

**BIOGRAPHICAL SKETCH**

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NAME Vidu Garg, M.D.		POSITION TITLE Associate Professor of Pediatrics & Director of Translational Research	
eRA COMMONS USER NAME VGARG1			
EDUCATION/TRAINING <i>(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)</i>			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	YEAR(s)	FIELD OF STUDY
The Pennsylvania State University, University Park, Pennsylvania	B.S.	1992	General Science
Jefferson Medical College of Thomas Jefferson University, Philadelphia, Pennsylvania	M.D.	1994	Medicine
Columbus Children's Hospital, Ohio State University, Columbus, Ohio		1994-97	Pediatrics
Children's Medical Center and UT Southwestern Medical Center, Dallas, Texas		1997-00	Pediatric Cardiology
UT Southwestern Medical Center, Dallas, Texas		2000-02	Cardiac Development and Genetics

**Positions and Honors****Positions and Employment**

2000 - 2009 Attending Physician, Pediatric Cardiology, Children's Medical Center Dallas  
 2000 - 2002 Assistant Instructor, Department of Pediatrics, UT Southwestern, Dallas, Texas  
 2002 - 2009 Assistant Professor, Department of Pediatrics, UT Southwestern, Dallas, Texas  
 2005 - 2009 Assistant Professor, Dept. of Molecular Biology and McDermott Center for Human Growth & Development and Integrative Biology Graduate Program, UT Southwestern, Dallas, Texas  
 2009 - present Attending Physician, Pediatric Cardiology, Nationwide Children's Hospital, Columbus, Ohio  
 2009 - present Associate Professor (tenure), Dept. of Pediatrics, Ohio State University, Columbus, Ohio  
 2009 - present Director of Translational Research & Investigator, Center for Cardiovascular Research and The Heart Center, Nationwide Children's Hospital, Columbus, Ohio  
 2010 - present Associate Professor and Investigator, Davis Heart & Lung Research Institute, Molecular, Cellular and Developmental Biology Graduate Program & Integrated Biomedical Science Graduate Program, The Ohio State University, Columbus, Ohio  
 2011 - present Associate Professor (adjunct), Dept. of Molecular Genetics, Ohio State University, Columbus, Ohio

**Other Experience and Professional Memberships:** 1994-present, American Academy of Pediatrics, Fellow; 1998-present, American Heart Association; 1998-2003, American College of Cardiology; 2001-2005 Director, 22q11 Deletion Syndrome Clinic, Children's Medical Center Dallas; 2003-2007, Member, AHA Western States Cardiac Development Study Section; 2005-present, Member, Society of Pediatric Research (elected); 2006-2009, Member, Society of Pediatric Research, Richard D. Rowe Award Selection Committee; 2008-09, Co-Chair, AHA Western States Cardiac Development Study Section; 2010 Chair, AHA, Cardiac Biology Study Section; 2/2010, 5/2010, 6/2011 Member (ad hoc), NIH Cardiovascular Differentiation and Development Study Section; 2011, Member, NIH SEP/SRG 2011/01 ZHD1 DSR-N (DP) P; 2011 Member, NIH SEP/SRG 2011/05 ZHD 1 DSR-Y (50); 2011 Member, NIH SEP/Workgroup 2011/10 HLBP 1; Member, Observational Safety Monitoring Board for NHLBI Pediatric Cardiac Genomics Consortium; Member, Medical Advisory Board, Saving Tiny Hearts Society.

**Honors and Awards:** 1990, Summer Science Research Fellowship, AHA (Oregon Affiliate); 1992, Hobart Amory Hare Honor Society (Medical School); 2000, NIH K08 Mentored Clinical Scientist Development Award; 2000, Postdoctoral Research Fellowship for Physicians, HHMI (declined); 2003 Overall Winner, Young

Investigators Molecular Cardiovascular Forum, UT Southwestern Dallas; 2004, Honorable Mention Richard D. Rowe Award in Perinatal Cardiology, Society of Pediatric Research; 2004 Young Investigators Travel Award, Society of Pediatric Research; 2004, Basil O'Connor Starter Scholar Research Award, March of Dimes; 2005, Young Investigator Award Finalist, ACC; 2005, Richard D. Rowe Award in Perinatal Cardiology, Society of Pediatric Research; 2005, Reynolds Associate (selected), Donald W. Reynolds Cardiovascular Research Center, Dallas, Texas; 2006, Dallas Heart Ball Pediatric Cardiology Clinical Research Award

### C. Selected Peer-reviewed publications

1. \*Yamagishi H, \*Garg V, Matsuoka R, Thomas T, and Srivastava D. A Molecular Pathway Revealing a Genetic Basis for Human Cardiac and Craniofacial Defects. **Science** 283: 1158-1161 (1999). \*co-authors.
2. Garg, V., Yamagishi, C., Hu, T., Kathiriya, I.S., Yamagishi, H., and Srivastava, D. "Tbx1, a DiGeorge syndrome candidate gene, is regulated by Sonic Hedgehog during pharyngeal arch development." **Dev Biol** 235:62-73 (2001).
3. Kunte, A., Ivey, K., Yamagishi, C., Garg, V., Yamagishi, H., and Srivastava, D. "A common cis-acting sequence in the DiGeorge critical region regulates bi-directional transcription of UFD1L and CDC45L." **Mech Dev** 108:81-92 (2001).
4. Srivastava, D. and Garg, V. "Potential for fetal gene therapy in congenital heart disease." **Frontiers in Fetal Health** 3(7):211-212 (2001).
5. Garg, V., Kathiriya, I.S., Barnes, R., Schluterman, M.K., King, I.N., Butler, C.A., Rothrock, C.R., Eapen, R.S., Hirayama-Yamada, K, Joo, K., Matsuoka, R., Cohen, J.C., and Srivastava, D. "GATA4 Mutations Cause Human Congenital Heart Defects and Reveal an Interaction with TBX5." **Nature** 424(6947): 443-447 (2003).
6. Garg, V. and Srivastava, D. Genetic Underpinnings of Cardiogenesis and Congenital Heart Disease. Eds. C. Patterson and M. Runge in **Molecular Cardiology**. Humana Press, (2005).
7. Garg, V., Muth, A.N., Ransom, J.F., Schluterman, M.K., Barnes, R., King, I.N., Grossfeld, P., and Srivastava, D. "Mutations in NOTCH1 Cause Aortic Valve Disease". **Nature** 437(7056):270-274 (2005).
8. Garg, V. Insights into the Genetic Basis of Congenital Heart Disease. **Cell Mol Life Sci** 63(10) 1141-1148 (2006).
9. Garg, V. Molecular Genetics of Aortic Valve Disease. **Curr Opin Cardiol** 21(3): 180-184 (2006).
10. Schluterman, M.K., Krysiak, A.E., Kathiriya, I.S., Abate, N., Chandalia, M., Srivastava, D. and Garg, V. Screening and Biochemical Analysis of GATA4 Sequence Variations Identified in Patients with Congenital Heart Disease. **Am J Med Genet A** 143(8):817-823 (2007).
11. Rajagopal, S.K., Ma, Q., Obler, D., Shen, J., Manichaikul, A., Tomita-Mitchell, A., Boardman, K, Briggs, C, Garg, V., Srivastava, D., Goldmuntz, E., Broman, K.W., Benson, D.W., Smoot, L., and Pu, W.T. Spectrum of Heart Disease Associated with Murine and Human GATA4 Mutation. **J Mol Cell Cardiol** 43(6):677-85 (2007).
12. Tomita-Mitchell, A., Maslen, C.L., Morris, C.D., Garg, V., and Goldmuntz, E. "GATA4 Sequence Variants in Patients with Congenital Heart Disease" **J Med Genet** 44(12): 779-783 (2007).
13. Richards, A., Jaeckle, L., Nichols, H., Crider, B., Elder, F., Hauser, N., Zinn, A.R., and Garg, V. Cryptic chromosomal abnormalities identified in children with congenital heart disease. **Pediatr Res** 64(4):358-363 (2008).
14. Ransom, J.F., King, I.N., Garg, V., and Srivastava, D. "A Rare Human Sequence Variation Reveals Myocardin Autoinhibition" **J Biol Chem**, 283(51):35845-52 (2008).
15. Maitra, M., Schluterman, M.K., Nichols, H., Richardson, J.A., Lo, C., Srivastava, D. and Garg, V. "Interaction of Gata4 and Tbx5 is critical for normal cardiac development". **Dev Biol**, 326(2):368-77 (2009).
16. Pan, H., Richards, A.A., Xhu, X., Joglar, J.A., Yin, H.L., and Garg, V. A novel mutation in LAMIN A/C is associated with isolated early-onset atrial fibrillation and progressive atrioventricular block followed by cardiomyopathy and sudden cardiac death. **Heart Rhythm**, 6(5):707-710 (2009).
17. Richards A.A. and Garg V. Genetics of Congenital Heart Disease. **Current Cardiology Reviews**, 6(2):91-97 (2010).
18. Garg, V. "Growth of the Normal Human Heart" Ed. Victor R. Preedy. **Handbook of Growth and Growth Monitoring in Health and Disease**. Springer, New York, in press (2010).
19. Maitra, M., Koenig, S., Srivastava, D. and Garg, V. "GATA6 Sequence Variations in Human Congenital Heart Disease" **Pediatr Res** 68(4):281-85 (2010).

Principal Investigator/Program Director (Last, First, Middle): Garg, Vidu

20. Yu, S., Poe, B., Schwarz, M., Elliot, S., Albertine, K.H., Fenton, S., Garg, V., and Moon, A.M. "Fetal and post-natal lung defects reveal a novel and required role for Fgf8 in lung development" *Dev Biol*, 347(1):92-108 (2010).
21. McBride, K.L. and Garg, V. Impact of Mendelian Genetics in Cardiovascular Disease. *Annals of New York Acad Sci*, 1214(1):122-137 (2010).
22. McBride, K.L. and Garg, V. Heredity of bicuspid aortic valve: is family screening indicated? *Heart* (2011).

#### **D. Research Support**

##### Ongoing Research Support

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Garg (PI)

7/16/07 - 4/30/12

Genetic Regulation of Cardiac Septation: The objectives of the grant are to understand the molecular pathways that underlie genetic etiologies of human cardiac septation defects.