

**A. Original peer-reviewed articles**

1. The IL-4R $\alpha$  Q576R polymorphism is associated with increased severity of atopic dermatitis and exaggerates allergic skin inflammation in mice. Yang B, Wilkie H, Das M, Timilshina M, Bainter W, Woods B, Daya M, Boorgula MP, Mathias RA, Lai P, Petty CR, Weller E, **Harb H**, Chatila TA, Leung DYM, Beck LA, Simpson EL, Hata TR, Barnes KC, Phipatanakul W, Leyva-Castillo JM, Geha RS. *J Allergy Clin Immunol*. 2023 Jan 21:S0091-6749(23)00084-2. doi: 10.1016/j.jaci.2023.01.011 (IF: 14.29)
2. A common IL-4 receptor variant promotes asthma severity via a Treg cell GRB2-IL-6-Notch4 circuit. Benamar M, **Harb H**, Chen Q, Wang M, Chan TMF, Fong J, Phipatanakul W, Cunningham A, Ertem D, Petty CR, Mousavi AJ, Sioutas C, Crestani E, Chatila TA. *Allergy*. 2022 Jul 16. doi: 10.1111/all.15444. Online ahead of print. (IF: 14.71)
3. Short-Chain Fatty Acids Augment Differentiation and Function of Human Induced Regulatory T Cells. Hu M, Alashkar Alhamwe B, Santner-Nanan B, Miethe S, **Harb H**, Renz H, Potaczek DP, Nanan RK. *Int J Mol Sci*. 2022 May 20;23(10):5740. doi: 10.3390/ijms23105740. (IF: 6.2)
4. Atopic Dermatitis Mediates the Association Between an IL4RA Variant and Food Allergy in School-Aged Children. Banzon TM, Kelly MS, Bartnikas LM, Sheehan WJ, Cunningham A, **Harb H**, Crestani E, Valeri L, Greco KF, Chatila TA, Phipatanakul W, Lai PS. *J Allergy Clin Immunol Pract*. 2022 Aug;10(8):2117-2124.e4. doi: 10.1016/j.jaip.2022.04.042. Epub 2022 May 16. (IF: 11.022)
5. Regulatory T Cell Notch4 Switch Governs lung inflammation in Viral Infection. **Harb H**, Benamar M, Lai PS, Contini P, Griffith JW, Crestani E, Schmitz-Abe K, Chen Q, Fong J, Marri L, Filaci G, Del Zotto G, Pishesha N, Kolifraht S, Broggi A, Ghosh S, Gelmez MY, Oktelik FB, Cetin EA, Kiykim A, Kose M, Wang Z, Cui Y, Yu XG, Li JZ, Berra L, Stephen-Victor E, Charbonnier LM, Zanoni I, Ploegh H, Deniz G, De Palma R, Chatila TA. *Immunity*. 2021 Jun 8;54(6):1186-1199.e7. doi: 10.1016/j.immuni.2021.04.002. Epub 2021 Apr 28. PMID: 33915108 (IF: 31.74)
6. Regulatory T Cell-Derived TGF- $\beta$ 1 Controls Multiple Checkpoints Governing Allergy and Autoimmunity. Turner JA, Stephen-Victor E, Wang S, Rivas MN, Abdel-Gadir A, **Harb H**, Cui Y, Fanny M, Charbonnier LM, Hung Fong JJ, Benamar M, Wang L, Burton OT, Bansal K, Bry L, Zhu C, Li QZ, Clement RL, Oettgen HC, Crestani E, Rachid R, Sage PT, Chatila TA. *Immunity*. 2020 Dec 15;53(6):1331-1332. doi: 10.1016/j.immuni.2020.11.011 (IF: 31.74)
7. A regulatory T cell Notch4-GDF15 axis licenses tissue inflammation in asthma. **Harb H**, Stephen-Victor E, Crestani E, Benamar M, Massoud A, Cui Y, Charbonnier LM, Arbag S, Baris S, Cunningham A, Leyva-Castillo JM, Geha RS, Mousavi AJ, Guennewig B, Schmitz-Abe K, Sioutas C, Phipatanakul W, Chatila TA. *Nat Immunol*. 2020 Nov;21(11):1359-1370. doi: 10.1038/s41590-020-0777-3. Epub 2020 Sep 14. (IF: 31.25)
8. IgE Levels to *Ascaris* and House Dust Mite Allergens Are Associated with Increased Histone Acetylation at Key Type-2 Immune Genes. Zakzuk J, Acevedo N, **Harb H**, Eick L, Renz H, Potaczek DP, Caraballo L. *Front Immunol*.

2020 Apr 28;11:756. doi: 10.3389/fimmu.2020.00756. eCollection 2020. (IF: 7.56)

9. Untargeted Metabolomic Profiling Identifies Disease-specific Signatures in Food Allergy and Asthma. Crestani E, **Harb H**, Charbonnier LM, Leirer J, Motsinger-Reif A, Rachid R, Phipatanakul W, Kaddurah-Daouk R, Chatila TA. *J Allergy Clin Immunol*. 2019 Oct 25. pii: S0091-6749(19)31402-2. doi: 10.1016/j.jaci.2019.10.014 (IF: 14.29)
10. Functional reprogramming of regulatory T cells in the absence of Foxp3. Charbonnier LM, Cui Y, Stephen-Victor E, **Harb H**, Lopez D, Bleesing JJ, Garcia-Lloret MI, Chen K, Ozen A, Carmeliet P, Li MO, Pellegrini M, Chatila TA. *Nat Immunol*. 2019 Sep;20(9):1208-1219. doi: 10.1038/s41590-019-0442-x. Epub 2019 Aug 5. (IF: 31.25)
11. Raw Cow's Milk Reduces Allergic Symptoms in a Murine Model for Food Allergy-A Potential Role for Epigenetic Modifications. Abbring S, Wolf J, Ayechu-Muruzabal V, Diks MAP, Alhamwe BA, Alhamdan F, **Harb H**, Renz H, Garn H, Garssen J, Potaczek DP, van Esch BCAM. *Nutrients*. 2019 Jul 25;11(8). pii: E1721. doi: 10.3390/nu11081721. (IF: 5.71)
12. Microbiota Therapy Acts Via a Regulatory T Cell MyD88/ROR $\gamma$ t Pathway to Suppress Food Allergy. Azza Abdel-Gadir, Emmanuel Stephen-Victor, Georg K. Gerbe, Magali Noval Rivas, Sen Wang, **Hani Harb**, Leighanne Wang, Ning Li, Elena Crestani, Sara Spielman, William Secor, Heather Biehl, Nicholas Dibendetto, Xiaoxi Dong, Dale T. Umetsu, Lynn Bry, Rima Rachid and Talal A. Chatila. *Nat Med*. 2019 Jul;25(7):1164-1174. doi: 10.1038/s41591-019-0461-z. Epub 2019 Jun 24. Erratum in: *Nat Med*. 2019 Sep;25(9):1458. (IF: 87.24)
13. Epigenetic Modifications in Placenta are Associated with the Child's Sensitization to Allergens. **Hani Harb**, Bilal Alashkar Alhamwe, Nathalie Acevedo, Paolo Frumento, Catharina Johansson, Lisa Eick, Nikos Papadogiannakis, Johan Alm, Harald Renz, Daniel P. Potaczek, and Annika Scheynius. *Biomed Res Int*. 2019 Apr 17;2019:1315257. doi: 10.1155/2019/1315257. eCollection 2019. (IF: 2.58)
14. Treatment of severe persistent asthma with IL-6 receptor blockade. Esty B, **Harb H**, Bartnikas LM, Charbonnier LM, Massoud AH, Leon-Astudillo C, Visner G, Subramaniam M, Phipatanakul W, **Chatila TA**. *J Allergy Clin Immunol Pract*. 2019 Mar 15. pii: S2213-2198(19)30267-3. doi: 10.1016/j.jaip.2019.02.043 (IF: 11.022)
15. Histone Acetylation of Immune Regulatory Genes in Human Placenta in Association with Maternal Intake of Olive Oil and Fish Consumption. Acevedo N, Frumento P, **Harb H**, Alashkar Alhamwe B, Johansson C, Eick L, Alm J, Renz H, Scheynius A, Potaczek DP. *Int J Mol Sci*. 2019 Mar 1;20(5). pii: E1060. doi: 10.3390/ijms20051060. (IF: 6.20)
16. A Jagged1-Notch4 Molecular Switch Mediates Airway Inflammation by Ultrafine Particles. Xia M, **Harb H**, Saffari A, Sioutas C, Chatila TA. *J Allergy Clin Immunol*. 2018 Apr 5. pii: S0091-6749(18)30510-4. doi: 10.1016/j.jaci.2018.03.009 (IF: 14.29)
17. Assessment of Brain Derived Neurotrophic Factor in hair to study stress responses: A pilot investigation. **H. Harb**, M. González-de-la-Vara, L. Thalheimerd, U. Klein, H. Renz, M. Rose, J. Kruse, D.P. Potaczek, E.M.J. Peters. *Psychoneuroendocrinology* 2017 Sep (IF: 4.9)
18. The Microbial Metabolite Butyrate Induces Expression of Th1-Associated Factors in CD4+ T Cells. Kespohl M, Vachharajani N, Luu M, **Harb H**, Pautz S,

- Wolff S, Sillner N, Walker A, Schmitt-Kopplin P, Boettger T, Renz H, Offermanns S, Steinhoff U, Visekruna A. *Front Immunol*. 2017 Aug (IF: 7.56)
19. Aberrant cognitive phenotypes and altered hippocampal BDNF expression related to epigenetic modifications in mice lacking the post-synaptic scaffolding protein SHANK1: Implications for autism spectrum disorder. Sungur AÖ, Jochner MCE, **Harb H**, Kılıç A, Garn H, Schwarting RKW, Wöhr M. *Hippocampus*. 2017 Aug (IF: 3.899)
  20. Chronic schistosomiasis during pregnancy epigenetically reprograms T cell differentiation in offspring of infected mothers. Klar K, Perchermeier S, Bhattacharjee S, **Harb H**, Adler T, Istvanffy R, Loffredo-Verde E, Oostendorp R, Renz H, Prazeres da Costa C. *Eur J Immunol*. 2017 Mar 8. doi: 10.1002/eji.201646836 (IF: 5.53)
  21. The role of PKC $\zeta$  in cord blood T-cell maturation towards Th1 cytokine profile and its epigenetic regulation by fish oil. **Harb H**, Irvine J, Amarasekera M, Hii CS, Kesper DA, Ma Y, D'Vaz N, Renz H, Potaczek DP, Prescott SL, Ferrante A. *Biosci Rep*. 2017 Feb 3. pii: BSR20160485. doi: 10.1042/BSR20160485 (IF: 3.84)
  22. Draft Genome Sequence and Complete Plasmid Sequence of *Acinetobacter lwoffii* F78, an Isolate with Strong Allergy-Protective Properties. Fritzenwanker M, Hain T, Kesper DA, **Harb H**, Renz H, Domann E. *Genome Announc*. 2016 Jul 21;4(4).
  23. Epigenetic Regulation in Early Childhood: A Miniaturized and Validated Method to Assess Histone Acetylation. **Harb H**, Amarasekera M, Ashley S, Tulic MK, Pfefferle PI, Potaczek DP, Martino D, Kesper DA, Prescott SL, Renz H. *Int Arch Allergy Immunol*. 2015;168(3):173-81. doi: 10.1159/000442158. (IF: 2.74)
  24. Transcription factor c-Rel plays a crucial role in driving anti-CD40-mediated innate colitis. Visekruna A, Linnerz T, Martinic V, Vachharajani N, Hartmann S, **Harb H**, Joeris T, Pfefferle PI, Hofer MJ, Steinhoff U. *Mucosal Immunol*. 2015 Mar;8(2):307-15. doi: 10.1038/mi.2014.68. (IF: 7.31)
  25. Childhood allergic asthma is associated with increased IL-13 and FOXP3 histone acetylation. **Harb H**, Raedler D, Ballenberger N, Böck A, Kesper DA, Renz H, Schaub B. *J Allergy Clin Immunol*. 2015 Jul;136(1):200-2. doi: 10.1016/j.jaci.2015.01.027. Epub 2015 Mar 11. No abstract available. (IF: 14.29)
  26. Genome-wide DNA methylation profiling identifies a folate-sensitive region of differential methylation upstream of ZFP57-imprinting regulator in humans. Amarasekera M, Martino D, Ashley S, **Harb H**, Kesper D, Strickland D, Saffery R, Prescott SL. *FASEB J*. 2014 Sep;28(9):4068-76. doi: 10.1096/fj.13-249029. Epub 2014 Jun 2. (IF: 5.83)
  27. Bioavailability and allergoprotective capacity of milk-associated conjugated linoleic acid in a murine model of allergic airway inflammation. Böcking C, **Harb H**, Ege MJ, Zehethofer N, Fischer K, Krauß J, Holst O, Nüsing RM, Lindner B, von Mutius E, Renz H, Garn H, Pfefferle PI. *Int Arch Allergy Immunol*. 2014;163(3):234-42. doi: 10.1159/000358523. Epub 2014 Mar 1. (IF: 2.74)
  28. The transcription factor Interferon Regulatory Factor 4 is required for the generation of protective effector CD8<sup>+</sup> T cells. Raczkowski F, Ritter J, Heesch K, Schumacher V, Guralnik A, Höcker L, Raifer H, Klein M, Bopp T, **Harb H**, Kesper DA, Pfefferle PI, Grusdat M, Lang PA, Mittrücker HW, Huber M. *Proc Natl Acad Sci U S A*. 2013 Sep 10;110(37):15019-24. doi: 10.1073/pnas.1309378110. Epub 2013 Aug 26. (IF: 12.78)

29. Neonatal supplementation of processed supernatant from *Lactobacillus rhamnosus* GG improves allergic airway inflammation in mice later in life. **Harb H**, van Tol EA, Heine H, Braaksma M, Gross G, Overkamp K, Hennen M, Alrifai M, Conrad ML, Renz H, Garn H. *Clin Exp Allergy*. 2013 Mar;43(3):353-64. doi: 10.1111/cea.12047. (IF: 5.01)
30. Farm-derived Gram-positive Bacterium *Staphylococcus sciuri* W620 prevents asthma phenotype in HDM- and OVA-exposed mice. Hagner S, **Harb H**, Zhao M, Stein K, Holst O, Ege MJ, Mayer M, Matthes J, Bauer J, von Mutius E, Renz H, Heine H, Pfefferle PI, Garn H. *Allergy*. 2013 Mar;68(3):322-9. doi: 10.1111/all.12094. Epub 2013 Feb 1. (IF: 14.71)
31. Systemic thrombin generation by glucose. Morad Mohrez, **Hani Harb**, Anja Spies, Harald Renz, Thomas W. Stief. *Journal of Diabetes Mellitus Vol.2 No.1*. Pub. Date: February 22, 2012 (IF: 1.14)
32. Epigenetic regulation in murine offspring as a novel mechanism for transmaternal asthma protection induced by microbes. Brand S, Teich R, Dicke T, **Harb H**, Yildirim AÖ, Tost J, Schneider-Stock R, Waterland RA, Bauer UM, von Mutius E, Garn H, Pfefferle PI, Renz H. *J Allergy Clin Immunol*. 2011 Sep;128(3):618-25.e1-7. doi: 10.1016/j.jaci.2011.04.035. Epub 2011 Jun 15. (IF: 14.29)
33. Tachdjian R, Mathias C, Al Khatib S, Bryce PJ, Kim HS, Blaeser F, O'Connor BD, Rzymkiewicz D, Chen A, Holtzman MJ, Hershey GK, Garn H, **Harb H**, Renz H, Oettgen HC, Chatila TA. *J Exp Med*. 2009 Sep 28;206(10):2191-204. doi: 10.1084/jem.20091480. Epub 2009 Sep 21. (IF: 17.58)

## B. Review Articles:

34. Regulatory T-cells in asthma. **Harb H**, Chatila TA. *Curr Opin Allergy Clin Immunol*. 2023 Apr 1;23(2):151-157. doi: 10.1097/ACI.0000000000000887. Epub 2023 Jan 3. (IF: 3.2)
35. Recent patents in allergy and immunology: Method for treating asthma or allergic disease via anti-Notch4 mAb. **Harb H**, Chatila TA. *Allergy*. 2022 Jul;77(7):2260-2261. doi: 10.1111/all.15317. Epub 2022 Apr 28. (IF: 14.71)
36. Mechanisms of Dupilumab. **Harb H**, Chatila T. *Clin Exp Allergy*. 2019 Sep 10. doi: 10.1111/cea.13491. (IF: 5.01)
37. Histone modifications and their role in epigenetics of atopy and allergic diseases. Alaskhar Alhamwe B, Khalaila R, Wolf J, von Bülow V, **Harb H**, Alhamdan F, Hii CS, Prescott SL, Ferrante A, Renz H, Garn H, Potaczek DP. *Allergy Asthma Clin Immunol*. 2018 May 23;14:39. doi: 10.1186/s13223-018-0259-4. (IF: 2.61)
38. The Role of Histone Protein Modifications and Mutations in Histone Modifiers in Pediatric B-Cell Progenitor Acute Lymphoblastic Leukemia. Janczar S, Janczar K, Pastorczak A, **Harb H**, Paige AJ, Zalewska-Szewczyk B, Danilewicz M, Mlynarski W. *Cancers (Basel)*. 2017 Jan 3;9(1). pii: E2. doi: 10.3390/cancers9010002. Review. (IF: 6.63)
39. Epigenetics and allergy: from basic mechanisms to clinical applications. Potaczek DP, **Harb H**, Michel S, Alhamwe BA, Renz H, Tost J. *Epigenomics*. 2017 Mar 21. doi: 10.2217/epi-2016-0162. (IF: 4.77)

40. Recent developments in epigenetics of pediatric asthma. **Harb H**, Alashkar Alhamwe B, Garn H, Renz H, Potaczek DP. *Curr Opin Pediatr*. 2016 Dec;28(6):754-763. (IF: 2.61)
41. Update on epigenetics in allergic disease. **Harb H**, Renz H. *J Allergy Clin Immunol*. 2015 Jan;135(1):15-24. doi: 10.1016/j.jaci.2014.11.009. Review. (IF: 14.29)
42. Epigenetics in immune development and in allergic and autoimmune diseases. Martino D, Kesper DA, Amarasekera M, **Harb H**, Renz H, Prescott S. *J Reprod Immunol*. 2014 Oct;104-105:43-8. doi: 10.1016/j.jri.2014.05.003. Epub 2014 Jun 30. Review. (IF: 2.66)

### C. Patents

1. 2018 - PCT/US2019/022493: regulation of allergic inflammation by notch 4
2. 2018- PCT/US2019/064458: methods and compositions for treating asthma
3. 2019 - U.S. Provisional: 62/979,602: Methods for Targeting the WNT-GDF15 axis in Asthma
4. 2020- U.S. Provisional No.: 63/038,186: Methods and Compositions for Treating Coronavirus Infectious Disease.
5. 2021 - U.S. Provisional No.: 63/181,018: Notch4 Antibodies And Uses Thereof