

Emrah Altindis, MSc, Ph.D.

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ACADEMIC POSITIONS

September 2018 - Present **Assistant Professor**, Biology Department, Boston College
February 2019 - Present **Adjunct Faculty**, Joslin Diabetes Center & Harvard Medical School
2017-2018 **Instructor**, Joslin Diabetes Center & Harvard Medical School

EDUCATION

September 2014 - September 2018 **Postdoctoral Researcher** with Prof. C. Ronald Kahn
Harvard Medical School, Joslin Diabetes Center (Boston, MA)
August 2011 - September 2014 **Postdoctoral Researcher** with Prof. John Mekalanos
Harvard Medical School (Boston, MA)
June 2007 - May 2011 **Ph.D.**, Molecular and Cellular Biology, Bologna University (Bologna, Italy)
& Novartis Vaccines (Siena, Italy)
September 2004- May 2007 **MSc.**, Biotechnology, Middle East Technical University (Ankara, Turkey)
September 2000-June 2004 **B.A.**, Bioengineering Department, Ege University (Izmir, Turkey)

GRANTS

Ongoing Support

	*total costs
2024-2028 NIH NIDDK Research Project (R01) Grant (DK132674) Viral insulin-like peptides and their unique activities on mammalian insulin/IGF-1 system Altindis E (PI)	\$2,544,421
2023-2025 Beatson Foundation, Passion to Find A Cure Grants (# 2023-003) Determine the Role of Microbiota Derived Insulin Epitope Mimics in Type 1 Diabetes Onset Altindis E (PI)	\$275,000
2023-2024 D-challenge Competition. first place award Uncovering the Role of Microbiome Derived Autoantigen Mimics in Type 1 Diabetes The Altindis Lab team (D. Dogru, A. Randall, K. Girdhar)	\$30,000

Completed Support

2020-23 The Mathers Foundation Research Award (MF-2006-00926) <i>The Role of Gut Microbes and Metabolites in Childhood Celiac Disease Pathogenesis</i> Altindis E (PI)	\$300,000
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2022-

14. **Altindis E**, Cozzi R, Di Palo B, Neccho F, Mishra PR., Fontana MR, Soriani M, Bagnoli F, Maione D, Grandi G, Liberatori S. Protectome analysis: a new selective bioinformatics tool for bacterial vaccine candidate discovery. **Mol Cell Proteomics**, 2015 Feb;14 (2):418-29.
15. **Altindis E**, Fu Y, Mekalanos JJ. Proteomic analysis of the *Vibrio cholera* outer membrane vesicles. **PNAS**, 2014 Apr 15;111 (15):E1548-56.
16. Mishra R, Mariotti P, Fiaschi L., Nosari S., Maccari S., Liberatori S, Fontana M R, Pezzicoli A, Falugi F, **Altindis E et al.** . *Staphylococcus aureus* FhuD2 is involved in the early phase of staphylococcal dissemination and generates protective immunity in mice. **J Infect Dis**, 2012 Oct 1;206 (7):1041-9, 2012.
- 17.

1. **Altindis E.** Inequitable COVID-19 vaccine distribution and the intellectual property rights prolong the pandemic. **Expert Rev Vaccines**, **2021** Dec 8. doi: 10.1080/14760584.2022.2014819.
2. Girdhar K, Powis M⁺, Raisingani A⁺, Chrudinová M, Huang R⁺, Tran T⁺, Sevgi K⁺, Dogru YD, **Altindis E^{*}**. Viruses and Metabolism: The Effects of Viral Infections and Viral Insulins on Host Metabolism. **Annu Rev Virol.** **2021** Sep 29;8(1):373-391. *Invited.*
3. Dedrick S, Sundaresh B, Huang Q,

4. **Keynote Speaker**. MIT Microbiome Symposium 2024. March 22, 2024. Cambridge, MA. Host: Symposium Organizing Committee | MIT Microbiome Club
5. Tracing the Intricate Dance: Investigating Gut Microbes' Role in Autoimmune Diseases. **Northeastern University**, Biology Department Seminar Series. March, 5, 2024. Boston, MA. Host: Assoc. Prof. Erica Homan
6. Egg or Chicken: Examining causal links between gut microbes and autoimmune diseases Department of Pathology Seminar Series, School of Medicine, **University of Utah**. October 13, 2023. Salt Lake City, UT. Host: Prof: Brian Evavold.
7. A Microbiota-derived Insulin Epitope Mimic and Type 1 Diabetes Onset. **Keynote Symposia: Mechanisms of Microbiota-Immune Interactions-Towards the Next Decade**. October 8- 11, 2023. Snowbird Resort ~ Snowbird, UT USA
8. A Human Gut Commensal, *Parabacteroides distasonis* and Type 1 Diabetes Onset. **Festival of Genomics & BioData**, Boston Convention Center October 4-5, 2023, Boston, MA
9. The Role of Gut Microbes in the Onset of Autoimmune Diseases. Department of Immunology, **Pasteur Institute**. May 22, 2023, Paris, France. Host: Dr. Gérard Eberl
10. Relearning the insulin/IGF system from the viruses. Centre for Medicines Discovery, **Oxford University**. May 19, 2023, Oxford, UK. Host: Prof. Valentine M Macaulay
11. **Keynote Speaker**. Viral Insulin/IGF-like Peptides and Their Unique Functions on Insulin/IGF System. **Gordon Research Seminar: The IGF and Insulin System: From Basic Science to Clinical Translation and New Technologies**. March 10-12, 2023, Ventura, CA, USA
12. A gut commensal, *Parabacteroides distasonis*, and Type 1 Diabetes onset. **International Society of Microbiota**, 9th World Congress on Targeting Microbiota 2022. October 20, 2022, Paris, France.
13. Learning Insulin/IGF signaling from viruses: Discovery of viral insulins. April 27, 2022. **Brown University**, Providence, Department of Molecular Biology, Cell Biology, and Biochemistry. Host: Prof. Marc Tatar
14. The Discovery of Microbial Insulins and Their Potential Role in Human Disease. November 9, 2021. **University of Massachusetts, Amherst**, Molecular & Cellular Biology Program Seminar Series. Host: Dr. Can Ozden.
15. The Discovery of Microbial Insulins and Their Potential Role in Human Disease. October 26, 2021. **Tufts University**, Cell, Molecular & Developmental Biology Department Seminar Series. Host: Prof. Karl Munger
16. Discovery of Microbial Insulin Mimics Leads to the Identification of Unique Characteristics. Institute of Biomedical Investigations, June 23, 2021, **Autonomous University of Madrid** (Spain, virtual). Host: Prof. Wolfgang Link.
17. Expanding the Dimensions in Insulin Research: Discovery of Viral Insulins. April 30, 2021. **University of Algarve** (Portugal, virtual), Biomedicine Research Centre. Host: Prof. Maria Leonor Faleiro.
18. Insulin and Viral Insulin Research. **rsity** (Istanbul, Turkey, virtual) Science Club. May 22, 2021. 15. Molecular Biology and Genetics Meeting. Host: Bo azi8i University Science Club
19. Characterization of Microbial Insulin/IGF-1 Mimics. April 14, 2021. **Boston College** Chemistry Department. Host: Prof. Jianmin Gao
20. Discovery of Microbial Insulin Mimics. April 13, 2021. Host: **Indiana University** Biology Department Seminar Series. Every year, the microbiology graduate students nominate a speaker for a talk, and I was honored to be chosen through their votes, despite not knowing any of them (virtual).
21. Discovery and Characterization of Microbial Insulin Mimics. March 31, 2021. **Ohio University** (virtual) - Basic and Translational Seminar Series. Host: Associate Prof. Kevin Lee
22. Discovery and Characterization of Microbial Insulins. **Indiana University**, School of Medicine. Department of Microbiology&Immunology. November 12, 2020 (virtual). Host: Prof. Christopher Robinson
23. Discovery of microbial insulin mimics: Do they play a role in diabetes? **North Arizona University**, Pathogen and Microbiome Institute. March 4, 2020. Host: Prof. Jason Ladner
24. Bridging Virology and Endocrinology: Viral Hormones. **14th Annual Peptide Therapeutics Symposium**, Peptide Therapeutics Foundation/ October 24-25, 2019, Salk Institute, La Jolla, California
25. Insulin Goes Viral: Characterization of Microbial Insulin Mimics in Human Disease. **University of Minnesota**, Division of Rheumatic and Autoimmune Diseases. 07/24/2019. Host: Prof. Brian Fife
26. Viral Endocrinology: Discovery of Viral Insulins. **American Society of Virology Annual Meeting**. July 19-24, 2019, Minneapolis, MN
27. Gut Microbiota Regulate Pancreatic Growth, Exocrine Function, and Gut Hormones. **79th American Diabetes Association Meeting**. June 7-11, 2019, San Francisco, CA

3. American Association of Immunology Minority Scientist Travel Award. AAI-2024. May 3-7. Chicago, IL, 2024

Kristina Kelley, PhD Student

1. Travel Award from the Society for the Study of Celiac Disease to join The International Celiac Disease Symposium, Sheffield, UK, 5-7 September, 2024.

Katherine Truelson, PhD Student

1. Travel Award, SACNAS, National Diversity in STEM Meeting (Portland, Oregon), Oct 26-28 2022

Undergraduate Researchers' Awards

1. Yena Sung. Travel Award, SACNAS, National Diversity in STEM Meeting (San Juan, Puerto Rico), Oct 27-29 2022
2. Khadija Danazumi, Boston College, Jeffrey S. Keith Resilience Award, 2023
3. Kalaimagal Nesarajah, Advanced Study Grant 2023 & 2024 (\$2500/year, 2 years)
4. Michelle Zhang, Travel Award, SACNAS, National Diversity in STEM Meeting (Phoenix, AZ October 31-November 2, 2024)
5. Maria Jove, Travel Award, SACNAS, National Diversity in STEM Meeting (Phoenix, AZ October 31-November 2, 2024)
6. Kalaimagal Nesarajah, Travel Award, SACNAS, National Diversity in STEM Meeting (Phoenix, AZ October 31-November 2, 2024)

Contributed posters at Boston College (The Altindis Lab Members, EA*, corresponding author)

Aurelien Chuard, PhD (Postdoc)

1. American Society of Virology Meeting 2022. Insulin Goes Viral: The Role of Viral Insulin/IGF-1 like peptides in host-virus interactions. ASV - July 2022- Madison, WI, USA Travel Award
2. Gordon Research Conference: IGF and Insulin System in Physiology and Disease 2023 Functional Characterization of Viral Insulin/IGF-1 like peptides in host-pathogen interactions. March 2023, CA, USA
3. MEEHUB2024- Microbial Ecology and Evolution Hub-based Conference 2024. Functional Characterization of Viral Insulin/IGF-1 like peptides in host-pathogen interactions. Boston, MA
4. ENDO 2024. Viral Hormones: The Role of Viral Insulin/IGF-1 like peptides in host-pathogen interactions. June 2024- Boston, MA, USA.

Khyati Girdhar, PhD (Postdoc)

5. nPOD meeting 2024. Deciphering the Mechanism of a Human Gut Commensal in the Acceleration of Type 1 Diabetes Pathogenesis. Long Beach, CA, Feb 9-12, 2024.
6. ENDO-2024. Investigating Viral Infections, Systemic Inflammation, and their Complex Interplay in Type 1 Diabetes Pathogenesis. Boston, MA, June 1-4, 2024
7. MIT Microbiome Symposium 2023. Pediatric Celiac Disease Progressors have a Distinct Gut Microbiome Composition, IgA response, and Plasma Metabolome profile. April, 2023, Cambridge, MA. MIT. April 7, 2023
8. The Immunology of Diabetes Society Conference 2021. A human gut commensal, Parabacteroides distasonis, enhances type 1 diabetes autoimmunity via molecularly defined interactions. *Journal of Allergy and Clinical Immunology* 147:1104-1114, 2021

12. American Diabetes Association Scientific Sessions 2021.

BIOL4290 - *Metabolic Regulation and Human Disease*

3 credit hour undergraduate class, 46 students

BIOL5100 - *Gut Microbiome and Human Disease*

2 credit hour undergraduate class, 12 students

BIOL6420 - *Contemporary Biological Questions and Critical Analysis* (co-taught, 3 weeks)

2 credit hour undergraduate class, 10 graduate students

2023 Spring

BIOL4290 - *Metabolic Regulation and Human Disease*

3 credit hour undergraduate class, 30 students

BIOL5100 - *Gut Microbiome and Human Disease*

2 credit hour undergraduate class, 12 students

2022 Spring

BIOL4290 - *Metabolic Regulation and Human Disease*

3 credit hour undergraduate class, 23 students

BIOL5100 - *Gut Microbiome and Human Disease*

2 credit hour undergraduate class, 12 students

2021 Spring

BIOL4290 - *Metabolic Regulation and Human Disease*

3 credit hour undergraduate class, 23 students

BIOL5100 - *Gut Microbiome and Human Disease*

2 credit hour undergraduate class, 12 students

2020 Spring

BIOL4290 - *Metabolic Regulation and Human Disease*

3 credit hour undergraduate class, 21 students

BIOL5100 - *Gut Microbiome and Human Disease*

2 credit hour undergraduate class, 12 students

2019 Spring

BIOL5100 - *Gut Microbiome and Human Disease*

2 credit hour undergraduate class, 12 students

Undergraduate Research Supervision in the Altindis Lab. Every semester 2019 Spring - 2024 Spring.
BIOL 4960. *Undergraduate Research* 3 credit hour supervision of undergraduate research; 46 students in total

MENTORING AND ADVISING

Underlined: current mentees

Senior Research Associate

1. Sudarshan Bhattacharjee, PhD 2024-present

Postdoctoral Researchers (Current: 3, Total: 6)

1. Khyati Girdhar 2020-2024

Dr. Girdhar will start her laboratory as an Assistant Professor at the Medical College of Wisconsin in Jan. 2025

2. Aurelien Chuard 2021-present
3. Keiichiro Mine 2024-present
4. Mahya Razavi 2023-2024
5. Martina Chrudinova 2019-2022

Scientist, Institute of Organic Chemistry and Biochemistry, Prague, Czech Republic

6. Qian Huang 2018-2020

Assistant Professor at the University of Kentucky Medical School.

7. Michael Rak 2018-2019

Principal Scientist, Carbon Biosciences, Boston, MA

Graduate Students (Current: 4, Total: 5)

1. Kristina Kelley 2022-present
2. Audrey Randall 2022-present
3. Dogus Dogru 2022-present
4. Katherine Truelson 2023- present
5. Oyku Tosun 2023-2024 (left the graduate program)

Rotation Graduate Students (Total: 18, 6-8 weeks)

1. Katherine Truelson 2023
2. Dogus Dogru 2022
3. Efe Cinar Sumer 2022
4. Kristina Kelley 2022
5. Audrey Randall 2022
6. Oyku Tosun 2022
7. Maira Ahmed 2021
8. Jelena Momirov 2021
9. Minqi Shen 2020
10. Irem Ozkan 2020
11. Tian Wang 2020
12. Casey Roberts 2020
13. Esteban Marte 2020
14. Tian Wang 2020
15. Matthew Crum 2019
16. M. Javad Akbari 2019
17. Alvaro Dafonte Imedio 2019
18. Bharathi Sundaresh 2019

In 2024, due to limited space constraints, The Altindis Lab was unable to accommodate rotation students, necessitating the regretful refusal of some applicants

Thesis Committees at Boston College

1. Kristina Kelley, Altindis Lab, PhD in progress (2023 -)
2. Audrey Randall, Altindis Lab, PhD in progress (2023 -)
3. Dogus Dogru, Altindis Lab, PhD in progress (2023 -)
4. Derek Lee, Seyfried Lab, Chair of the Committee, PhD in progress (2023 -)
5. Javad Akbari, Momeni Lab, Member of the Committee, PhD in progress (2022-)
6. Kevin White, Williams Lab, Chair of the Committee (received his MSc in 2024) (2019-2024)
7. Joshua Linnane, Johnson Lab, Member of the Committee (2019-)

Comprehensive Exam Committees, Boston College

1. Andrew Ding, Williams Lab (May 31, 2024)

2.

- PhD student, *Dartmouth College*, Goods Lab, Engineering Department
2. Typhania Zanou (2023) * BC Gateway Student, McNair Scholar
Master of Public Health Epidemiology Student (2nd year), *University at Albany*
 3. Claudia Brady (2020)
Master of Public Health (2022-2024), *The George Washington University*, Milken Institute School of Public Health. Works as legislative Correspondent United States Senate.

Other Positions (class)

1. Scott Hsu (2021) . applying to PA School
Medical Assistant, New York
2. Maximilian Figura (2022) . applying to Medical School
Emergency Medical Technician in Queens, New York
3. Amol Raisingani (2022) . applying to Medical School
Research Assistant, Tisch MS Research Center of New York
4. Matthew Mojares (2023) . applying to Medical School
Medical Assistant, New York
5. Yena Sung (2023) . applying to graduate school
Research Assistant, MIT Biology Department
6. Tu Tran (2021)
Project Manager at Deloitte
7. Robert Reiners (2021)
Advanced Emergency Medical Technician, Jackson Ambulance Service
8. Riley Aquilano (2022)
Unknown
9. Brianna Coppinger (2023) *Gateway Student
Unknown
10. Jaewon Oh (2023)
Unknown
11. Julianne Cutone (2024)
Vertex Pharmaceuticals
12. Genesis Soto (2024) *Gateway Student, McNair Scholar
Clinical Research Technician
13. Alessandro Pezzella (2024) *Gateway Student . applying to Medical School
Clinical Research Technician

McNair Exploratory Program mentees (Total: 2)

1. Joseph Barawisata 2023
2. Mahad Abdi 2019

Note: Since September 2018, I've had 36 undergraduate researchers in my laboratory. I have actively recruited 30 Black, Indigenous, and people of color (BIPOC) and/or first-generation undergraduate researchers into our lab, reflecting our commitment to inclusivity. Most of these students are recruited in active collaboration with Gateway and McNair scholar programs. Several undergraduate students have made substantial contributions to our research, earning them co-authorship credits in our publications.

PROFESSIONAL SERVICE

Biology Department Committees

2019-present	Member of the Biology Graduate Admissions Committee
2020-2023	Inaugural member of the Biology DEI Committee
2021-2023	Chair of the Biology Graduate Admissions Committee

7. Grant for biologist's diabetes research. <https://www.bc.edu/bc-web/bcnews/science-tech-and-health/biology-and-genetics/boston-college-biologist-emrah-altindis-awarded-grant-from-jdrf.html>. February 2022
8. Understanding pediatric celiac disease. <https://www.bc.edu/bc-web/bcnews/science-tech-and-health/biology-and-genetics/mathers-foundation-grant.html>. November 2020
9. Research grants for two Boston College scientists. <https://www.bc.edu/bc-web/bcnews/campus-community/faculty/awards-for-bc-scientists.html> February 2020