

CURRICULUM VITAE
Joseph Carl Fusco, M.D.

Office Address: Department of Pediatric Surgery
Monroe Carell Jr. Children's Hospital at Vanderbilt
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College:
2004- 2008 Georgetown University Washington, DC B.S
Bachelor of Science, Biology
Magna Cum Laude

Post-Graduate Training:
2012 – 2015 Mount Sinai Beth Israel Medical Center New York, NY
General Surgery Resident
2017 - 2019 Barnes Jewish Hospital of Washington University of St. Louis
General Surgery Resident
2019 – 2021 Children's Hospital of Pittsburgh of UPMC Pittsburgh, PA
Pediatric Surgery Fellow

Research Fellowship:
2015 – 2017 Children's Hospital of Pittsburgh of UPMC Pittsburgh, PA
Pediatric Surgery Research Fellow

Graduate Education:
2008 – 2012 Mount Sinai School of Medicine New York, NY M.D.

Other Education:

Specialty Certification:
Pediatric Surgery Board Eligible

Licensure:
General Surgery Board Certification 2019
Medical Board of Pennsylvania, License number – MD454529 2015
Tennessee Board of Medical Examiners number - pending

Academic Appointments:

October 1, 2021 Assistant Professor of Pediatric Surgery on the Clinician Educator Track

Hospital Appointments:

October 1, 2021 Assistant Professor of Pediatric Surgery on the Clinician Educator Track

Professional Activities:

American Association of Pediatrics Program Planning Committee

Children's Oncology Group Member

Teaching Activities:

Clinical Teaching

Research Supervision

Cumulative listing of all grants:

Published in peer reviewed journals

1. **Fusco J**, Congde C, Xiao X, Gittes G. Pancreatic duct infusion: An effective and selective method of drug and viral delivery. *Journal of Visualized Experiments*. In-Press.
2. Bholra S, Chen J, **Fusco J**, Duarte GF, Andarawis-Puri N, Ghillani R, Jepsen KJ. Variation in skeletal robustness is an important determinant of adult bone mass. *Bone*. 2011 Jul. Cited in PubMed; PMID:21810492
3. Epelboym Y, Gendron RN, Mayer J, **Fusco J**, Nasser P, Gross G, Ghillani R, Jepsen KJ. The inter-individual variation in femoral neck width is associated with the acquisition of predictable sets of morphological and tissue-quality traits and differential bone loss patterns. *J Bone Miner Res*. 2012. Mar 28
4. **Fusco J***, Song Z*, Zimmerman R, Fischback S, Chen C, Ricks D, Prasad K, Shiota C, Xiao X, Gittes G. EGFR signaling regulates beta cell proliferation in adult mice. *Journal of Biological Chemistry*. 2016 Sept 1. doi: 10.1074/jbc.M116.747840. PMID 27587395. *Authors contributed equally to the publication.
5. Xiao X, Fischback S, **Fusco J**, Zimmerman R, Song Z, Nebres P, Richs D, Prasad K, Shiota C, Husain S, Gittes G. PNA lectin for purifying mouse acinar cells from the inflamed pancreas. *Scientific Reports*. 2016 Feb 17. doi: 10.1038/srep21127. PMC4756371
6. Prasad K, Shiota C, Xiangwei X, Ricks D, **Fusco J**, Gittes G. A synopsis of factors regulating beta cell development and beta cell mass. *Cell Mol Life Sci*. 2016 Apr 22. doi:10.1007/s00018-016-2231-0. PMID 27105622

7. **Fusco J**, Xiao X, Prasadana K, Sheng Q, Chen C, Ming YC, Gittes G. GLP-1/Exendin-4 induces β -cell proliferation via the epidermal growth factor receptor. *Scientific Reports*. 2017 Aug 22.
8. **Fusco J**, Nace G, Calisto J, Malek M. Video assisted thymectomy for Langerhans cells histiocytosis. *Journal of Laparoendoscopic & Advanced Surgical Techniques & Part B: Videoscopy*. 2017 Jul 19.
9. Xiao X, Guo P, Shiota C, Zhang T, Coudriet G, Fischbach S, Prasadana K, **Fusco J**, Ramachandran S, Witkowski P, Piganella J, Gittes G. Endogenous reprogramming of alpha cells into beta cells induced by viral gene therapy reverses autoimmune diabetes. *Cell Stem Cell*. 2017 Jan 4.
10. Xiao X, Fischbach S, Zhang T, Chen C, Sheng Q, Zimmerman R, Patnik S, **Fusco J**, Ming Y, Guo P, Shiota S, Prasadana K, Gangopadhyay N, Hussain S, Dong H, Gittes G. SMAD3/Stat3 signaling mediates β -cell epithelial-mesenchymal transition in chronic pancreatitis-related diabetes. *Diabetes*. 2017 Oct.
11. Shiota C, Prasadana K, Guo P, **Fusco J**, Xiao X, Gittes G. GcgCreERT2 knockin mice as a tool for genetic manipulation in pancreatic alpha cells. *Diabetologia*. 2017 Sept 7.
12. Xiao X, Fischbach S, Zhang T, Chen C, Sheng Q, Zimmerman R, Patnaik S, **Fusco J**, Ming Y, Guo P, Shiota C, Prasadana K, Gangopadhyay N, Husain S, Dong H, Gittes G. SMAD3/Stat3 signaling mediates β -cell epithelial-mesenchymal transition in chronic pancreatitis-related diabetes. *Diabetes*. 2017 Aug 3. pii: db170537. doi: 10.2337/db17-0537. PMID 28775125.
13. Cheng Q, Xiao X, Prasadana K, Chen C, Ming Y, **Fusco J**, Gangopadhyay N, Richs D, Gittes G. Autophagy protects pancreatic beta cell mass and function in the setting of a high-fat and high-glucose diet. *Scientific Reports*. 2017 Nov 27. 7(1):16348. doi:10.1038/s41598-017-16485-0. PMID 29180700.
14. Xiao X, Congde C, Guo P, Zhang T, Fischbach S, **Fusco J**, Shiota C, Prasadana K, Gong H, Gittes G. Foxo1 inhibits accelerated β -cell aging in pancreas-specific SMAD7 mutant mice. *Journal of Biological Chemistry*. 2017 Jan 5. doi: 10.1074/jbc.M116.770032. PMID: 28057752
15. **Fusco J**, Seynaeve B, Davit A, Czachowski M, Joyce J, Gaines B, Malek M. Use of intraoperative nuclear imaging leads to decreased anesthesia time and real-time confirmation of lesion removal. *Journal of Pediatric Surgery*. Accepted 2018 Jan.
16. **Fusco J**, Calisto J, Gaines B, Malek M. A large single-institution review of tracheoesophageal fistulae with evaluation of the use of transanastomotic feeding tubes. *Journal of Pediatric Surgery*. Accepted 2018 Jan.
17. So J, Ningappa M, Glessner J, Min J, Higgs B, Don S, Schwart M, **Fusco J**, Prasadana K, Sharif K, Kelly D, Squires R, Gittes G, Morell V, Shin D, Sindhi R. Biliary-Atresia-Associated mannosidase-1-Alpha-2 Gene Regulates Biliary and Ciliary Morphogenesis and Laterality. *Frontiers in Physiology*. 2020 Oct 30. Doi 10.3389/fphys.2020.538701 PMID 33192543
18. Saleh M, Kalsi R, **Fusco J**, Xiao X, Sharma K, Yan W, Nada M, Ping G, Jami S, Prasadana K, Gittes G. Chemical pancreatectomy: a potential treatment for chronic

pancreatitis that preserves endocrine function in preclinical models. *Journal of Clinical Investigation*. 2020 Dec 22.

Book Chapters:

1. El-Gohary Y, **Fusco J**, Gittes G. Congenital Cysts and Sinuses of the Neck, (pp 362-371). In P. Puri (Ed.) *Newborn Surgery 4th Edition*. Boca Raton, FL, CRC Press, 2017.
2. **Fusco J**, Gittes G. Pancreas Embryology, Anatomy and Physiology, (pp 143-160). In D. Ledbetter and P. Johnson (Eds.) *Endocrine Surgery in Children*: New York: Springer, 2018.
3. **Fusco J**, Malek M, Gittes G. (2019) Lesions of the Pancreas. In G.W. Holcomb III, J P. Murphy, & S.D. St. Peter (Eds.) *Ashcraft's Pediatric Surgery 7th Edition*. Amsterdam: Elsevier, 2019.
4. **Fusco J**, El-Gohary Y, Gittes G. Anatomy, Physiology and Embryology of the Pancreas; (pp 1062-1075). In *Shackelford's Surgery of the Alimentary Tract 8th Edition Vol. 2*. Philadelphia: Sanders, 2019.
5. **Fusco J**, Gittes G. Congenital Malformations of the Esophagus, (pp. 220-222). In C.M. Alper, E. N. Myers & D. E. Eibling (Eds.) *Decision Making in Otolaryngology 2nd Edition*: New Delhi: Jaypee Brothers Medical Publishers; 2019.
6. **Fusco J**. & Schuerer D. Abdominal Trauma; (pp 203-215) In M.D. Klingensmith and P.E Wise (Eds) *Washington Manual of Surgery 8th Edition*. New York: Lippincott Manual Series, 2019.

Oral Presentations:

1. **Fusco J**, Ayo D, Fisher J, Ginsburg H, Kuenzler K, Tomita S. *Should children with perforated appendicitis be managed on the Pediatric hospitalist Service?* Oral presentation at: Academic Surgical Congress; Jacksonville, FL. February 2016.
2. **Fusco J**, Nace G, Calisto J, Malek M. *Video assisted thymectomy for Langerhans cell histiocytosis*. Oral presentation at: American College of Surgeons; Washington, DC, 2016.
3. **Fusco J**, Calisto J, Gittes G, Malek M. *Surgical approach to the tracheoesophageal fistula*. Oral presentation at: Plenary Session, American Pediatric surgical Association; Hollywood, FL, 2017.
4. **Fusco J**, Czachowski M, Davit A, Joyce J, Mollen K, Scholz S, Grunwaldt L, Malek J, Gaines B. *Intraoperative nuclear imaging in the pediatric population*. Oral presentation at: Plenary Session American Pediatric Surgical Association; Hollywood, FL 2017.
5. **Fusco J**, Xiao X, Prasad K, Sheng Q, Chen C, Ming Y, Gittes G. *GLP-1/Exendin-4 induces β -cell proliferation via the epidermal growth factor receptor*. Oral presentation at: Midwest Islet Conference; Madison, WI 2017.

Poster Presentations:

1. **Fusco J**, Calisto J, Gaines B, Malek M. *A large single-institution review of tracheoesophageal fistulae with evaluation of the use of transanastomotic feeding tubes.* Poster presented at; Department of Surgery Research Day; Pittsburgh, PA 2017.
2. **Fusco J**, Guo P, Xiao X, Prasad K, Gittes G. *Chemical pancreatectomy spares islets of Langerhans.* Poster presented at: Department of Surgery Research Day; Pittsburgh, PA 2017. **Awarded Best Basic and Translational Sciences Poster.**
3. **Fusco J**, Czachowski M, Davit A, Joyce J, Mollen K, Scholz S, Grunwaldt L, Gaines B, Malek M. *Intraoperative nuclear imaging in the pediatric population.* Poster presented at: Children's Oncology Group; Atlanta, GA 2016.
4. **Fusco J**, Nace G, Galisto J, Malek M. *Is a wait and see approach appropriate for a patent processus vaginalis.* Poster presented at: Department of Surgery Research Day; Pittsburgh, PA 2016.
5. **Fusco J**, Nace G, Galisto J, Malek M. *A more efficient approach to the pulmonary lesion.* Poster presented at: Department of Surgery Research Day; Pittsburgh, PA 2016.
6. **Fusco J**, Fischback S, Zimmerman R, Song Z, Nebres P, Ricks D, Prasad K, Shiota C, Husain S, Gittes G, Xiao X. *PNA lectin for purifying mouse acinar cells from the inflamed pancreas.* Poster presented at: Keystone Islet Symposium; Keystone, CO 2016.
7. **Fusco J**, Chen Y, Bhola S, Ghillani R, Jepsen K. *Pubertal growth patterns of slender and robust bone.* Poster presented at MSSM Research Day; New York, NY 2009.
8. Chen Y, **Fusco J**, Bhola S, Ghillani R, Jepsen K. *Patterns of female bone growth at puberty.* Poster presented at MSSM Research Day' New York, NY 2009.
9. Epelboym Y, Gendron N, Mayer J, **Fusco J**, Nasser P, Gross G, Ghillani R, Jepsen K. *Functional interactions among morphological and tissue-quality traits in the proximal femur.* Poster presented at: Orthopaedic Research Society Annual Meeting; San Francisco, CA 2012.
10. Epelboym Y, Gendron N, Mayer J, **Fusco J**, Nasser P, Gross G, Ghillani R, Jepsen K. *Effects of the inter-individual variation in bone width on age-related bone loss and strength.* Poster presented at: Orthopaedic Research Society Annual Meeting' San Francisco, CA 2012.
11. Epelboym Y, Ghillani R, Mayer J, **Fusco J**, Gendron N, Laudier D, Jepsen K. *Stratifying femora based on robustness improves our understanding of age-related bone loss.* Poster presented at: National Predoctoral Clinical Research Training Program Meeting; St Louis, MO 2011.
12. Shaprio S, Chen Y, Lekarev O, **Fusco J**, Duarte G, Wallach E, Jepsen K, Rapaport R. *Short term treatment with anastrozole does not affect bone strength in pubertal boys with short stature.* Poster presented at; The Eastern Society for Pediatric Research; New Orleans, LA 2010.
13. **Fusco J**, Tako-Ayu E, Singer S. *Effect of G. lamblia infection on microvilli.* Poster presented at: Howard Hughes Research Symposium; Washing DC 2007.
14. **Fusco J**, DiPietro J, Twomey K. *Climate change and vector borne disease.* Poster presented at: American Association for Advancement of Science Conference; Boston, MA 2007.