

Curriculum Vitae
Matthew Alan Hornick, MD

Address

Division of General, Thoracic, & Fetal Surgery
Children's Hospital of Philadelphia
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Education

2002-2006 University of California, Berkeley
B.A., MCB-Neurobiology and Psychology (magna cum laude)

2006-2011 Yale University School of Medicine
M.D., Class of 2011 (originally Class of 2010)
5th year (2009-2010) sponsored by Yale School of Medicine Office of Student Research

Postgraduate Training

2011-2018 Hospital of the University of Pennsylvania
Resident, General Surgery

2018-present Children's Hospital of Philadelphia
Fellow, Pediatric Surgery

Certifications

2019-present General Surgery, American Board of Surgery, Certificate #064844

Research

2007-2011 Department of Surgery, Section of Cardiac Surgery, Yale School of Medicine
Faculty advisor: John Elefteriades, MD (Section of Cardiac Surgery)
Medical school thesis project investigated association between bovine aortic arch and thoracic aortic disease.

2014-2016 Center for Fetal Research, Children's Hospital of Philadelphia
Faculty advisor: Alan Flake, MD (Division of General, Thoracic, and Fetal Surgery)
Research fellow in large-animal project aimed at developing novel mode of pumpless extracorporeal support for extremely premature infants.

Awards

May 2011 Connecticut Chapter of American College of Surgeons Prize
Awarded to graduating medical student for excellence in the surgical sciences.

May 2016 The Sheikh Zayed Institute Award for Innovation in Pediatric Surgery
Presented at the American Pediatric Surgical Association annual meeting.

- October 2016 American College of Surgeons Scientific Forum Excellence in Research Award (Basic Science/Pediatric Surgery)
Presented at the American College of Surgeons Clinical Congress.
- June 2018 Keith Reemtsma Surgical Resident of the Year Award
Department of Surgery, Hospital of the University of Pennsylvania

Professional Memberships

American College of Surgeons
American Pediatric Surgical Association

Peer-Reviewed Publications

1. O'Dell C, Shinnar S, Ballaban-Gil KR, **Hornick M**, Sigalova M, Kang H, Moshé SL. Rectal diazepam gel in the home management of seizures in children. *Pediatric Neurology* 2005;33(3):166-72.
2. **Hornick M**, Moomiaie R, Mojibian H, Ziganshin B, Almuwaqqat Z, Lee ES, Rizzo J, Tranquilli M, Elefteriades JA. 'Bovine' aortic arch – a marker for thoracic aortic disease. *Cardiology* 2012;123(2):116-24.
3. Elefteriades JA, Sang A, Kuzmik G, **Hornick M**. Guilt by association: paradigm for detecting a silent killer (thoracic aortic aneurysm). *Open Heart* 2015;2:e000169.
4. Han J, **Hornick M**, Ko HS, Yang X, He Y. Severe tortuous intra-abdominal segment of isolated single umbilical artery by three-dimensional high-definition flow imaging. *Clinical and Experimental Obstetrics & Gynecology* 2017;44(6):956-7.
5. Partridge EA, Davey MG, **Hornick MA**, McGovern PE, Mejaddam AY, Vrecenak JD, Mesas-Burgos C, Olive A, Caskey RC, Weiland TR, Han J, Schupper AJ, Connelly JT, Dysart KC, Rychik J, Hedrick HL, Peranteau WH, Flake AW. An extra-uterine system to physiologically support the extreme premature lamb. *Nature Communications* 2017 Apr 25;8:15112. doi: 10/1038/ncomms15112.
6. Partridge EA, Davey MG, **Hornick MA**, Flake AW. Pumpless extracorporeal support of the preterm infant: Bridging fetal and postnatal physiology. *NeoReviews* 2017;18(5).
7. Partridge EA, Davey MG, **Hornick MA**, Flake AW. An EXTrauterine environment for neonatal development: EXTENDING fetal physiology beyond the womb. *Seminars in Fetal and Neonatal Medicine* 2017;22(6):404-9.
8. **Hornick MA**, Davey MG, Partridge EA, Mejaddam AY, McGovern PE, Olive AM, Hwang G, Kim J, Castillo O, Young K, Han J, Zhao S, Connelly JT, Dysart KC, Rychik J, Peranteau WH, Flake AW. Umbilical cannulation optimizes circuit flows in premature lambs supported by the EXTra-uterine Environment for Neonatal Development (EXTEND). *Journal of Physiology* 2018 Feb 1. doi: 10.1113/JP275367.
9. Partridge EA, Davey MG, **Hornick MA**, Dysart KC, Olive A, Caskey RC, Connelly JT, Hedrick HL, Peranteau WH, Flake AW. Pumpless arterio-venous extracorporeal membrane oxygenation: a novel mode of respiratory support in a lamb model of congenital diaphragmatic hernia. *Journal of Pediatric Surgery* 2018 Mar. doi; 10.1016/j.jpedsurg.2018.02.061.

10. Mejjaddam AY, **Hornick MA**, McGovern PE, Baumgarten HD, Lawrence KM, Rossidis AC, Hwang G, Young K, Abdulmalik O, Partridge EA, Peranteau WH, Davey MG, Flake AW. Erythropoietin prevents anemia and transfusions in extremely premature lambs supported by an EXTrauterine Environment for Neonatal Development. *Fetal Diagnosis and Therapy* 2019 Jan 31:1-7. doi: 10.1159/000493680.
11. Ozawa K, Davey MG, Tian Z, **Hornick MA**, Mejjaddam AY, McGovern PE, Flake AW, Rychik J. Fetal echocardiographic assessment of the cardiovascular impact of prolonged support in the EXTrauterine Environment for Neonatal Development (EXTEND) system. *Ultrasound in Obstetrics & Gynecology* 2019 Apr 15. doi: 10.1002/uog.20295.
12. **Hornick MA**, Mejjaddam AY, McGovern PE, Hwang G, Han J, Peranteau WH, Partridge EA, Davey MG, Flake AW. Technical feasibility of umbilical cannulation in midgestation lambs supported by the EXTra-uterine Environment for Neonatal Development (EXTEND). *Artificial Organs* 2019 Jun 25. doi: 10.1111/aor.13524.

Book Chapters

1. **Hornick MA**, Martin ND. "Nutrition, Digestion, Absorption." *The Surgical Review*. 4th ed. Ed. Paige M. Porrett, et al. Philadelphia: Wolters Kluwer, 2016. 38-53. Print.
2. Kucharczuk JC, **Hornick MA**. "Pulmonary Medicine: Chest Wall Disorders." *Clinical Advisor*. Decision Support in Medicine, Dec 2016. Notes: <http://www.clinicaladvisor.com/pulmonary-medicine/chest-wall-disorders-include-scoliosis-chest-wall-tumors-trauma/article/625378/>

Podium Presentations

1. "Resection of IVC leiomyosarcoma with caval reconstruction." Annual Fall Dinner Meeting, Delaware Valley Vascular Society, October 2012.
2. "Benefits of prophylactic inferior vena cava filters in high-risk bariatric surgery patients." Academic Surgical Congress, February 2015.
3. "Toward physiologic extracorporeal support of the premature infant: Umbilical cannulation provides superior oxygenator flows, oxygen delivery, and hemodynamic stability." American Pediatric Surgical Association Annual Meeting, May 2016.
4. "Toward physiologic extracorporeal support of the premature infant: Technical feasibility of umbilical cord cannulation in midgestation fetal lambs." American College of Surgeons Clinical Congress Surgical Forum, October 2016.

Poster Presentations

1. **Hornick M**, Xu Y, Query C. "How do mutations in U6 snRNA affect catalysis of pre-mRNA splicing?" Summer Undergraduate Research Program Poster Symposium, Albert Einstein College of Medicine, Bronx, NY, August 2005.
2. Moomiaie R, **Hornick M**, Mojibian H, Tranquilli M, Elefteriades JA. "Bovine arch anomaly: An opportunity to screen for thoracic aortic aneurysm." American Association for Thoracic Surgery Aortic Symposium 2010, New York, NY, April 2010.