young Investigator Award, Society for Experimental Biology & Medicine**
1/2007	**Scholar, Looking into the Future Scholarship, Society for Thoracic Surgeons**

GRANT SUPPORT

Co-writer of submissions

1999-2003 **Merit Review, Department of Veterans Affairs - $551,400**
"Cholinergic Mechanisms in Heart Failure: Role of Ganglionic Transmission"

2004-2008 **Merit Review, Department of Veterans Affairs - $703,500**
"Modulation of Ganglionic Transmission in Heart Failure"

Co-investigator

2008-2010 **"Chronic Vagal Nerve Stimulation in Congestive Heart Failure", American Heart Association, Regional $50,000**

Principal Investigator

2011-2012 **Association of Autonomic Tone and Markers of Inflammation in Patients with Congenital Heart Disease. The University of Michigan, Griese/Hutchison/Woodson Foundation $25,000**

Principal Investigator

2013-2015 **Autonomic Tone and Markers of Inflammation in Infants with Congenital Heart Disease. The Joe DiMaggio Children's Hospital Foundation. $25,000**

Co-investigator

2016-current **Bioscaffold mitral valve replacement permitting somatic growth and remodeling. American Heart Association. $154,000**

PROFESSIONAL SERVICE

Study Sections:

1995 **VA Merit Review Grant program primary reviewer**

Ad hoc Journal Reviewer:

American Journal of Physiology
Cardiovascular Research
Circulation
Circulation Research
Journal of the Autonomic Nervous System
Annals of Thoracic Surgery

TEACHING ACTIVITIES

Lecturer, Graduate School, Case Western Reserve University, Dept. Pharmacology
Cardiovascular Pharmacology Course

Medical Student Clerkship Director – Florida Atlantic University School of Medicine- Pediatric Cardiology and Cardiac Surgery at JDCH

Medical Student Clerkship Director – Nova Southeastern School of Medicine- Pediatric Cardiology and Cardiac Surgery at JDCH

Physician Assistant Rotation Director - Nova Southeastern Physician Assistant program- Pediatric Cardiology and Cardiac Surgery at JDCH

OTHER SERVICE ACTIVITIES

School, Hospital, and University Committees:
2005 ACGME Site review committee

BIBLIOGRAPHY

Articles – Original Research

- **Bibevski S**, and Dunlap ME: Ganglionic mechanisms contribute to diminished vagal control in heart failure. *Circulation* 99:2958-2963, 1999.

- **Bibevski S**, McIntosh JM, Zigmond R, and Dunlap ME: Functional nicotinic acetylcholine receptors that mediate ganglionic transmission in cardiac parasympathetic neurons. *Journal of Neuroscience* 20(13):5076-5082, 2000.

- Dunlap ME, **Bibevski S**, Rosenberry TL, Ernsberger P: Mechanisms of altered vagal control in heart failure: influence of muscarinic receptors and acetylcholinesterase activity. *American Journal of Physiology, Heart and Circulatory Physiology* 285(4):H1632-40, 2003.

- **Bibevski S** and Dunlap ME: Prevention of diminished parasympathetic control of the heart in experimental heart failure. *American Journal of Physiology (Heart and Circulatory)* 287(4):H1780-5, 2004.

- Deck J, **Bibevski S**, Gnecchi-Ruscone T, Bellina V, Montano N, and Dunlap ME: The a7 nicotinic acetylcholine receptor subunit is not required for resting parasympathetic control of the heart in the mouse. *Physiological Genomi*cs 22:86-92, 2005.

- Zhang Y, Yamada H, **Bibevski S,** Zhuang S, Mowrey KA, Wallick DW, Oh S, Mazgalev TN. Chronic atrioventricular nodal vagal stimulation: first evidence for long-term ventricular rate control in canine atrial fibrillation model. *Circulation.* 2005 Nov 8;112(19):2904-11.

- Oh S, Zhang Y, **Bibevski S,** Marrouche NF, Natale A, Mazgalev TN. Vagal denervation and atrial fibrillation inducibility: epicardial fat pad ablation does not have long-term effects. *Heart Rhythm*. 2006 Jun;3(6):701-8.

- Youhua Zhang, Zoran B. Popovic, **Steve Bibevski**, Itaf Fakhry, Domenic A. Sica, David R. Van Wagoner, and Todor N. Mazgalev. Chronic Vagus Nerve Stimulation Improves Autonomic Control and Attenuates Systemic Inflammation and Heart Failure Progression in a Canine High-Rate Pacing Model. *Circ Heart Fail*. 2009;692-699

- **Bibevski S**, Dunlap M. Evidence for Impaired Vagus Nerve Activity in Heart Failure. Heart Fail Rev. 2010 Sept 5.

- **Bibevski S,** Horton S, Millar J, and d'Udekem, Y. Veno-right ventricular ECMO support in an infant. Perfusion 2014 Jan(1):94-95.

  Bibevski S, Scholl F.G. Feasibility and early effectiveness of a custom, hand-made systemic atrioventricular valve using porcine extracellular matrix (CorMatrix) in a 4-month-old infant. Ann Thorac Surg. 2015 Feb;99(2):710-2.

- **Bibevski S**, Ruzmetov M, Fortuna R, Turrentine M, Brown J, Ohye R. Performance of Synergraft Decellularized Pulmonary Allografts Compared With Standard Cryopreserved Allografts: Results from Multi-Institutional Data. Annals of Thoracic Surgery 2017 Mar 103(3):869-874

- Ramaswamy S, Lordeus M, Mankame OV, Valdes-Cruz L, **Bibevski S,** Bell SM, Baez I, Scholl F. Hydrodynamic assessment of aortic valves prepared from porcine small intestinal submucosa. Cardiovascular Engineering and Technology. 2017 Mar 8(1):30-40

- **Bibevski S**, Levy A, Scholl FG. Mitral valve replacement using a handmade construct in an infant. Interact Cardiovasc Thorac Surg. 2017 Apr 1:24(4):639-640

Articles – In Revision/In Process

- **Bibevski S**, Deck J, McIntosh JM, Zigmond R, and Dunlap ME: Evidence for altered nicotinic acetylcholine receptors in parasympathetic efferent neurons in experimental heart failure. *Brain Research*

- **Bibevski S,** Bolling S.F: Mitral valve repair for the inherited Tissue Defects: Marfans and Ehlers-Danlos Syndromes.

Abstracts

- **Bibevski S**, and Dibner-Dunlap ME: Ganglionic mechanisms contribute to attenuated vagal control in heart failure. FASEB Journal 12(4):A398,1998.

- **Bibevski S**, and Dibner-Dunlap ME: Ganglionic mechanisms contribute to attenuated vagal control in heart failure. Journal of Investigative Medicine, 46(3):194A, 1998.

- **Bibevski S**, McIntosh M, and Dunlap M: Synaptic transmission in cardiac canine parasympathetic ganglia is mediated by α3/β2 nicotinic receptor subtypes. Circulation 98(8):I-540, 1998.

- **Bibevski S**, McIntosh M and Dunlap ME: Evidence for altered nicotinic receptor subtype contribution to ganglionic transmission in canine parasympathetic neurons in heart failure. FASEB J. 13(4):A452,1999.

- **Bibevski S**, and Dunlap ME: Preservation of parasympathetic ganglionic transmission in the heart in dogs with developing heart failure: effects of repeated DMPP administration. FASEB Journal 13(4):A454,1999.

- **Bibevski S**, McIntosh JM, and Dunlap ME: Evidence for altered nicotinic acetylcholine receptor subtypes mediating parasympathetic ganglionic transmission in heart failure. Circulation 100(18):;I-133, 1999.

- **Bibevski S**, Deck JL, Bellini V, Gnecchi-Ruscone T, Montano N, Dunlap ME: The alpha 7 nicotinic acetylcholine receptor subunit is not required for resting parasympathetic tone in the mouse heart: evidence from alpha 7 deficient mice. FASEB J 17(4), A406. 2003.

- **Bibevski S**, Deck JL, Zigmond RE, Dunlap ME. Decreased ganglionic function in cardiac vagal nerves is associated with decreased neuronal size and altered levels of alpha subunits of the nicotinic acetylcholine receptor. FASEB J. 19:702.7, 2005.

- Deck J, **Bibevski S**, Jin JP, Dunlap ME: Compensatory Parasympathetic Effects in a Skeletal Muscle Troponin T Overexpression Murine Model of Cardiac Dysfunction. Journal of Cardiac Failure 11(6):S108, 2005.

- **Bibevski S**, AIlocco F, Deck JL, Mclntosh JM, Dunlap M: α3 and not α6 subunit

containing nAChR mediate cardiac cholinergic ganglionic transmission. FASEB J. 2006.

- Allocco F, **Bibevski S**, Deck J, Dunlap M: Adminstration of nicotinic acteylcholine receptor agonist given during development of heart failure results in preserved parasympathetic tone and improves cardiac remodeling. FASEB J. 2006.

- Youhua Zhang, Zoran B Popovic, **Steve Bibevski**; Don W Wallick; David R Van Wagoner; Todor N Mazgalev.: Chronic Cervical Vagus Nerve Stimulation Attenuates Systemic Inflammation and Heart Failure Progression in a Canine Rapid Ventricular Pacing Model, Circulation, Oct 2008; 118: S_541 Abstract 5392

- **Bibevski S,** Bolling S.F: Mitral valve repair for the inherited Tissue Defects: Marfans and Ehlers-Danlos Syndromes. Mitral Conclave, 2011

- **Bibevski S,** Ruzmetov, M, Ohye, R. Performance of Synergraft Decellularized Pulmonary Allografts Compared With Standard Cryopreserved Allografts: Results from Multi-Institutional Data, American Heart Association Scientific Sessions, 2013

- **Bibevski S,** Decker J, Sorunmu A, Chan KC, Scholl FG**.** The destiny of post-operative residual ventricular septal defects after surgical repair. The European Congenital Heart Surgeons Society meeting, Venice, Italy 2016

- Scholl FG, Levy A, **Bibevski S.** The Fate of Extracellular Matrix Valves in Right Ventricular Outflow Tract Reconstruction. The European Congenital Heart Surgeons Society Annual meeting, Venice, Italy 2016

- Mankame O, Hausz R, Valces-Cruz L, **Bibevski S**, Scholl FG, Bell S, Baez I, Ramaswamy S. Porcine Small Intestine Submucosal Mitral Valve Hydrodynamics: Preliminary Assessment. BMES 2016 Annual Meeting, Minneapolis Minnesota.

- Ramaswamy S, Valdes-Cruz L, Lordeus M, Mankame OV, **Bibevski S**, Bell SM, Baez I, Scholl F: Hydrodynamic Functionality of Aortic Valves Custom Made from Porcine Small Intestinal Submucosal Tissue, American Heart Association (AHA) Scientific Sessions, Nov 12-16, 2016, New Orleans, LA.

- Mankame OV, Lordeus M, Valdes-Cruz L, **Bibevski S**, Scholl F, Bell SM, Baez I, Ramaswamy S (POSTER): Porcine Small Intestinal Submucosal Valve Dynamics in the Aortic Position. Summer Biomechanics, Bioengineering, and Biotransport Conference (SB3C), National Harbor, MD, June 29 – July 2, 2016.

- Nasim S, Castellanos G, Estrada A, Medina D, Lordeus M, Valdes-Cruz L, **Bibevski S**, Scholl F, Boesl B, Agarwal A and Ramaswamy S (POSTER): Flow Field Post-Repair in Critical Aortic Valve Stenosis: Implications to Recurring Disease States, *Summer*

Biomechanics. Bioengineering, and Biotransport Conference (SB^{3}C), National Harbor, MD, June 29 – July 2, 2016 (Accepted as a finalist for Master's level Student Paper Competition).

- Nasim S, Castellanos G, Medina D, Valdes-Cruz L, **Bibevski S,** Scholl F, Ramaswamy S (ORAL): Flow Patterns in critical congenital aortic valve stenosis Post-repair. *The 7th Biennial Heart Valve Biology & Tissue Engineering Meeting*, 12th - 14th October 2016, Hilton Head Island, SC

INVITED SCIENTIFIC PRESENTATIONS

- "Nicotinic Acetylcholine Receptors: From Shotgun Physiology to Molecular Precision". Invited speaker, University of Milan, Italy, 2002

- "Modulation of Ganglionic Transmission in vagal pathways to the heart". Invited speaker, The Baker Heart Institute, Melbourne, Australia, 2003

PERSONAL INTERESTS

Member - Porsche Club of North America
Musician – Drums and Percussion
Horsemanship – Own and train horses in Dressage

REFERENCES

Rick Ohye M.D. - Chairman, Division of Congential Cardiac Surgery, University of Michigan Medical Center, Ann Arbor, MI. ohye@med.umich.edu

Edward Bove M.D. – Head, Department of Cardiac Surgery, University of Michigan Medical Center, Ann Arbor, MI. elbove@med.umich.edu

Mark E. Dunlap M.D. - Head, Heart Failure Section, Division of Cardiology, Metrohealth System mdunlap@metrohealth.org