Stanford

Jennifer Ikle

Adjunct Clinical Assistant Professor, Pediatrics - Endocrinology and Diabetes

CLINICAL OFFICE (PRIMARY)

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Bio

BIO

Dr. Jen Ikle completed a combined MD/PhD program at the University of Colorado Denver, Anschutz Medical campus. While earning her PhD, she worked in the lab of Dr. David Clouthier studying genetics and transcriptional regulatory networks, with an emphasis on craniofacial development in the embryo. After completion of her MD, Jen completed both Pediatrics Residency and Fellowship in Pediatric Endocrinology and Diabetes at Washington University in St. Louis and St. Louis Children's Hospital. During her fellowship, Jen worked in the lab of Dr. Colin Nichols where she developed a passion for regulation of insulin secretion from the beta cells of the pancreas. She has a specific interest in the role of ATP-sensitive potassium (KATP) channels. Genetic disruption of these channels leads to neonatal diabetes (in KATP gain of function mutations) or congenital hyperinsulinism (in KATP loss of function mutations). Jen also has a clinical interest in diabetes and hyperinsulinism.

CLINICAL FOCUS

- Pediatric Endocrinology

ACADEMIC APPOINTMENTS

- Member, Maternal & Child Health Research Institute (MCHRI)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Member, American Diabetes Association (2020 - present)
- Member, Pediatric Endocrine Society (2017 - present)
- Member, American Academy of Pediatrics (2013 - present)

PROFESSIONAL EDUCATION

- Board Certification: Pediatric Endocrinology, American Board of Pediatrics
- Fellowship: St Louis Children's Hospital Washington University (2020) MO
- Board Certification: Pediatrics, American Board of Pediatrics (2017)
- Residency: St Louis Children's Hospital Washington University Pediatric Residency (2017) MO
- Medical Education: University of Colorado School of Medicine (2014) CO

- Fellowship, Washington University and St. Louis Children's Hospital , Pediatric Endocrinology and Diabetes (2020)
- Board Certification, American Board of Pediatrics , General Pediatrics (2017)
- Residency, Washington University and St. Louis Children's Hospital , Pediatrics (2017)
- Internship, Washington University and St. Louis Children's Hospital , Pediatrics (2015)
- Ph.D., University of Colorado Denver , Cells, Stem Cells, and Developmental Biology (2012)
- M.D., University of Colorado Denver (2014)

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Jen is interested in the genetic factors that lead to abnormal beta-cell function and insulin secretion, causing disorders such as hyperinsulinism and neonatal diabetes.

Jen's current research focus is the use of zebrafish models, combined with genetics and genomics, to understand cellular and molecular mechanisms of glucose metabolism and elucidate previously unknown players involved in the regulation of insulin secretion.

Publications

PUBLICATIONS

- **The use of precision diagnostics for monogenic diabetes: a systematic review and expert opinion.** *Communications medicine*
  Murphy, R., Colclough, K., Pollin, T. I., Ikle, J. M., Svalastoga, P., Maloney, K. A., Saint-Martin, C., Molnes, J., Misra, S., Aukrust, I., de Franco, E., Flanagan, S. E., Njølstad, et al
  2023; 3 (1): 136
- **Loss of RREB1 in pancreatic beta cells reduces cellular insulin content and affects endocrine cell gene expression.** *Diabetologia*
  Mattis, K. K., Krentz, N. A., Metzendorf, C., Abaitua, F., Spigelman, A. F., Sun, H., Ikle, J. M., Thaman, S., Rottner, A. K., Bautista, A., Mazzaferro, E., Perez-Alcantara, M., Manning Fox, et al
  2023
- **Genome-edited zebrafish model of ABCC8 loss-of-function disease.** *Islets*
  Ikle, J. M., Tryon, R. C., Singareddy, S. S., York, N. W., Remedi, M. S., Nichols, C. G.
  2022; 14 (1): 200-209
- **ATP-sensitive potassium channels in zebrafish cardiac and vascular smooth muscle.** *The Journal of physiology*
  Singareddy, S. S., Roessler, H. I., McClenaghan, C., Ikle, J., Tryon, R., van Haaften, G., Nichols, C. G.
  2021
- **Neonatal Hypoglycemia: Progress and Predicaments** *JOURNAL OF PEDIATRICS*
  Ikle, J. M., Prince, L. S., Maahs, D. M.
  2021; 235: 82
- **A brief history of diabetes genetics: insights for pancreatic beta-cell development and function.** *The Journal of endocrinology*
  Ikle, J. M., Gloyn, A. L.
  2021
- **Progress in Pediatric Diabetes Prediction, Management, and Outcomes** *JOURNAL OF PEDIATRICS*
  Ikle, J. M., Maahs, D. M.
  2021; 233: 131
- **Beta-cell excitability and excitability-driven diabetes in adult Zebrafish islets.** *Physiological reports*
  Emfinger, C. H., L#rincz, R. n., Wang, Y. n., York, N. W., Singareddy, S. S., Ikle, J. M., Tryon, R. C., McClenaghan, C. n., Shyr, Z. A., Huang, Y. n., Reissaus, C. A., Meyer, D. n., Piston, et al
  2019; 7 (11): e14101
- **Nkx2.5 regulates endothelin converting enzyme-1 during pharyngeal arch patterning.** *Genesis (New York, N.Y. : 2000)*
  Iklé, J. M., Tavares, A. L., King, M. n., Ding, H. n., Colombo, S. n., Firulli, B. A., Firulli, A. B., Targoff, K. L., Yelon, D. n., Clouthier, D. E.

2017; 55 (3)

- **Identification and characterization of the zebrafish pharyngeal arch-specific enhancer for the basic helix-loop-helix transcription factor Hand2.** *Developmental biology*

  Iklé, J. M., Artinger, K. B., Clouthier, D. E.

  2012; 368 (1): 118–26

- **Nkx2.5 regulates hand2 expression in the zebrafish pharyngeal arches via a conserved enhancer**

  Ikle, J., Artinger, K., Clouthier, D.

  ACADEMIC PRESS INC ELSEVIER SCIENCE.2011: 233

- **Transcriptional regulation of hand2 in zebrafish neural crest cells and cardiomyocytes**

  Ikle, J., Clouthier, D. E.

  ACADEMIC PRESS INC ELSEVIER SCIENCE.2010: 460

- **Pathogen entrapment by transglutaminase--a conserved early innate immune mechanism.** *PLoS pathogens*

  Wang, Z. n., Wilhelmsson, C. n., Hyrsl, P. n., Loof, T. G., Dobes, P. n., Klupp, M. n., Loseva, O. n., Mörgelin, M. n., Iklé, J. n., Cripps, R. M., Herwald, H. n., Theopold, U. n.

  2010; 6 (2): e1000763

- **Cardiac expression of the Drosophila Transglutaminase (CG7356) gene is directly controlled by myocyte enhancer factor-2.** *Developmental dynamics : an official publication of the American Association of Anatomists*

  Iklé, J. n., Elwell, J. A., Bryantsev, A. L., Cripps, R. M.

  2008; 237 (8): 2090–99