

BIOGRAPHICAL SKETCH

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NAME: Sivia Kerry Lapidus

eRA COMMONS USER NAME (credential, e.g., agency login): LAPIDUS1

POSITION TITLE: Pediatric Rheumatologist, Physician Scientist, Assistant Professor of Pediatrics

EDUCATION/TRAINING

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY
Barnard College, Columbia University New York, NY	BA	05/1999	Environmental Science
State University of New York, Upstate Medical University Syracuse, NY	MD	05/2003	Medicine
Schneider Children’s Hospital North Shore-Long Island Jewish New Hyde Park, NY		06/2006	Pediatrics
Nemours/A.I. DuPont Hospital For Children/Thomas Jefferson University Hospital, Wilmington, DE		06/2009	Fellow, Pediatric Rheumatology
National Institutes of Arthritis and Musculoskeletal and Skin Diseases, National Institutes of Health		07/2009	Research in Pediatric Rheumatology

A. Personal Statement

I am a board-certified pediatric rheumatologist and physician-scientist with research training in translational research in auto-inflammatory diseases. As the inaugural Hearst Foundation Physician-Scientist; a collaborative program between Hackensack Meridian Health’s (HMH) Division of Pediatric Rheumatology and the Center for Discovery and Innovation, an academic research institute focused on translation of science innovation, I have the unique opportunity to pursue translational science that is directly relevant to the depth of complex inflammatory illnesses in pediatric rheumatology. My research has been funded by foundation grants to build an autoinflammatory center of excellence founded in organized research, CARRA for innovative diagnostic technology as well as development of outcome measures for therapeutic trials, and most recently, the Hearst Foundation’s and Shotmeyer Family Foundation’s generous support in developing a physician-scientist. At Hackensack Meridian Health, I lead the HMH MISC Task Force and Pediatric Collaborative which have been pivotal in leveraging collaborative research across pediatrics throughout the HMH Network, in large national studies including Overcoming COVID-19, CONNECT and CLOCK, building a pediatric recovery clinic for clinical care as well as research in PASC in addition to operationalizing specimen collection in pediatrics through HMH’s Biorepository. My research focus is in investigating the underlying pathogenesis, physicians’ practice patterns, outcomes and treatments of pediatric

inflammatory states including auto-inflammatory conditions such as PFAPA/CRMO, autoimmune conditions such as SLE, and hyper-inflammatory states as is seen in response to COVID-19 in MISC. My research training and experience over the last several years in translational and genetic studies conducted at NIH under the mentorship of Dr. Daniel Kastner has formed the foundation for my continued interest in auto-inflammatory conditions in addition to elucidating immunological/genetic mechanisms of rare diseases. Clinical research experience has included participating in collaborative SLE research to study disease activity measures in pediatric SLE, characterizing auto-inflammatory disorders based on genotype as well as phenotype, and developing an auto-inflammatory clinical program that would create the infrastructure for future studies on auto-inflammation. As leader of the CARRA PFAPA and Auto-inflammatory Diseases Work Group, we have generated PFAPA Consensus Treatment Plans, built an auto-inflammatory network development work group interrogating the impact of COVID-19 in auto-inflammatory diseases and advanced an auto-inflammatory family advocacy group. I have served in the American College of Rheumatology MISC Task Force, leading the diagnostic group, American College of Rheumatology/Vasculitis Foundation guidelines for the management of Kawasaki Disease, and as Vice Chair of the CARRA Scleroderma, Vasculitis, and Rare Disease Group.

1. Clouser K, Gadhavi J, Bhavsar S, Lewis R, Balance C, Michalak Z, Baer A, Kriegel M, Pall H, Piwoz J, Slavin K, Siegel M, Tozzi M, Tozzi R, Walker D, **Lapidus S**, Aschner J. Short-Term Outcomes after Multisystem Inflammatory Syndrome in Children Treatment. *J. Pediatric Infect Dis Soc.* 2021 Feb 13; 10(1):52-56.
2. Henderson LA, Canna SW, Friedman KG, Gorelik M, **Lapidus SK**, Bassiri H, Behrens EM, Ferris A, Kernan KF, Schulert GS, Seo P, F Son MB, Tremoulet AH, Yeung RSM, Mudano AS, Turner AS, Karp DR, Mehta JJ. American College of Rheumatology Clinical Guidance for Pediatric Patients with Multisystem Inflammatory Syndrome in Children (MIS-C) Associated with SARS-CoV-2 and Hyperinflammation in COVID-19. Version 2. *Arthritis Rheumatol.* 2020 Nov;72(11):1791-1805
3. Manthiram K, Preite S, Dedeoglu F, Demir S, Ozen S, Edwards KM, **Lapidus S**, Katz AE; Genomic Ascertainment Cohort, Feder HM Jr, Lawton M, Licameli GR, Wright PF, Le J, Barron KS, Ombrello AK, Barham B, Romeo T, Jones A, Srinivasalu H, Mudd PA, DeBiasi RL, Gül A, Marshall GS, Jones OY, Chandrasekharappa SC, Stepanovskiy Y, Ferguson PJ, Schwartzberg PL, Remmers EF, Kastner DL. Common genetic susceptibility loci link PFAPA syndrome, Behçet's disease, and recurrent aphthous stomatitis. *Proc Natl Acad Sci U S A.* 2020 Jun 23;117(25).
4. Stojanov S*, **Lapidus S***, Chitkara P, Feder H, Salazar J, Fleisher T, Brown M, Edwards K, Ward M, Colbert R, Sun H, Wood G, Barham B, Jones A, Aksentijevich I, Goldbach-Mansky R, Athreya B, Barron K, Kastner D. Periodic fever, aphthous stomatitis, pharyngitis, and adenitis (PFAPA) is a disorder of innate immunity and TH1 activation responsive to IL-1 blockade. *Proc Natl Acad Sci USA* April 2011; 108(17): 1748-1753.

Ongoing and recently reported projects that I would like to highlight include:

Lapidus (PI) 09/01/2021-9/1/2024
Hearst Foundation to support the development of a Physician Scientist through 50% of supported time to conduct translational research. Role: PI

Lapidus (PI) 09/01/2021-9/1/2024
Shotmyer Family Foundation to support the development of a Physician Scientist through supplies. Role: PI

Lapidus (Co-I) 03/1/2021-2/1/2023

CARRA-Arthritis Foundation Large Grant to validate the Auto-Inflammatory Disease Activity Index (AIDAI) in Periodic Fever, Aphthous Stomatitis, Pharyngitis, and Cervical Adenitis (PFAPA) Syndrome.

Dates: March 2021-Feb 2023

Lapidus (PI)

02/1/2017-2/1/2018.

Willits Foundation

Goals: Development of auto-inflammatory program. Collaborative effort to contribute to data collection forms for multicenter Northern American Auto-inflammatory Registry and building infrastructure for future implementation of Consensus Treatment Plans (CTPs) for Periodic Fever, Aphthous Stomatitis, Pharyngitis, and cervical Adenitis (PFAPA) and Chronic Recurrent Multifocal Osteomyelitis (CRMO).

B. Positions, Scientific Appointments, and Honors

Positions and Employment

2021-present Faculty, Center for Discovery and Innovation, Nutley, NJ
2019-present Assistant Professor, Hackensack Meridian School of Medicine, Nutley, NJ
2018-present Pediatric Rheumatologist, Hackensack University Medical Center, Hackensack, NJ
2018-2020 Co-Leader, CARRA Rare Diseases Kawasaki Disease Work Group
2016-2019 Assistant Professor, Sidney Kimmel Medical College of Thomas Jefferson University, Philadelphia, PA
2014-2017 Vice Chair, CARRA Scleroderma, Vasculitis, Auto-inflammatory and Rare Diseases Committee
2013-present Leader, CARRA Rare Diseases PFAPA and Autoinflammatory Disease Work Group
2010-2020 Guest Researcher, NHGRI, NIH, Bethesda, MD
2010-2018 Division Director, Pediatric Rheumatology Goryeb Children's Hospital, Atlantic Health System Morristown, NJ
2009-2010 Guest Researcher, NIAMS, NIH, Bethesda, MD

Experience and Professional Memberships

2020-present Leader, Task Force on Multisystem Inflammatory Syndrome of Children, Hackensack Meridian Health Network
2020-present American College of Rheumatology, MIS-C Guidelines Task Force
2019 American College of Rheumatology PRYSM Abstract Reviewer
2019-present Board Member, Arthritis Foundation
2016-present Co-leader, Kawasaki Disease Subcommittee of CARRA
2016-present Pediatric Rheumatology Collaborative Study Group (PRCSG)
2016-present Member, ANCA-Associated Vasculitis Subcommittee of CARRA
2016-2018 Member, Autoimmune, Immuno-deficient and Monogenic Subcommittee of CARRA
2015-present Member, CRMO Subcommittee of CARRA
2013-present Leader, PFAPA and Auto-inflammatory Disease Subcommittee of CARRA
2010-present Member, Arthritis Foundation
2010-present Member, New Jersey Rheumatology Association
2008-present Member, Childhood Arthritis and Rheumatology Research Alliance (CARRA)
2006-present Member, American College of Rheumatology
2003-2009 Member, American Academy of Pediatrics, FAAP

Honors

2015-2018 NJ Monthly Top Doctor
2015-2018 NJ Family Favorite Kids' Doc
2015 Medical Honoree, Arthritis Foundation
2009 Outstanding Poster Award NIAMS, NIH

2008	American College of Rheumatology Distinguished Fellow Award
2002	Student Clinician's Award, SUNY Upstate Medical University
1999	Graduated with Distinction in Environmental Science; thesis on lead
neuro-epidemiology	
1995-1999	Dean's List, Barnard College, Columbia University 8 semesters

C. Contributions to Science

1. **Auto-inflammatory diseases:** During my fellowship, I was intrigued by PFAPA in terms of its genetics, cyclic propensity, and immunological etiology. I had the honor of engaging in translational work with Dr. Silvia Stojanov, and Dr. Daniel Kastner exploring the differential gene expression, cytokine milieu, and flow cytometry of PFAPA patients with flare and in between fevers relative to healthy pediatric controls and other hereditary auto-inflammatory diseases. Recognizing the clinical need for more evidence-based guidelines for treatment of PFAPA, we evaluated practice patterns in treating PFAPA that lead to the current CTP development for PFAPA. I have followed fascinating families of PFAPA patients with multiple affected family members. This prompted the investigation into the genetic heterogeneity of PFAPA patients who were genetically negative for the known hereditary auto-inflammatory diseases; the data of which has been presented in multiple meetings. In 2016, I was an invited speaker at the First International PFAPA Conference where I presented on the role of IL-1 in the pathogenesis of PFAPA. Most recently, I have been honored to collaborate with Dr. Kalpana Manthiram on the genetics of PFAPA.

1. Gutierrez M and **Lapidus S**. Systemic Autoinflammatory Diseases: A Growing Family of Disorders of Overlapping Immune Dysfunction. *Rheum Dis Clin North Am* 2022 Feb; 48(1):371-395.
2. Amarilyo G, Rothman D, Manthiram K, Edwards KM, Li SC, Marshall GS, Yildirim-Toruner C, Haines K, Ferguson PJ, Lionetti G, Cherian J, Zhao Y, DeLaMora P, Syverson G, Nativ S, Twilt M, Michelow IC, Stepanovskiy Y, Thatayatikom A, Harel L, Akoghlanian S, Tucker L, Marques MC, Srinivasalu H, Propst EJ, Licameli GR, Dedeoglu F, **Lapidus S**. Consensus treatment plans for periodic fever, aphthous stomatitis, pharyngitis and adenitis syndrome (PFAPA): a framework to evaluate treatment responses from the childhood arthritis and rheumatology research alliance (CARRA) PFAPA work group. *Pediatr Rheumatol Online J*. 2020 Apr 15;18(1):31.
3. Harel L, Hashkes P, **Lapidus S**, Edwards K, Padeh S, Gattorno M, Marshall G. The first international conference on periodic fever, aphthous stomatitis, pharyngitis, adenitis (PFAPA) syndrome. *The Journal of Pediatrics* 2018 Feb; 193:265-274. *Arthritis Care and Research* 2018 Aug;70(8):1228-1237
4. **Lapidus S**, Chitkara P, Feder H, Athreya B, Aksentijevich I, Barham B, Ward M, Barron K, Kastner D, Stojanov S. Genetics, clinical features, and treatment in a well-defined cohort with periodic Fever, aphthous stomatitis, pharyngitis, and cervical adenitis (PFAPA). American College of Rheumatology Annual Scientific Meeting Oral Presentation Philadelphia, PA.

2. TNF induced Psoriasis in JIA, Genetic Arthropathy, Interstitial lung Disease in Systemic Onset JIA, and American College of Rheumatology Guidelines for MIS-C:

As a pediatric rheumatologist with clinical and research interests in rare diseases and improving treatment, diagnoses, quality of life; I have been invested in projects advancing these different areas.

As a deep believer that collaborative work advances the field for our patients, I have been engaged in a variety of projects that has utilized established networks in advancing collaboration among pediatric rheumatologists and across disciplines. Working in an early epi-center for COVID 19 with an interest in hyper-inflammatory conditions including vasculitis such as Kawasaki Disease, more of my recent work has been invested in Multisystem Inflammatory Syndrome of Children.

1. Groth D, Perez M, Treat JR, Castelo-Soccio L, Nativ S, Weiss PF, **Lapidus S***, Perman MJ*. Tumor necrosis factor- α inhibitor-induced psoriasis in juvenile idiopathic arthritis patients. *Pediatr Dermatol*. 2019 Sep;36(5):613-617. * Both authors contributed equally to this work.
2. Saper VE, Chen G, Deutsch GH, Guillerman RP, Birgmeier J, Jagadeesh K, Canna S, Schulert G, Deterding R, Xu J, Leung AN, Bouzoubaa L, Abulaban K, Baszis K, Behrens EM, Birmingham J, Casey

A, Cidon M, Cron RQ, De A, De Benedetti F, Ferguson I, Fishman MP, Goodman SI, Graham TB, Grom AA, Haines K, Hazen M, Henderson LA, Ho A, Ibarra M, Inman CJ, Jerath R, Khawaja K, Kingsbury DJ, Klein-Gitelman M, Lai K, **Lapidus S**, Lin C, Lin J, Liptzin DR, Milojevic D, Mombourquette J, Onel K, Ozen S, Perez M, Phillippi K, Prahalad S, Radhakrishna S, Reinhardt A, Riskalla M, Rosenwasser N, Roth J, Schneider R, Schonenberg-Meinema D, Shenoi S, Smith JA, Sönmez HE, Stoll ML, Towe C, Vargas SO, Vehe RK, Young LR, Yang J, Desai T, Balise R, Lu Y, Tian L, Bejerano G, Davis MM, Khatri P, Mellins ED; Childhood Arthritis and Rheumatology Research Alliance Registry Investigators. Emergent high fatality lung disease in systemic juvenile arthritis. *Ann Rheum Dis*. 2019 Dec;78(12):1722-1731.

3. Ferrara G, Giani T, Lieberman SM, Kremer C, Hong S, Indolfi G, Schulert G, Cron RQ, Mannion ML, **Lapidus S**, Armbrust W, Gonzales E, Jacquemin E, Koné-Paut I, Cimaz R. J Alagille Syndrome and Chronic Arthritis: An International Case Series. *Pediatr*. 2020 Mar;218:228-230.
4. Henderson LA, Canna SW, Friedman KG, Gorelik M, **Lapidus SK**, Bassiri H, Behrens EM, Ferris A, Kernan KF, Schulert GS, Seo P, F Son MB, Tremoulet AH, Yeung RSM, Mudano AS, Turner AS, Karp DR, Mehta JJ. American College of Rheumatology Clinical Guidance for Pediatric Patients with Multisystem Inflammatory Syndrome in Children (MIS-C) Associated with SARS-CoV-2 and Hyperinflammation in COVID-19. Version 2. *Arthritis Rheumatol*. 2020 Nov; 72(11):1791-1805

Complete List of Published Work in My Bibliography

<https://www.ncbi.nlm.nih.gov/myncbi/1PCf6g7A7jfwkq/bibliography/public/>