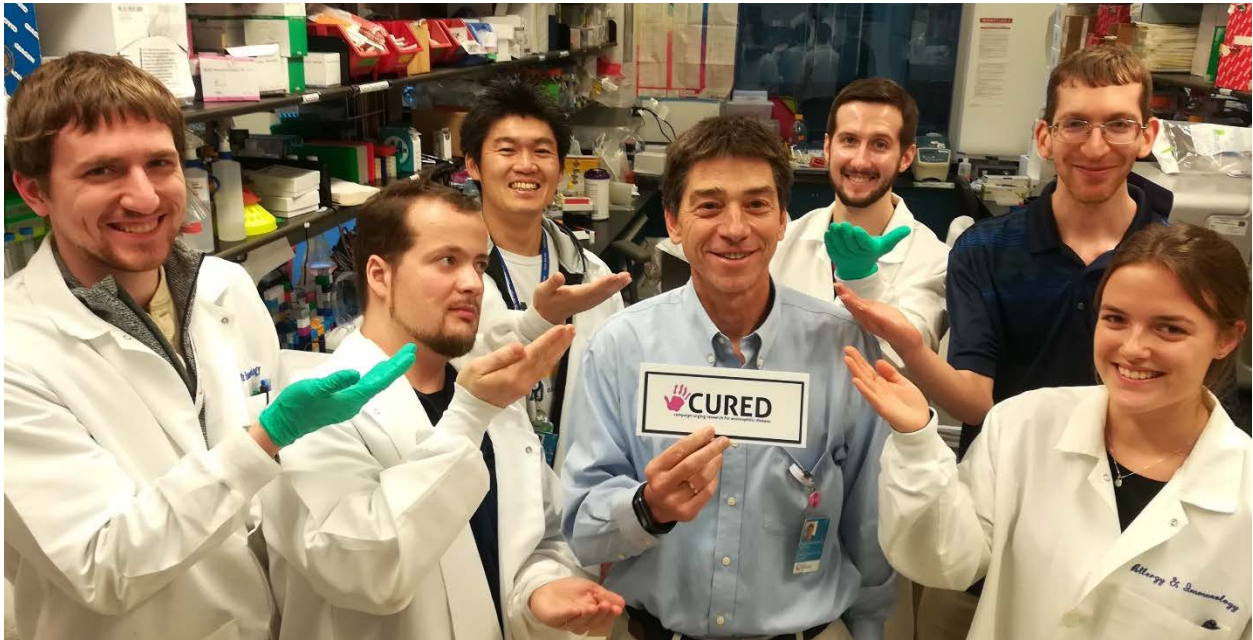


CURED Foundation Support (2018-2022)



As the Principal Investigator of the Rothenberg CURED Laboratory and good friend of the CURED Foundation, I wish to express my sincere appreciation and gratitude for the many years of funding that the CURED Foundation has provided to the Rothenberg CURED Laboratory. The CURED Foundation, who has donated millions of dollars to research, is a genuine driver of research and clinical practice progress for eosinophilic gastrointestinal disorders, and it is a privilege and honor to be entrusted as a recipient of such funds, which represent countless hours of time and service of CURED Foundation members and families. As we continue to partner together in our quest for improved diagnosis, treatments, and a CURE for eosinophilic conditions through research, I wanted to take a moment to share with you a glimpse of what your amazing foundation has made possible through its support.

Sincerely,

Marc Rothenberg, MD, PhD

Director, Division of Allergy and Immunology, Cincinnati Children's

Director, Cincinnati Center for Eosinophilic Disorders, Cincinnati Children's

Director, Consortium of Eosinophilic Gastrointestinal Disease Researchers

CURED Supports More Than Science. CURED Supports People

Your research support has impacted not only the field, but also the careers of talented trainees and researchers, such as Tetsuo Shoda, MD, PhD. Tetsuo started as a postdoctoral trainee in 2016 in the Rothenberg CURED Laboratory before being appointed as an Assistant Professor in the Division of Allergy and Immunology at Cincinnati Children's in 2022. Through CURED's support, he published several studies in the Rothenberg CURED Laboratory, including a landmark study for the understudied condition of eosinophilic colitis and detailed mechanistic studies of eosinophilic esophagitis, two of which were so notable in the field that the studies were featured as the cover art on the respective issues of *Gastroenterology* in which they appeared. CURED has been a constant support for the Rothenberg CURED Laboratory to support trainees like Tetsuo, who is now my colleague and will be an important part of the future of our field.

CURED Advances Research and the Field

CURED has made an immeasurable but tangible benefit to research over its many years of support. CURED is supporting basic, translational, and direct clinical research studies being conducted by the Rothenberg CURED Laboratory. For example, in the basic science arena, CURED funding has been instrumental in our capacity to produce recombinant proteins (not available elsewhere), such as calpain 14 and different forms of IL-33, so that we can test the activity and function of these pro-EGID mediators. In the translational arena, CURED has helped decipher the genetic basis of EGID. In the clinical side, CURED funds have been instrumental in identifying different forms of EGID, their pathophysiological bases, and treatment strategies. Below are publications that CURED's recent funding support of the Rothenberg CURED Laboratory (2018¹⁻¹⁶, 2019,¹⁷⁻³² 2020³³⁻⁴⁶, 2021⁴⁷⁻⁵⁹, 2022⁶⁰⁻⁷⁹) have made possible. With your support, we remained productive and strong in research even through the pandemic. Truly, we, the CURED Foundation and the Rothenberg CURED Laboratory, change the outcome together.

1. Travers J, Rochman M, Miracle CE, Habel JE, Brusilovsky M, Caldwell JM, et al. Chromatin regulates IL-33 release and extracellular cytokine activity. *Nat Commun* 2018; 9:3244.
2. Spergel JM, Aceves SS, Kliewer K, Gonsalves N, Chehade M, Wechsler JB, et al. New developments in patients with eosinophilic gastrointestinal diseases presented at the CEGIR/TIGERS Symposium at the 2018 American Academy of Allergy, Asthma & Immunology Meeting. *J Allergy Clin Immunol* 2018; 142:48-53.

3. Shoda T, Wen T, Aceves SS, Abonia JP, Atkins D, Bonis PA, et al. Eosinophilic oesophagitis endotype classification by molecular, clinical, and histopathological analyses: a cross-sectional study. *Lancet Gastroenterol Hepatol* 2018; 3:477-88.
4. Sherrill JD, Kc K, Wang X, Wen T, Chamberlin A, Stucke EM, et al. Whole-exome sequencing uncovers oxidoreductases DHTKD1 and OGDHL as linkers between mitochondrial dysfunction and eosinophilic esophagitis. *JCI Insight* 2018; 3.
5. Rosenberg CE, Mingler MK, Caldwell JM, Collins MH, Fulkerson PC, Morris DW, et al. Esophageal IgG4 levels correlate with histopathologic and transcriptomic features in eosinophilic esophagitis. *Allergy* 2018; 73:1892-901.
6. Rochman M, Azouz NP, Rothenberg ME. Epithelial origin of eosinophilic esophagitis. *J Allergy Clin Immunol* 2018; 142:10-23.
7. O'Shea KM, Aceves SS, Dellon ES, Gupta SK, Spergel JM, Furuta GT, et al. Pathophysiology of Eosinophilic Esophagitis. *Gastroenterology* 2018; 154:333-45.
8. Martin LJ, He H, Collins MH, Abonia JP, Biagini Myers JM, Eby M, et al. Eosinophilic esophagitis (EoE) genetic susceptibility is mediated by synergistic interactions between EoE-specific and general atopic disease loci. *J Allergy Clin Immunol* 2018; 141:1690-8.
9. Lynch MK, Barnes MJ, Dimmitt RA, Martin L, Rothenberg ME, Goodin BR. Disease-Related Predictors of Health-Related Quality of Life in Youth With Eosinophilic Esophagitis. *J Pediatr Psychol* 2018; 43:464-71.
10. Khoury P, Akuthota P, Ackerman SJ, Arron JR, Bochner BS, Collins MH, et al. Revisiting the NIH Taskforce on the Research needs of Eosinophil-Associated Diseases (RE-TREAD). *J Leukoc Biol* 2018; 104:69-83.
11. Jensen ET, Kuhl JT, Martin LJ, Langefeld CD, Dellon ES, Rothenberg ME. Early-life environmental exposures interact with genetic susceptibility variants in pediatric patients with eosinophilic esophagitis. *J Allergy Clin Immunol* 2018; 141:632-7 e5.
12. Hiremath G, Kodroff E, Strobel MJ, Scott M, Book W, Reidy C, et al. Individuals affected by eosinophilic gastrointestinal disorders have complex unmet needs and frequently experience unique barriers to care. *Clin Res Hepatol Gastroenterol* 2018; 42:483-93.
13. Dellon ES, Liacouras CA, Molina-Infante J, Furuta GT, Spergel JM, Zevit N, et al. Updated International Consensus Diagnostic Criteria for Eosinophilic Esophagitis: Proceedings of the AGREE Conference. *Gastroenterology* 2018; 155:1022-33 e10.
14. Chehade M, Jones SM, Pesek RD, Burks AW, Vickery BP, Wood RA, et al. Phenotypic Characterization of Eosinophilic Esophagitis in a Large Multicenter Patient Population from the Consortium for Food Allergy Research. *J Allergy Clin Immunol Pract* 2018; 6:1534-44 e5.
15. Azouz NP, Ynga-Durand MA, Caldwell JM, Jain A, Rochman M, Fischesser DM, et al. The antiprotease SPINK7 serves as an inhibitory checkpoint for esophageal epithelial inflammatory responses. *Sci Transl Med* 2018; 10.
16. Aceves SS, King E, Collins MH, Yang GY, Capocelli KE, Abonia JP, et al. Alignment of parent- and child-reported outcomes and histology in eosinophilic esophagitis across multiple CEGIR sites. *J Allergy Clin Immunol* 2018; 142:130-8 e1.
17. Wheeler JC, Vanoni S, Zeng C, Waggoner L, Yang Y, Wu D, et al. 17beta-Estradiol protects the esophageal epithelium from IL-13-induced barrier dysfunction and remodeling. *J Allergy Clin Immunol* 2019; 143:2131-46.
18. Wen T, Aronow BJ, Rochman Y, Rochman M, Kc K, Dexheimer PJ, et al. Single-cell RNA sequencing identifies inflammatory tissue T cells in eosinophilic esophagitis. *J Clin Invest* 2019; 129:2014-28.
19. Schwartz JT, Morris DW, Collins MH, Rothenberg ME, Fulkerson PC. Eosinophil progenitor levels correlate with tissue pathology in pediatric eosinophilic esophagitis. *J Allergy Clin Immunol* 2019; 143:1221-4 e3.

20. Pesek RD, Reed CC, Muir AB, Fulkerson PC, Menard-Katcher C, Falk GW, et al. Increasing Rates of Diagnosis, Substantial Co-Occurrence, and Variable Treatment Patterns of Eosinophilic Gastritis, Gastroenteritis, and Colitis Based on 10-Year Data Across a Multicenter Consortium. *Am J Gastroenterol* 2019; 114:984-94.
21. Muir AB, Jensen ET, Wechsler JB, Menard-Katcher P, Falk GW, Aceves SS, et al. Overestimation of the diagnosis of eosinophilic colitis with reliance on billing codes. *J Allergy Clin Immunol Pract* 2019; 7:2434-6.
22. Miller DE, Forney C, Rochman M, Cranert S, Habel J, Rymer J, et al. Genetic, Inflammatory, and Epithelial Cell Differentiation Factors Control Expression of Human Calpain-14. *G3 (Bethesda)* 2019; 9:729-36.
23. Lyles J, Rothenberg M. Role of genetics, environment, and their interactions in the pathogenesis of eosinophilic esophagitis. *Curr Opin Immunol* 2019; 60:46-53.
24. Kurten RC, Rawson R, Shoda T, Duong LD, Adejumobi D, Levy R, et al. Development and Application of a Functional Human Esophageal Mucosa Explant Platform to Eosinophilic Esophagitis. *Sci Rep* 2019; 9:6206.
25. Krishnan U, Lijuan C, Andrew GJ, Rothenberg ME, Wen T. Analysis of eosinophilic esophagitis in children with repaired congenital esophageal atresia. *J Allergy Clin Immunol* 2019; 143:1455-64 e2.
26. Kottyan LC, Maddox A, Braxton JR, Stucke EM, Mukkada V, Putnam PE, et al. Genetic variants at the 16p13 locus confer risk for eosinophilic esophagitis. *Genes Immun* 2019; 20:281-92.
27. Klion AD, Rothenberg ME. Advances in eosinophilic diseases in 2018. *J Allergy Clin Immunol* 2019; 144:1490-4.
28. Gupta SK, Falk GW, Aceves SS, Chehade M, Collins MH, Dellon ES, et al. Consortium of Eosinophilic Gastrointestinal Disease Researchers: Advancing the Field of Eosinophilic GI Disorders Through Collaboration. *Gastroenterology* 2019; 156:838-42.
29. Doucet-Ladeveze R, Holvoet S, Raymond F, Foata F, Hershey GKK, Sherrill JD, et al. Transcriptomic Analysis Links Eosinophilic Esophagitis and Atopic Dermatitis. *Front Pediatr* 2019; 7:467.
30. DiTommaso LA, Rosenberg CE, Eby MD, Tasco A, Collins MH, Lyles JL, et al. Prevalence of eosinophilic colitis and the diagnoses associated with colonic eosinophilia. *J Allergy Clin Immunol* 2019; 143:1928-30 e3.
31. Ben Baruch-Morgenstern N, Shoda T, Rothenberg ME. Bagels and LOX in patients with eosinophilic esophagitis. *J Allergy Clin Immunol* 2019; 144:41-3.
32. Azouz NP, Rothenberg ME. Mechanisms of gastrointestinal allergic disorders. *J Clin Invest* 2019; 129:1419-30.
33. Vanoni S, Zeng C, Marella S, Uddin J, Wu D, Arora K, et al. Identification of anoctamin 1 (ANO1) as a key driver of esophageal epithelial proliferation in eosinophilic esophagitis. *J Allergy Clin Immunol* 2020; 145:239-54 e2.
34. Shoda T, Wen T, Caldwell JM, Collins MH, Besse JA, Osswald GA, et al. Molecular, endoscopic, histologic, and circulating biomarker-based diagnosis of eosinophilic gastritis: Multi-site study. *J Allergy Clin Immunol* 2020; 145:255-69.
35. Pesek RD, Rothenberg ME. Eosinophilic gastrointestinal disease below the belt. *J Allergy Clin Immunol* 2020; 145:87-9 e1.
36. Pesek RD, Reed CC, Collins MH, Muir AB, Fulkerson PC, Menard-Katcher C, et al. Association Between Endoscopic and Histologic Findings in a Multicenter Retrospective Cohort of Patients with Non-esophageal Eosinophilic Gastrointestinal Disorders. *Dig Dis Sci* 2020; 65:2024-35.
37. Lindsley AW, Schwartz JT, Rothenberg ME. Eosinophil responses during COVID-19 infections and coronavirus vaccination. *J Allergy Clin Immunol* 2020; 146:1-7.

38. Kottyan LC, Parameswaran S, Weirauch MT, Rothenberg ME, Martin LJ. The genetic etiology of eosinophilic esophagitis. *J Allergy Clin Immunol* 2020; 145:9-15.
39. Jensen ET, Aceves SS, Bonis PA, Bray K, Book W, Chehade M, et al. High Patient Disease Burden in a Cross-sectional, Multicenter Contact Registry Study of Eosinophilic Gastrointestinal Diseases. *J Pediatr Gastroenterol Nutr* 2020; 71:524-9.
40. Dunn JLM, Shoda T, Caldwell JM, Wen T, Aceves SS, Collins MH, et al. Esophageal type 2 cytokine expression heterogeneity in eosinophilic esophagitis in a multisite cohort. *J Allergy Clin Immunol* 2020; 145:1629-40 e4.
41. Collins MH, Martin LJ, Wen T, Abonia JP, Putnam PE, Mukkada VA, et al. Eosinophilic Esophagitis Histology Remission Score: Significant Relations to Measures of Disease Activity and Symptoms. *J Pediatr Gastroenterol Nutr* 2020; 70:598-603.
42. Ben Baruch-Morgenstern N, Rochman M, Rothenberg ME. Pumping mast cells out of allergic inflammation-are proton pump inhibitors taking center stage? *J Allergy Clin Immunol* 2020; 146:783-5.
43. Azouz NP, Klingler AM, Pathre P, Besse JA, Baruch-Morgenstern NB, Ballaban AY, et al. Functional role of kallikrein 5 and proteinase-activated receptor 2 in eosinophilic esophagitis. *Sci Transl Med* 2020; 12.
44. Azouz NP, Klingler AM, Callahan V, Akhrymuk IV, Elez K, Raich L, et al. Alpha 1 Antitrypsin is an Inhibitor of the SARS-CoV-2-Priming Protease TMPRSS2. *bioRxiv* 2020.
45. Applequist J, Burroughs C, Ramirez A, Jr., Merkel PA, Rothenberg ME, Trapnell B, et al. A novel approach to conducting clinical trials in the community setting: utilizing patient-driven platforms and social media to drive web-based patient recruitment. *BMC Med Res Methodol* 2020; 20:58.
46. Aceves S, Collins MH, Rothenberg ME, Furuta GT, Gonsalves N, Consortium of Eosinophilic Gastrointestinal Disease R. Advancing patient care through the Consortium of Eosinophilic Gastrointestinal Disease Researchers (CEGIR). *J Allergy Clin Immunol* 2020; 145:28-37.
47. Shoda T, Kaufman KM, Wen T, Caldwell JM, Osswald GA, Purnima P, et al. Desmoplakin and periplakin genetically and functionally contribute to eosinophilic esophagitis. *Nat Commun* 2021; 12:6795.
48. Rochman M, Xie YM, Mack L, Caldwell JM, Klingler AM, Osswald GA, et al. Broad transcriptional response of the human esophageal epithelium to proton pump inhibitors. *J Allergy Clin Immunol* 2021; 147:1924-35.
49. Mersha TB, Afanador Y, Johansson E, Proper SP, Bernstein JA, Rothenberg ME, et al. Resolving Clinical Phenotypes into Endotypes in Allergy: Molecular and Omics Approaches. *Clin Rev Allergy Immunol* 2021; 60:200-19.
50. Mahoney M, Damalanka VC, Tartell MA, Chung DH, Lourenco AL, Pwee D, et al. A novel class of TMPRSS2 inhibitors potently block SARS-CoV-2 and MERS-CoV viral entry and protect human epithelial lung cells. *Proc Natl Acad Sci U S A* 2021; 118.
51. Lyles JL, Martin LJ, Shoda T, Collins MH, Trimarchi MP, He H, et al. Very early onset eosinophilic esophagitis is common, responds to standard therapy, and demonstrates enrichment for CAPN14 genetic variants. *J Allergy Clin Immunol* 2021; 147:244-54 e6.
52. Kottyan LC, Trimarchi MP, Lu X, Caldwell JM, Maddox A, Parameswaran S, et al. Replication and meta-analyses nominate numerous eosinophilic esophagitis risk genes. *J Allergy Clin Immunol* 2021; 147:255-66.
53. Jacobsen EA, Jackson DJ, Heffler E, Mathur SK, Bredenoord AJ, Pavord ID, et al. Eosinophil Knockout Humans: Uncovering the Role of Eosinophils Through Eosinophil-Directed Biological Therapies. *Annu Rev Immunol* 2021; 39:719-57.

54. Hiremath G, Krischer JP, Rothenberg ME, Dellon ES. Validation of self-reported diagnosis of eosinophilic gastrointestinal disorders patients enrolled in the CEGIR contact registry. *Clin Res Hepatol Gastroenterol* 2021; 45:101555.
55. Friedlander JA, Fleischer DM, Black JO, Levy M, Rothenberg ME, Smith C, et al. Unsedated transnasal esophagoscopy with virtual reality distraction enables earlier monitoring of dietary therapy in eosinophilic esophagitis. *J Allergy Clin Immunol Pract* 2021; 9:3494-6.
56. Czyzewski T, Daniel N, Rochman M, Caldwell JM, Osswald GA, Collins MH, et al. Machine Learning Approach for Biopsy-Based Identification of Eosinophilic Esophagitis Reveals Importance of Global features. *IEEE Open J Eng Med Biol* 2021; 2:218-23.
57. Chiang AWT, Duong LD, Shoda T, Nhu QM, Ruffner M, Hara T, et al. Type 2 Immunity and Age Modify Gene Expression of Coronavirus-induced Disease 2019 Receptors in Eosinophilic Gastrointestinal Disorders. *J Pediatr Gastroenterol Nutr* 2021; 72:718-22.
58. Brusilovsky M, Rochman M, Rochman Y, Caldwell JM, Mack LE, Felton JM, et al. Environmental allergens trigger type 2 inflammation through ripoptosome activation. *Nat Immunol* 2021; 22:1316-26.
59. Azouz NP, Klingler AM, Callahan V, Akhrymuk IV, Elez K, Raich L, et al. Alpha 1 Antitrypsin is an Inhibitor of the SARS-CoV-2-Priming Protease TMPRSS2. *Pathog Immun* 2021; 6:55-74.
60. Zhang S, Shoda T, Aceves SS, Arva NC, Chehade M, Collins MH, et al. Mast cell-pain connection in eosinophilic esophagitis. *Allergy* 2022; 77:1895-9.
61. Tanzer J, Meng D, Ohsaki A, Caldwell JM, Mingler MK, Rothenberg ME, et al. Laundry detergent promotes allergic skin inflammation and esophageal eosinophilia in mice. *PLoS One* 2022; 17:e0268651.
62. Shoda T, Collins MH, Rochman M, Wen T, Caldwell JM, Mack LE, et al. Evaluating Eosinophilic Colitis as a Unique Disease Using Colonic Molecular Profiles: A Multi-Site Study. *Gastroenterology* 2022; 162:1635-49.
63. Shoda T, Wen T, Caldwell JM, Ben-Baruch Morgenstern N, Osswald GA, Rochman M, et al. Loss of Endothelial TSPAN12 Promotes Fibrostenotic Eosinophilic Esophagitis via Endothelial Cell-Fibroblast Crosstalk. *Gastroenterology* 2022; 162:439-53.
64. Rothenberg ME, Hottinger SKB, Gonsalves N, Furuta GT, Collins MH, Talley NJ, et al. Impressions and aspirations from the FDA GREAT VI Workshop on Eosinophilic Gastrointestinal Disorders Beyond Eosinophilic Esophagitis and Perspectives for Progress in the Field. *J Allergy Clin Immunol* 2022; 149:844-53.
65. Rothenberg ME. Scientific Journey to the First FDA-approved Drug for Eosinophilic Esophagitis. *J Allergy Clin Immunol* 2022.
66. Rothenberg ME. The climate change hypothesis for the allergy epidemic. *J Allergy Clin Immunol* 2022; 149:1522-4.
67. Rochman M, Wen T, Kotliar M, Dexheimer PJ, Ben-Baruch Morgenstern N, Caldwell JM, et al. Single-cell RNA-Seq of human esophageal epithelium in homeostasis and allergic inflammation. *JCI Insight* 2022; 7.
68. Robida PA, Rische CH, Morgenstern NB, Janarthanam R, Cao Y, Krier-Burris RA, et al. Functional and Phenotypic Characterization of Siglec-6 on Human Mast Cells. *Cells* 2022; 11.
69. Min S, Shoda T, Wen T, Rothenberg ME. Diagnostic merits of the Eosinophilic Esophagitis Diagnostic Panel from a single esophageal biopsy. *J Allergy Clin Immunol* 2022; 149:782-7 e1.
70. Hiremath G, Sun L, Correa H, Acra S, Collins MH, Bonis P, et al. Development and Validation of Web-Based Tool to Predict Lamina Propria Fibrosis in Eosinophilic Esophagitis. *Am J Gastroenterol* 2022; 117:272-9.

71. Hirano I, Collins MH, King E, Sun Q, Chehade M, Abonia JP, et al. Prospective Endoscopic Activity Assessment for Eosinophilic Gastritis in a Multisite Cohort. *Am J Gastroenterol* 2022; 117:413-23.
72. Grisar-Tal S, Rothenberg ME, Munitz A. Eosinophil-lymphocyte interactions in the tumor microenvironment and cancer immunotherapy. *Nat Immunol* 2022; 23:1309-16.
73. Dellon ES, Khoury P, Muir AB, Liacouras CA, Safroneeva E, Atkins D, et al. A Clinical Severity Index for Eosinophilic Esophagitis: Development, Consensus, and Future Directions. *Gastroenterology* 2022; 163:59-76.
74. Dellon ES, Gonsalves N, Abonia JP, Alexander JA, Arva NC, Atkins D, et al. International Consensus Recommendations for Eosinophilic Gastrointestinal Disease Nomenclature. *Clin Gastroenterol Hepatol* 2022; 20:2474-84 e3.
75. Dellon ES, Khoury P, Muir AB, Liacouras CA, Safroneeva E, Atkins D, et al. A Clinical Severity Index for Eosinophilic Esophagitis: Development, Consensus, and Future Directions. *J Allergy Clin Immunol* 2022; 150:33-47.
76. Daniel N, Larey A, Aknin E, Osswald GA, Caldwell JM, Rochman M, et al. A Deep Multi-Label Segmentation Network For Eosinophilic Esophagitis Whole Slide Biopsy Diagnostics. *Annu Int Conf IEEE Eng Med Biol Soc* 2022; 2022:3211-7.
77. Brusilovsky M, Bao R, Rochman M, Kemter AM, Nagler CR, Rothenberg ME. Host-Microbiota Interactions in the Esophagus During Homeostasis and Allergic Inflammation. *Gastroenterology* 2022; 162:521-34 e8.
78. Brusilovsky M, Rochman M, Shoda T, Kotliar M, Caldwell JM, Mack LE, et al. Vitamin D receptor and STAT6 interactome governs oesophageal epithelial barrier responses to IL-13 signalling. *Gut* 2022.
79. Avlas S, Shani G, Rhone N, Itan M, Dolitzky A, Hazut I, et al. Epithelial cell-expressed type II IL-4 receptor mediates eosinophilic esophagitis. *Allergy* 2022.