



Hanna Maria Knihtila

- Affiliate, Department Funds
- Resident in Pediatrics

Bio

BIO

Hanna Knihtila is a Pediatrics Resident at Stanford. She gained her MD in 2017 and PhD in 2018 from the University of Helsinki, Finland. She then completed her 2-year postdoctoral research fellowship at the Channing Division of Network Medicine, Brigham and Women's Hospital and Harvard Medical School before joining Stanford for her residency training.

CLINICAL FOCUS

- Residency

HONORS AND AWARDS

- Best Scientific Abstract, Pediatric Pulmonary Training Directors Association (PEPTDA) (2022)
- Pediatric Resident Development Scholarship (PRDS), American Thoracic Society (ATS) (2022)
- Pediatrics Resident Research Grant, Stanford Pediatrics Residency Program (2022)
- Postdoctoral research grant award, The Pediatric Research Foundation (2020-2022)
- Postdoctoral research grant award, The Jane and Aatos Erkko Foundation (2019-2022)
- Postdoctoral research grant award, The Paulo Foundation (2019-2021)
- Postdoctoral research grant award, The Finnish Society of Allergology and Immunology (2019)
- International Trainee Scholarship, American Thoracic Society (ATS) (2018)
- Research grant award, The Pediatric Research Foundation (2017)
- Research grant award, Emil Aaltonen Foundation (2016)
- Top 3 Licentiate of Medicine Thesis Award, University of Helsinki (2016)
- Research grant award, The Finnish Allergy Research Foundation (2015, 2017)
- Research grant award, The Finnish Medical Foundation (2015, 2017)
- Best Poster, European Academy of Allergy and Clinical Immunology (EAACI) (2015)
- Research grant award, Finnish Allergy and Asthma Federation (2015)
- Travel Grant Award, European Academy of Allergy and Clinical Immunology (EAACI) (2015)
- Research grant award, Ida Montin's Foundation (2014, 2016, 2017, 2018)
- Research grant award, Väinö and Laina Kivi's Foundation (2014, 2016)
- Research grant award, The Research Foundation of Pulmonary Diseases (2014, 2015, 2016, 2017, 2018)
- Research grant award, University of Helsinki (2014)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Member, American Academy of Allergy, Asthma, and Immunology (AAAAI) (2023 - present)
- Member, American College of Allergy, Asthma, and Immunology (ACAAI) (2023 - present)
- Member, American Academy of Pediatrics (AAP) (2021 - present)
- Member, American Thoracic Society (ATS) (2018 - present)
- Member, The Finnish Society of Allergology and Immunology (2017 - present)

PROFESSIONAL EDUCATION

- Residency, Stanford University School of Medicine , Pediatrics
- Postdoctoral Research Fellowship, Brigham and Women's Hospital and Harvard Medical School (2021)
- PhD, University of Helsinki, Faculty of Medicine (2018)
- MD, University of Helsinki, Faculty of Medicine (2017)

Publications

PUBLICATIONS

- **Preschool Impulse Oscillometry Predicts Active Asthma and Impaired Lung Function at School Age.** *The Journal of allergy and clinical immunology*
Knihtilä, H. M., Stubbs, B. J., Carey, V. J., Laranjo, N., Zeiger, R. S., Bacharier, L. B., O'Connor, G. T., Weiss, S. T., Litonjua, A. A.
2024
- **Maternal vitamin D status modifies the effects of early life tobacco exposure on child lung function.** *The Journal of allergy and clinical immunology*
Knihtilä, H. M., Huang, M., Prince, N., Stubbs, B. J., Carey, V. J., Laranjo, N., Mirzakhani, H., Zeiger, R. S., Bacharier, L. B., O'Connor, G. T., Litonjua, A. A., Weiss, S. T., Lasky-Su, et al
2022
- **Author Correction: Metabolomic profiling reveals extensive adrenal suppression due to inhaled corticosteroid therapy in asthma.** *Nature medicine*
Kachroo, P., Stewart, I. D., Kelly, R. S., Stav, M., Mendez, K., Dahlin, A., Soeteman, D. I., Chu, S. H., Huang, M., Cote, M., Knihtilä, H. M., Lee-Sarwar, K., McGeachie, et al
2022
- **Low gestational vitamin D level and childhood asthma are related to impaired lung function in high-risk children.** *The Journal of allergy and clinical immunology*
Knihtilä, H. M., Stubbs, B. J., Carey, V. J., Laranjo, N., Chu, S. H., Kelly, R. S., Zeiger, R. S., Bacharier, L. B., O'Connor, G. T., Lasky-Su, J., Weiss, S. T., Litonjua, A. A.
2021; 148 (1): 110-119.e9
- **Maternal 17q21 genotype influences prenatal vitamin D effects on offspring asthma/recurrent wheeze.** *The European respiratory journal*
Knihtilä, H. M., Kelly, R. S., Brustad, N., Huang, M., Kachroo, P., Chawes, B. L., Stokholm, J., Bønnelykke, K., Pedersen, C. T., Bisgaard, H., Litonjua, A. A., Lasky-Su, J. A., Weiss, et al
2021; 58 (3)
- **Pets, furry animal allergen components, and asthma in childhood** *CLINICAL AND TRANSLATIONAL ALLERGY*
Lajunen, K., Maatta, A. M., Malmstrom, K., Kalliola, S., Knihtila, H., Savinko, T., Malmberg, L., Pelkonen, A. S., Makela, M. J.
2024; 14 (2)
- **Cord blood DNA methylation signatures associated with preeclampsia are enriched for cardiovascular pathways: insights from the VDAART trial.** *EBioMedicine*
Knihtilä, H. M., Kachroo, P., Shadid, I., Raissadati, A., Peng, C., McElrath, T. F., Litonjua, A. A., Demeo, D. L., Loscalzo, J., Weiss, S. T., Mirzakhani, H.
2023; 98: 104890
- **The association of prenatal C-reactive protein and interleukin-8 levels with maternal characteristics and preterm birth.** *American journal of perinatology*
Chen, Y. S., Mirzakhani, H., Knihtila, H., Fichorova, R., Luu, N., Laranjo, N., Kelly, R., Weiss, S. T., Litonjua, A. A., Lee-Sarwar, K.
2022

- **The association of prenatal C-reactive protein levels with childhood asthma and atopy.** *The journal of allergy and clinical immunology. In practice*
Chen, Y. S., Lee-Sarwar, K. A., Mirzakhani, H., O'Connor, G. T., Bacharier, L. B., Zeiger, R. S., Knihtilä, H. M., Jha, A., Kelly, R. S., Laranjo, N., Fichorova, R. N., Luu, N., Weiss, et al
2022
- **Characteristics and Mechanisms of a Sphingolipid-associated Childhood Asthma Endotype.** *American journal of respiratory and critical care medicine*
Rago, D., Pedersen, C. T., Huang, M., Kelly, R. S., Gürdeniz, G., Brustad, N., Knihtilä, H., Lee-Sarwar, K. A., Morin, A., Rasmussen, M. A., Stokholm, J., Bønnelykke, K., Litonjua, et al
2021; 203 (7): 853-863
- **Metabolomic differences in lung function metrics: evidence from two cohorts.** *Thorax*
Kelly, R. S., Stewart, I. D., Bayne, H., Kachroo, P., Spiro Iii, A., Vokonas, P., Sparrow, D., Weiss, S. T., Knihtilä, H. M., Litonjua, A. A., Wareham, N. J., Langenberg, C., Lasky-Su, et al
2021
- **Long-term Social Outcomes After Congenital Heart Surgery.** *Pediatrics*
Raissadati, A., Knihtilä, H., Pätilä, T., Nieminen, H., Jokinen, E.
2020; 146 (1)
- **Serum chitinase-like protein YKL-40 is linked to small airway function in children with asthmatic symptoms.** *Pediatric allergy and immunology : official publication of the European Society of Pediatric Allergy and Immunology*
Knihtilä, H., Kotaniemi-Syrjänen, A., Pelkonen, A. S., Savinko, T., Malmberg, L. P., Mäkelä, M. J.
2019; 30 (8): 803-809
- **The effect of sildenafil on pleural and peritoneal effusions after the TCPC operation.** *Acta anaesthesiologica Scandinavica*
Koski, T. K., Suominen, P. K., Raissadati, A., Knihtilä, H. M., Ojala, T. H., Salminen, J. T.
2019; 63 (10): 1384-1389
- **Small airway function in children with mild to moderate asthmatic symptoms.** *Annals of allergy, asthma & immunology : official publication of the American College of Allergy, Asthma, & Immunology*
Knihtilä, H., Kotaniemi-Syrjänen, A., Pelkonen, A. S., Mäkelä, M. J., Malmberg, L. P.
2018; 121 (4): 451-457
- **Assessment of Small Airway Function – Application of Impulse Oscillometry in Young Children with Asthmatic Symptoms**
Knihtilä, H.
University of Helsinki, Faculty of Medicine. Helsinki.
2018 ; Dissertationes Scholae Doctoralis Ad Sanitatem Investigandam Universitatis Helsinkiensis (URN:ISSN:2342-317X): 1-93
- **Small airway oscillometry indices: Repeatability and bronchodilator responsiveness in young children.** *Pediatric pulmonology*
Knihtilä, H., Kotaniemi-Syrjänen, A., Pelkonen, A. S., Kalliola, S., Mäkelä, M. J., Malmberg, L. P.
2017; 52 (10): 1260-1267
- **Sensitivity of newly defined impulse oscillometry indices in preschool children.** *Pediatric pulmonology*
Knihtilä, H., Kotaniemi-Syrjänen, A., Pelkonen, A. S., Kalliola, S., Mäkelä, M. J., Malmberg, L. P.
2017; 52 (5): 598-605
- **Preschool oscillometry and lung function at adolescence in asthmatic children.** *Pediatric pulmonology*
Knihtilä, H., Kotaniemi-Syrjänen, A., Mäkelä, M. J., Bondestam, J., Pelkonen, A. S., Malmberg, L. P.
2015; 50 (12): 1205-13

PRESENTATIONS

- Cord Blood DNA Methylation Signatures Associated with Preeclampsia Are Enriched for Cardiovascular Pathways - Keystone Symposia, Heart Development and Disease: From Genes to Cures (February 13, 2023)
- Preschool Impulse Oscillometry, Respiratory Symptoms, and School-Age Asthma and Lung Function - American Thoracic Society International Conference 2022 (5/2022)
- Driving Metabolomic Signatures for Clinical Asthma Subtypes: Important Distinctions Leading to Personalized Treatment in the TOPMed Initiative - American Thoracic Society International Conference 2022 (5/2022)
- Cumulative tobacco smoke exposure during pregnancy and early childhood is associated with lung function deficits at age 6 years - American Thoracic Society International Conference 2021 (5/2021)

- Maternal 17q21 genotype influences the protective effect of prenatal vitamin D supplementation against asthma in offspring - American Thoracic Society International Conference 2020 (5/2020)
- Vitamin D and epigenome-wide cord blood DNA methylation in the Vitamin D Antenatal Asthma Reduction Trial - American Thoracic Society International Conference 2020 (5/2020)
- Assessing lung function in healthy and asthmatic children using impulse oscillometry, spirometry, multiple breath washout, and extended exhaled nitric oxide - American Thoracic Society International Conference 2018 (5/2018)
- Within-measurement variability of respiratory impedance and bronchial hyperresponsiveness using impulse oscillometry in young asthmatic children - American Thoracic Society International Conference 2017 (5/2017)
- Within- and between-visit repeatability of impulse oscillometry in healthy and symptomatic young children - European Respiratory Society International Congress 2016 (9/2016)
- Reference values of oscillometric indices assessing small airway function in Finnish preschool children - European Academy of Allergy and Clinical Immunology Congress 2015 (6/2015)
- Small airway obstruction assessed by impulse oscillometry in healthy and symptomatic preschool children - European Academy of Allergy and Clinical Immunology, Allergy School on Early Diagnosis and Treatment of Allergic Diseases in Childhood (3/2015)
- Impaired lung function in asthmatic schoolchildren – Evaluation of risk factors - European Academy of Allergy and Clinical Immunology, Pediatric Allergy and Asthma Meeting (10/2013)