

**Emrah Altindis, MSc, Ph.D.**

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Boston College  
140 Commonwealth Avenue  
Higgins Hall, 515 (office), 520 (lab)  
Chestnut Hill, MA 02467

altindis@bc.edu  
617-552-3715 (office)  
617-552-2841 (lab)  
[altindislab.com](http://altindislab.com)

## **ACADEMIC POSITIONS**

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September 2018- **Assistant Professor**, Biology Department, Boston College

February 2019- **ACADEMIC**

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## PUBLICATIONS

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Altindis Lab members are underlined,  
Undergraduate researchers identified with +,  
Corresponding authors identified with \*.

### Peer-reviewed Research Articles

#### At Boston College

1. Chrudinová M<sup>#</sup>, Kirk NS, Chuard A<sup>#</sup>, Venugopal H, Zhang F, Lubos M, Gelfanov V, Páníková T, Žáková L, Cutone J<sup>+</sup>, Mojares M<sup>+</sup>, DiMarchi R, Jiráček J, **Altindis E**<sup>\*</sup>. A Viral Insulin-like Peptide Inhibits IGF-1 Receptor Phosphorylation and Regulates IGF1R Gene Expression. **Molecular Metabolism**. 2024 Feb;80:101863
2. Girdhar K, Dogru DY, Huang Q, Yang Y, Chrudinova M, Raisingani A<sup>+</sup>, Oh J<sup>+</sup>, Tolstikov V, Kiebish MA, Kelley K, Ludvigsson JF, Palm NW, Ludvigsson J, **Altindis E**<sup>\*</sup>. Dynamics of Gut Microbiome, IgA Response and Plasma Metabolome in Development of Pediatric Celiac Disease. **Microbiome**. 2023 Jan 13;11(1):9. doi: 10.1186/s40168-022-01429-2.
3. Moreau F, Kirk NS, Zhang F, Gelfanov V, List EO, Chrudinová M, Venugopal H, Lawrence MC, Jimenez V, Bosch F, Kopchick JJ, DiMarchi DR, **Altindis E**

10. Fujisaka S., Pacheco JA., Soto M., Kostic Aleksandar, Dreyfuss JM., Pan H., Ussar S., **Altindis E.**, Li N., Bry L., Clish CB., and Kahn CR. Diet, genetics and gut microbiome drive dynamic changes in plasma metabolites. **Cell Rep.** **2018** Mar 13;22 (11):3072-3086.
11. Fujisaka S, Ussar S, Clish C, Devkota S, Dreyfuss J, Sakaguchi M, Konishi M, Softic S, **Altindis E et al.** Antibiotic Modification of Gut Microbiota Improves Insulin Signaling Via Effects on Bile Acids Depending on Host Genetics. **J Clin Invest.**, **2016** Dec 1;126 (12):4430-4443.
12. **Altindis E**<sup>&</sup>, Dong T<sup>&</sup>, Catalano J, Mekalanos JJ. Secretome analysis of *Vibrio cholera* Type VI

**In preparation, Research Articles (will be submitted in 2024)**

1. Chrudinova M, Dogru YD, Huang R<sup>+</sup>, Reiners R<sup>+</sup>, DeMeyts P, DaCosta J, **Altindis E.**\* Evolution of insulin, IGF-1, viral insulins and their cognate receptors (will be submitted by 2025)



21. Discovery and Characterization of Microbial Insulins. **Indiana University**, School of Medicine. Department of Microbiology&Immunology. November 12, **2020** (virtual). Host: Prof. Christopher Robinson
22. 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
23. Bridging Virology and Endocrinology: Viral Hormones. **14th Annual Peptide Therapeutics Symposium**, Peptide Therapeutics Foundation/ October 24-25, **2019**, Salk Institute, La Jolla, California
24. 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
25. Viral Endocrinology: Discovery of Viral Insulins. **American Society of Virology Annual Meeting**. July 19-24, **2019**, Minneapolis, MN
- 26.

**Contributed talks (The Altindis Lab Members, EA corresponding author)**

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*At Boston College*



## Awards for the Altindis Lab Members

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### **Aurelien Chuard, PhD**

1. Best Oral Presentation Award, 7th biennial conference of the North American Society for Comparative Endocrinology, May 2023
2. Travel Award, American Society of Virology 2021, International
3. Travel Award. First Global Amphibian and Reptile Disease (GARD) conference-2022 (August 4-10, University of Tennessee Conference Center, Knoxville, TN)
4. The Boston College Postdoctoral Association (BCPDA) Conference Travel Award 2023
5. 2023-24 The Boston College Postdoctoral Association (BCPDA) Training Grants visiting Rochester University in 2023.

### **Khyati Girdhar, PhD**

1. The Boston College Postdoctoral Association (BCPDA) Conference



20. MIT Microbiome Symposium, 2024. Exploring the Role of Taurodeoxycholic Acid in Pediatric Celiac Disease Pathophysiology March 22, 2024. MIT- Cambridge MA
21. AAI Annual Meeting, Immunology 2024. A microbiota derived metabolite and pediatric celiac disease pathogenesis May 3-7, 2024. Chicago IL
22. Boston Bacterial Meeting 2024. Investigating a Gut Microbiota-derived Metabolite in the Onset of Pediatric Celiac Disease June 3-4 2024. Cambridge, MA.

**Audrey Randall (PhD student)**

23. Dr. Samuel M. Nabrit Conference for Early Career Scholars. Determining if HPRT from *Parabacteroides distasonis* can accelerate diabetes onset by activating immune cells via molecular mimicry. Brown University, Providence, Rhode Island, June 8-9 2023
24. Boston Bacterial Meeting 2023. Determining if *Parabacteroides distasonis* requires HPRT to accelerate diabetes and activate insulin B:9-23-specific T-cells Harvard University, Cambridge, Massachusetts, June 12-13 2023
25. Boston College Biology Department Retreat. A gut commensal, *Parabacteroides distasonis*, and molecular mimicry in type 1 diabetes. Portsmouth, NH, August 21-22, 2023
26. Keystone Conference: Mechanisms of Microbiota-Immune Interactions-Towards the Next Decade. A gut commensal, *Parabacteroides distasonis*, and molecular mimicry in Type 1 diabetes. October 8-11 2023, Snowbird Resort, Snowbird, Utah. Travel Award.
27. MIT Microbiome Symposium 2024 A gut commensal, *Parabacteroides distasonis*, and molecular mimicry in Type 1 diabetes. March 22, 2024, Boston, MA. Best Poster Award
28. AAI Annual Meeting, Immunology 2024. A gut commensal, *Parabacteroides distasonis*, and molecular mimicry in Type 1 diabetes. May 3-7, 2024, Chicago, IL. 2024 AAI Minority Scientist Travel Award

41. Nicole Koutun and Michelle Zhang. Undergraduate Research Day. The Role of a Gut Microbiome-derived Metabolite in the Pathogenesis of Pediatric Celiac Disease. May 5, 2024, Chestnut Hill, MA.
42. Kalaimagal Nesarajah. Undergraduate Research Symposium. Impact of Viral Insulin on IGF1R Localization in Zebrafish Cells. April 10, 2024, Chestnut Hill, MA
43. Kalaimagal Nesarajah SACNAS NDiSTEM Conference. Impact of Viral Insulin on IGF1R Localization in Zebrafish Cells. October 31, 2024.
44. Kalaimagal Nesarajah Dr. Samuel M. Nabrit Conference for Early Career Scholars. Understanding the Insulin and IGF1 Signaling Pathways During Physiological Nutrient Privation. June 2, 2023, Providence, RI
45. Michelle Zhang. Dr. Samuel M. Nabrit Conference for Early Career Scholars. Investigating the Role of Taurodeoxycholic Acid in the Pathogenesis of Pediatric Celiac Disease. June 7, 2024, Brown University, Providence, RI
46. Michelle Zhang. Future of Biology Conference. Exploring the Role of Taurodeoxycholic Acid in Pediatric Celiac Disease Pathophysiology. April 20, 2024, Harvard University, Cambridge, MA
47. Michelle Zhang. World Pre-Health Conference. The Microbiota-derived Metabolite TDCA May Contribute to the Pathogenesis of Pediatric Celiac Disease. April 13, 2024, Harvard Medical School, Boston, MA
48. Michelle Zhang. Undergraduate Research Day. Investigating the Role of Taurodeoxycholic Acid in the Pathogenesis of Pediatric Celiac Disease. May 3, 2024, Boston College
49. Brady James and Daniel Kim. BC Undergraduate Research Day. Isolation of Molecular Mimic HPRT for T1D Autoimmune Response. May 3, 2024, Chestnut Hill, MA.
50. Brady James. Dr. Samuel M. Nabrit Conference. Isolation of Molecular Mimic HPRT for T1D Autoimmune Response. June 7, 2024, Providence, RI

## TEACHING

My teaching evaluations have consistently been above the departmental and university averages. Evaluations are available upon request.

### Classes

#### 2024 Fall

- BIOL4290 *Metabolic Regulation and Human Disease*  
3 credit hour undergraduate class, 51 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, 8 graduate students

#### 2024 Spring

- 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

## 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

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Underlined: current mentees

### Senior Research Associate

1. Sudarshan Bhattacharjee, PhD 2024-present

### Postdoctoral Researchers (Current: 3, Total: 6)

1. Khyati Girdhar 2020-present

Dr. Girdhar will start her laboratory as an Assistant Professor at the Medical College of Wisconsin in January 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 since July 20224.

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



### **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
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## OUTREACH

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2023 - State of the Science: The Role of the Microbiome and Type 1 Diabetes. *the(sugar)science*.  
01/11/2023

2023- Science Journal for Kids. How do viruses trick their hosts into feeding them? October 2023

2023 - FACES Summit: Racism in the Workplace Professor Panel. 04/22/2023

2022 - Joslin Diabetes Center Alumni Career Panel, October 7, 2022

2021 - Guest scientist: Bioethics Society Lunch with a Professor, Boston College

2021 - Boston Bacterial Meeting 2021 –

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### 3. New grant for d