

Jon C. D. Houtman, PhD

Professor and Vice Chair of Microbiology and Immunology

Professor of Internal Medicine

Associate Director for Career Enhancement, Holden Comprehensive Cancer Center

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Educational and Professional History

Degrees Earned

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| 1990-1994 | BA in Biology and Chemistry, University of Minnesota, Morris, Morris, Minnesota with Distinction, Scholar of the College |
| 1994-1999 | PhD in Cellular and Molecular Biology, University of Wisconsin-Madison, Madison, Wisconsin |

Postgraduate

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| 1999 - 2005 | Postdoctoral Fellow in Molecular Immunology, National Cancer Institute/National Institutes of Health, Bethesda, Maryland |
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Employment History

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| 2005 - 2011 | Assistant Professor, Department of Microbiology, The University of Iowa, Iowa City, Iowa |
| 2015 - 2018 | Assistant Director for Cancer Education, Holden Comprehensive Cancer Center, University of Iowa, Iowa City, Iowa, United States |
| 2011 - 2022 | Associate Professor (With Tenure), Department of Microbiology and Immunology, The University of Iowa, Iowa City, Iowa |
| 2012 - 2022 | Associate Professor (Secondary Appointment), Division of Immunology, Department of Internal Medicine, The University of Iowa, Iowa City, Iowa |
| 2018 - Present | Associate Director for Career Enhancement, Holden Comprehensive Cancer Center, University of Iowa, Iowa City, Iowa, United States |
| 2020 - Present | Faculty Director, Human Immunology Core, University of Iowa, Iowa City, Iowa, United States |
| 2022 - Present | Professor (With Tenure), Department of Microbiology and Immunology, The University of Iowa, Iowa City, Iowa |
| 2022 - Present | Professor (Secondary Appointment), Division of Immunology, Department of Internal Medicine, The University of Iowa, Iowa City, Iowa |
| 2022 - Present | Vice Chair, Department of Microbiology and Immunology, The University of Iowa, Iowa City, Iowa |

Honors and Awards

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| 1994 - 1997 | Molecular Biosciences Training Grant NIH Predoctoral Fellow, NIH |
| 1997 - 1999 | Endocrinology Training Grant NIH Predoctoral Fellow, NIH |

2004	FARE Award, National Institutes of Health
1999 - 2005	Cancer Research Training Award Fellow, National Cancer Institute
2008 - 2011	Scientist Development Grant, American Heart Association
2017	John P. Long Teaching Award in the Basic Sciences, Carver College of Medicine, University of Iowa
2022	Collegiate Teaching Award, Carver College of Medicine, University of Iowa

Service

Holden Comprehensive Cancer Center

2015 - 2018	Holden Comprehensive Cancer Center, Assistant Director for Cancer Education
2018 - Present	Holden Comprehensive Cancer Center, Associate Director for Cancer Enhancement
2008 - Present	Holden Comprehensive Cancer Center Standing Grant Review Committee, Member
2015 - Present	Holden Comprehensive Cancer Center Research Advisory Committee, Member
2016 - Present	Holden Comprehensive Cancer Center Seminar Series Committee, Member, Chair 2016-2023
2016 - Present	Holden Comprehensive Cancer Center Research Retreat Committee, Member, Chair 2016-2022
2018 - Present	Holden Comprehensive Cancer Center Career Enhancement Advisory Committee, Chair
2019 - Present	Holden Comprehensive Cancer Center Community Outreach and Engagement Community Advisory Board, Member
2020 - Present	CCOM Medical Student Oncology Interest Group, Advisor
2021 - Present	Cancer Research Opportunity in Iowa (CROI) Summer Undergraduate Research Program, Director
2021 - Present	American Cancer Society Institutional Grant Program, Director
2023 - Present	Iowa Cancer Research Experience (ICARE) Post-Baccalaureate Program, Co-Director
2023 - Present	Associate Director Committee, Member
2022 - 2023	UI Postdoc Mentoring Workgroup, Chair
2024 - Present	Advisory Committee for Office of Workforce Access and Advancement, Member

Department of Microbiology and Immunology

2006 - 2008	Graduate Student Admissions Committee, Member
2012 - 2020	Finance Committee, Member
2020 - Present	Diversity, Equity and Inclusion Committee, Member
2022 - Present	Executive Committee, Member
2022 - Present	Curriculum Committee, Chair

Graduate Programs

2007 - 2012	Program in Molecular and Cellular Biology Graduate Student Admissions Committee, Member and Chair 2009-2012
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2006 - 2014	Biosciences Program, Interview Prospective Graduate Students
2010 - 2015	MSTP Program Executive Committee, Member
2010 - 2015	MSTP Program Recruitment Committee, Chair
2010 - 2015	Program in Immunology Curriculum Committee, Chair
2016 - 2017	Cancer Biology Program Admissions Committee, Chair
2008 - 2020	Immunology Program Admissions Committee, Member, Chair 2012-2016
2012 - 2024	Immunology Program Executive Committee, Member
2012 - Present	Molecular Medicine Program Executive Committee, Member
2016 - Present	Cancer Biology Program Executive Committee, Member
2016 - Present	MSTP Admissions Committee, Member
2017 - Present	Immunology Program Student Advisor Committee, Member and Chair
2024 - Present	Search Committee for Director of Cancer Biology, Chair
2025 - Present	Search Committee for Director of Molecular Medicine, Chair

Carver College of Medicine and University of Iowa

2006 - 2012	Dual Career Network Advisory Committee, Member
2008 - Present	Carver College of Medicine IT Advisory Committee, Member
2009 - Present	Carver College of Medicine Structural Core Facilities Advisory Committee, Member
2009 - 2015	Faculty Council for The College of Liberal Arts and Sciences, Department of Microbiology Representative
2012 - 2018	Carver College of Medicine Carver Trust Pilot Grants and Grant Review Committee, Chair
2014	Department of Pharmacology Department Review, Member
2014 - 2015	Grand Rounds Committee, Division of Immunology, Department of Internal Medicine, Member
2015 - Present	Faculty Council for The College of Liberal Arts and Sciences, Department of Microbiology Secondary Representative
2016 - 2020	Carver College of Medicine HISAS Committee, Member
2021 - 2022	UI Healthcare DEI Collaborative Committee, Member
2023 - Present	Office for the Vice President of Research, Graduate Student and Postdoctoral Fellow Research Award Selection Committee, Member

Memberships in Professional Organizations

2006 - Present	American Association of Immunologists (AAI)
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Professional Service

Committees and Boards

2016 - 2020	Journal of Immunology, Editorial Board
2020 - 2021	Frontiers in Immunology Review Editor, Editorial Board
2012 - 2022	PLoS One, Editorial Board

2016 - 2022 General Council, Autumn Immunology Conference, Board of Directors
 2022 - Present Cancer Biology Training Consortium (CABTRAC), Board of Directors
 2021 - Present Frontiers in Immunology Associate Editor, Editorial Board

Editor/Reviewer

2006 US-Israel Binational Science Foundation, Reviewer, Ad-hoc
 2009 Postdoctoral Grant, National Science Foundation, Reviewer, Ad-hoc
 2010 The Netherlands Organization for Scientific Research, Reviewer, Ad-hoc
 2012 TEVA Grants in the Field of Medicinal Research, Reviewer, Ad-hoc
 2013 Leukemia and Lymphoma Research, Reviewer, Ad-hoc
 2013 United Kingdom Medical Research Council, Reviewer, Ad-hoc
 2014 US-Israel Binational Science Foundation, Reviewer, Ad-hoc
 2015 NCI Immunology R21 Panel, National Institutes of Health, Reviewer, Ad-hoc
 2016 French Nation Research Agency, Reviewer, Ad-hoc
 2016 Human Frontiers Science Program, Reviewer, Ad-hoc
 2016 NCI IMAT Program Panel, National Institutes of Health, Reviewer, Ad-hoc
 2017 Israeli Science Foundation, Reviewer, Ad-hoc
 2010 - 2019 Cell and Molecular Immunology A Study Section, National Institutes of Health, Reviewer, Ad-hoc
 2012 - 2020 Special Interest Group IMA, National Institutes of Health, Reviewer, Ad-hoc
 2021 - 2023 NCI F99/K00 Award Panel, National Institutes of Health, Reviewer, Ad-hoc
 2023 - 2025 NCI K22/T32 Award Panel, National Institutes of Health, Reviewer, Ad-hoc
 2025 Institutional Training and Education Study Section NCI F, National Cancer Institute, Reviewer, Standing Member

Public or Community Service

National

2020 Advisor for Indoor Soccer Protocols for COVID, USA Soccer, Consultant

State

2020 - 2022 COVID Advisory Committee, Iowa Soccer Club, Member

Teaching

Course Teaching

2006-2009 Principles in Molecular and Cell Biology
 2007-2009 Microbiology Seminar
 2007 Advanced Topics in Immunology
 2008-2009 Immunology Seminar
 2008-2024 Immunology and Human Disease, Course Director 2013-2024

2008-2025	Graduate Immunology
2009	Pharmacy and Nursing Microbiology
2010-2013	Biosciences Critical Thinking & Communication
2012-2014	Principles of Medical Immunology
2012-2013	Foundations of Clinical Practice
2015-2025	Mechanisms of Human Disease II, Co-Course Director 2016-2025
2019-2024	Graduate Experimental Approaches to Molecular Microbiology
2022-2024	Rigor and Reproducibility in Immunology

Mentoring and Student Supervision

Graduate Students

2007 - 2008	Sean Connolly, Graduate, Immunology, PhD Deceased December 2008
2007 - 2012	Rebekah Bartelt, Graduate, Microbiology, PhD
2009 - 2013	Nicole Chapman, Graduate, Immunology, PhD
2011 - 2015	Mahmood Bilal, Graduate, Immunology, PhD
2012 - 2016	Aldo Vacaflores, Graduate, Immunology, PhD
2013 - 2017	Michael Zhang, Graduate/Medical, Microbiology/MSTP, MD/PhD
2017 - 2022	Micaela Fosdick, Graduate, Molecular & Cellular Biology, PhD
2016 - 2023	Aline Sandouk, Graduate/Medical, Immunology/MSTP, MD/PhD

Post-Doctoral Fellows

2015-2016	Mahmood Bilal
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Medical and Dental Students

2017	Wahida Khan, Medical
2008	Noemi Cruz-Orcutt, Dental
2010	Jonathan Light, Dental

Other Supervision

2006-2007	Noemi Cruz-Orcutt, Research Assistant
2007-2008	Micaela Collins, Research Assistant
2008-Present	Mikaela Tremblay, Research Associate
2012-2014	Jonathan Light, Research Assistant
2022-Present	Zeb Zacharias, Associate Research Scientist, Human Immunology Core
2024-Present	Emma Hornick, Associate Research Scientist, Human Immunology Core

Post-baccalaureate

2024 - Present	Riley DeJohn, Post-Baccalaureate Student, ICARE Program
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Summer Research Scholars

2008	Erin Reinl, Undergraduate, Interdisciplinary Summer Undergraduate Research Program
2009	Sofia Madinavetia, Undergraduate, REU in Microbiology
2010	Tyler Schaffer, Undergraduate, REU in Microbiology
2012	Daimon Hardy, Undergraduate, REU in Microbiology
2013	Brittney Dinkel, Undergraduate, REU in Microbiology
2014	Samantha Freedman, Undergraduate, REU in Microbiology
2015	KeiAuyndria Edwards, Undergraduate, REU in Microbiology
2016	Ronal Peralta, Undergraduate, REU in Microbiology
2017	Joshua Matt, Undergraduate, REU in Microbiology
2018	Shannon Loftus, Undergraduate, REU in Microbiology
2018	Xavier Tijerina, Undergraduate, MSTP SUMR Program
2021	Francois LeSage, Undergraduate, REU in Microbiology

University of Iowa Undergraduate Students

2006 - 2007	Amanda Schlue, Undergraduate, Microbiology
2008 - 2009	James Curry, Undergraduate, Studio Arts
2007 - 2010	Rohit Vuppuluri, Undergraduate, Biomedical Engineering
2009 - 2011	Alayna Butcher, Undergraduate, Biomedical Engineering
2010 - 2013	Ashley Yoder, Undergraduate, Microbiology
2011 - 2013	Kathryn Barbon, Undergraduate, Human Physiology
2014 - 2015	Tomye Ollinger, Undergraduate, Microbiology
2017 - 2019	Isabella Phillips, Undergraduate, Microbiology, BA
2018 - 2020	Cole McElroy, Undergraduate, Microbiology, BA
2024	Riley DeJohn, Undergraduate, Microbiology
2024 - Present	Aaron Smith, Undergraduate, Biochemistry

Faculty Mentoring Committees

2018 - Present	Assistant Professor Mentoring Committee for Sabrina Scroggins, University of Minnesota-Duluth
2019 - Present	Assistant Professor Mentoring Committee for Joseph Caster, Department of Radiation Oncology
2021 - Present	Assistant Professor Mentoring Committee for Suresh Veeramani, Department of Internal Medicine
2021 - Present	Assistant Professor Mentoring Committee for Adam Mailloux, Department of Microbiology and Immunology, Chair
2021 - Present	Assistant Professor Mentoring Committee for Jessica Tucker, Department of Microbiology and Immunology
2025 - Present	Associate Professor Mentoring Committee for Thad Waddas, Department of Radiology, Member

Master's Thesis Committees

2009	John Zuk, Graduate, Molecular & Cellular Biology, MS
2009	Stella Lee, Graduate, Molecular & Cellular Biology, MS
2016 - 2017	Alexander Brown, Graduate, Biomedical Engineering, MS
2020 - 2021	Sequoia Crooks, Graduate, Immunology, MS

PhD Thesis Committees

2007 - 2008	Sean Connolly, Graduate, Immunology, PhD (chair) Deceased December 2008
2008	Karrissa Carlson, Graduate, Biochemistry, PhD
2008	Mayuri Dighe, Graduate, Chemistry, PhD
2010	John Graham, Graduate, Immunology, PhD
2011	Samrit Dutta, Graduate, Chemistry, PhD
2011	Katherine Vrieze, Graduate, Molecular & Cellular Biology, PhD
2011	Miranda Curtiss, Graduate, Immunology, PhD
2012	Rebekah Bartelt, Graduate, Microbiology, PhD (chair)
2012	Greg Esparza, Graduate, Immunology, PhD
2012	Jason Ulrich, Graduate, Pharmacology, PhD
2012	John Pryor, Graduate, Biochemistry, PhD
2012	Jonathan Trujillo, Graduate, Immunology, PhD
2012	Kelly Arcipowski, Graduate, Molecular & Cellular Biology, PhD
2012	Nirjal Bhattarai, Graduate, Molecular & Cellular Biology, PhD
2007 - 2013	Lynne Dieckman, Graduate, Molecular & Cellular Biology, PhD
2009 - 2013	Nicole Chapman, Graduate, Immunology, PhD (chair)
2010 - 2014	Jacob Gorman, Graduate, Immunology, PhD
2011 - 2014	John Janczy, Graduate, Immunology, PhD
2011 - 2014	Lauren Workman, Graduate, Molecular & Cellular Biology, PhD
2009 - 2015	Jennifer Barr, Graduate, Anatomy & Cell Biology, PhD
2011 - 2015	Cory Knudson, Graduate, Immunology, PhD
2011 - 2015	Mahmood Bilal, Graduate, Immunology, PhD (chair)
2011 - 2015	Rahul Vijay, Graduate, Immunology, PhD
2011 - 2015	Wai-Wai Lin, Graduate, Immunology, PhD
2012 - 2015	Ernest Chivero, Graduate, Molecular & Cellular Biology, PhD
2012 - 2015	Farrah Steinke, Graduate, Immunology, PhD
2012 - 2015	Marie Kim, Graduate, Immunology, PhD
2012 - 2016	Aldo Vacaflores, Graduate, Immunology, PhD (chair)
2012 - 2016	Jenna Parks, Graduate, Microbiology, PhD

2013 - 2016 Elizabeth Boehm, Graduate, Biochemistry, PhD

2011 - 2017 Sarah Hengel, Graduate, Biochemistry, PhD

2012 - 2017 Patrick Kelly, Graduate, Microbiology, PhD

2013 - 2017 Alicia Wallis, Graduate, Immunology, PhD

2013 - 2017 Jennifer Bays, Graduate, Biochemistry, PhD

2013 - 2017 Michael Zhang, Graduate/Medical, Microbiology/MSTP, MD/PhD (chair)

2013 - 2017 Nurbek Mambetsariev, Graduate/Medical, Immunology/MSTP, MD/PhD

2014 - 2017 Lori Wheeler, Graduate/Medical, Immunology/MSTP, MD/PhD (chair)

2014 - 2018 Tiffany Borbón, Graduate/Medical, Microbiology/MSTP, MD/PhD

2015 - 2018 Emma Hornick, Graduate, Immunology, PhD

2015 - 2019 Antony Burand, Graduate, Biomedical Engineering, PhD

2015 - 2019 Guanghao Liu, Graduate/Medical, Neuroscience/MSTP, MD/PhD

2015 - 2019 Julio Sanchez, Graduate, Biochemistry, PhD

2015 - 2019 Matthew Grunewald, Graduate/Medical, Microbiology/MSTP, MD/PhD

2015 - 2019 Megan Schmidt, Graduate, Immunology, Ph.D.

2016 - 2019 Kai Rogers, Graduate/Medical, Microbiology/MSTP, MD/PhD

2016 - 2020 Ajaykumar Viswakarma, Graduate, Cancer Biology, PhD

2016 - 2020 Amy Whillock, Graduate/Medical, Immunology/MSTP, MD/PhD

2017 - 2020 Isaac Jensen, Graduate, Immunology, PhD

2018 - 2020 Yinwen Cheng, Graduate, Human Toxicology, Ph.D.

2019 - 2020 Melissa Gildenberg, Graduate/Medical, Cancer Biology, MD/PhD

2017 - 2021 Samantha Freedman, Graduate, Immunology, PhD

2018 - 2021 Mitchell LeFebvre, Graduate/Medical, Immunology, MD/PhD

2018 - 2021 Stephanie Silva Del-Toro, Graduate, Immunology, Ph.D.

2019 - 2021 Shakoora Sabree, Graduate/Medical, Immunology, MD/PhD (chair)

2019 - 2021 Zhaoming Wang, Graduate, Cancer Biology, PhD

2020 - 2021 Andrew Dosch, Graduate, Immunology, PhD (chair)

2016 - 2022 Tina Arkee, Graduate/Medical, Immunology/MSTP, MD/PhD (chair)

2017 - 2022 Micaela Fosdick, Graduate, Molecular & Cellular Biology, PhD (chair)

2019 - 2022 Laura Pietrok, Graduate, Immunology, PhD

2019 - 2022 Wade Gutierrez, Graduate/Medical, Cancer Biology, MD/PhD

2016 - 2023 Aline Sandouk, Graduate/Medical, Immunology/MSTP, MD/PhD (chair)

2020 - 2023 Sylvia Faurot, Graduate, Microbiology, PhD

2020 - 2023 Zishan Zhang, Graduate, Molecular Medicine, PhD

2021 - 2023 Tiffany Ybarra, Graduate, Immunology, PhD

2020 - 2024 Jayden Bowen, Graduate/Medical, Immunology, MD/PhD (chair)

2021 - 2024	Kara Wuchter, Graduate, Molecular Medicine, PhD
2023 - 2024	Christopher Lopez, Graduate, Microbiology, PhD
2021 - Present	Amanda Heiderscheit, Graduate, Immunology, PhD
2021 - Present	Jace Heath, Graduate, Immunology, PhD
2021 - Present	Mayo Akinbo, Graduate, Immunology, PhD
2022 - Present	Alexis Ramos, Graduate, Cancer Biology, PhD
2022 - Present	Austin Santhin, Graduate, Immunology, PhD
2022 - Present	Kyra Watral, Graduate, Immunology, PhD (chair)
2022 - Present	Matthew Smith, Graduate, Immunology, PhD (chair)
2022 - Present	Travis Fisher, Graduate, Cancer Biology, PhD
2022 - Present	Xavier Tijerina, Graduate/Medical, Microbiology, MD/PhD
2023 - Present	Alexa Sheehan, Graduate, Molecular Medicine, PhD
2023 - Present	Jordan Mayberry, Graduate, Genetics, PhD
2023 - Present	Lizzie Hannan, Graduate, Cancer Biology, PhD
2023 - Present	Lily Shirbazar, Graduate, Cancer Biology, PhD
2023 - Present	Daniel Sands, Graduate/Medical, Microbiology, MD/PhD
2023 - Present	Ryan Reis, Graduate/Medical, Cancer Biology, MD/PhD
2024 - Present	Nicole Ruiz, Graduate, Immunology, PhD
2024 - Present	Blake Bernauer, Graduate, Immunology, PhD
2024 - Present	Ifechukwu Ezeilo, Graduate, Immunology, PhD
2025 - Present	Altay Koyas, Graduate, Cancer Biology, PhD

Comprehensive Exam Committees

2008	Katherine Vrieze, Molecular & Cellular Biology, PhD
2008	Elke Nelson, Molecular & Cellular Biology, PhD
2009	Jonathan Trujillo, Immunology, PhD
2009	Kelly Arcipowski, Molecular & Cellular Biology, PhD
2009	Lynne Dieckman, Molecular & Cellular Biology, PhD
2009	Matthew Long, Molecular & Cellular Biology, PhD
2010	Claire Buchta, Immunology, PhD
2010	Jacob Gorman, Immunology, PhD
2011	Britnie James, Immunology, PhD
2011	Emily Hemann, Immunology, PhD
2011	John Janczy, Immunology, PhD
2011	Nirjal Bhattarai, Molecular & Cellular Biology, PhD
2011	Timothy Rosean, Immunology, PhD
2012	Ernest Chivero, Molecular & Cellular Biology, PhD

2012 Gwen Clay, Molecular & Cellular Biology, PhD

2012 Lauren Workman, Molecular & Cellular Biology, PhD

2012 Sarah Hengel, Biochemistry, PhD

2012 Sun Wen, Molecular & Cellular Biology, PhD

2013 Alfa Herrera, Graduate, Microbiology, PhD

2013 Eric Elliot, Graduate, Molecular & Cellular Biology, PhD

2013 Jenna Parks, Graduate, Microbiology, PhD

2013 Patrick Kelly, Graduate, Microbiology, PhD

2014 Elizabeth Boehm, Graduate, Biochemistry, PhD

2014 Jennifer Bays, Graduate, Biochemistry, PhD

2015 Antony Burand, Graduate, Biomedical Engineering, PhD

2015 Emma Hornick, Graduate, Immunology, PhD

2015 Hailie Fowler, Graduate, Immunology, PhD

2015 Matthew Grunewald, Graduate/Medical, Microbiology/MSTP, MD/PhD

2016 Ajaykumar Viswakarma, Graduate, Biomedical Engineering, PhD

2016 Ashley Brate, Graduate, Immunology, PhD

2016 Derek Danahy, Graduate, Immunology, PhD

2016 Julio Sanchez, Graduate, Biochemistry, PhD

2018 AJ Viswakarma, Graduate, Cancer Biology, PhD

2018 Antony Burand, Graduate, Biomedical Engineering, PhD

2018 Kai Rogers, Graduate/Medical, Microbiology/MSTP, MD/PhD

2019 Wade Guitierrez, Graduate/Medical, Cancer Biology, MD/PhD

2019 Yinwen Cheng, Graduate, Human Toxicology, PhD

2019 Zhaoming Wang, Graduate, Cancer Biology, PhD

2020 Zishan Zhang, Graduate, Molecular Medicine, PhD

2021 Maddie Mix, Graduate/MSTP, Immunology, MD/PhD

2021 Samuel Connell, Graduate, Immunology, PhD (chair)

2021 Sequoia Crooks, Graduate, Immunology, PhD (chair)

2021 Sylvia Faurot, Graduate, Microbiology, PhD

2022 Xavier Tijerina, Graduate/Medical, Microbiology, MD/PhD (chair)

2023 Alexa Sheehan, Graduate, Molecular Medicine, PhD

2023 Jianyu Yu, Graduate, Cancer Biology, PhD (chair)

2023 Travis Fisher, Graduate, Cancer Biology, PhD

2023 Ti-Ara Turner, Graduate, Immunology, PhD

2024 Jordan Mayberry, Graduate, Genetics, PhD

2024 Daniel Sands, Graduate/Medical, Microbiology, MD/PhD

2024	Lily Shirbazar, Graduate, Cancer Biology, PhD
2024	Lizzie Hannan, Graduate, Cancer Biology, PhD
2024	Ryan Reis, Graduate/Medical, Cancer Biology, MD/PhD
2025	Allie Smith, Graduate, Cancer Biology, PhD
2025	Altay Koyas, Graduate, Cancer Biology, PhD

Scholarship/Professional Productivity

Publications or creative works

Peer-reviewed papers and journal articles

1. Lee, D., Szumlanski, C., **Houtman, J. C.**, Honchel, R., Rojas, K., Overhauser, J., Wieben, E. D. & Weinshilboum, R. M. (1995). Thiopurine methyltransferase pharmacogenetics. Cloning of human liver cDNA and a processed pseudogene on human chromosome 18q21.1. *Drug Metab Dispos* 23 (3) 398-405. [PMID: 7628307.](#)
2. Wiepz, G. J., **Houtman, J. C.**, Cha, D. & Bertics, P. J. (1997). Growth hormone attenuation of epidermal growth factor-induced mitogenesis. *J Cell Physiol* 173 (1) 44-53. [DOI: 10.1002/\(SICI\)1097-4652\(199710\)173:1<44::AID-JCP6>3.0.CO;2-J](#). [PMID: 9326448.](#)
3. Zhang, Y., Li, D., **Houtman, J. C.**, Witiak, D. T., Seltzer, J., Bertics, P. J. & Lauhon, C. T. (1999). Design, combinatorial chemical synthesis and in vitro characterization of novel urea based gelatinase inhibitors. *Bioorg Med Chem Lett* 9 (19) 2823-6. [PMID: 10522699.](#)
4. Kim, S. O., **Houtman, J. C.**, Jiang, J., Ruppert, J. M., Bertics, P. J. & Frank, S. J. (1999). Growth hormone-induced alteration in ErbB-2 phosphorylation status in 3T3-F442A fibroblasts. *J Biol Chem* 274 (50) 36015-24. [PMID: 10585492.](#)
5. Yamaguchi, H., **Houtman, J. C.**, Samelson, L. E. & Appella, E. (2003). Synthesis and application of large phosphopeptides from the Linker for Activation of T cells (LAT) protein. *Biopolymers* 71 P503.
6. Cho, S., Velikovskiy, C. A., Swaminathan, C. P., **Houtman, J. C.**, Samelson, L. E. & Mariuzza, R. A. (2004). Structural basis for differential recognition of tyrosine-phosphorylated sites in the linker for activation of T cells (LAT) by the adaptor Gads. *EMBO J* 23 (7) 1441-51. [DOI: 10.1038/sj.emboj.7600168.](#) [PMID: 15029250.](#) [PMCID: PMC391073.](#)
7. **Houtman, J. C.**, Higashimoto, Y., Dimasi, N., Cho, S., Yamaguchi, H., Bowden, B., Regan, C., Malchiodi, E. L., Mariuzza, R., Schuck, P., Appella, E. & Samelson, L. E. (2004). Binding specificity of multiprotein signaling complexes is determined by both cooperative interactions and affinity preferences. *Biochemistry* 43 (14) 4170-8. [DOI: 10.1021/bi0357311.](#) [PMID: 15065860.](#)
8. **Houtman, J. C.**, Houghtling, R. A., Barda-Saad, M., Toda, Y. & Samelson, L. E. (2005). Early phosphorylation kinetics of proteins involved in proximal TCR-mediated signaling pathways. *J Immunol* 175 (4) 2449-58. [PMID: 16081816.](#) [PMCID: PMC1414060.](#)
9. **Houtman, J. C.**, Yamaguchi, H., Barda-Saad, M., Braiman, A., Bowden, B., Appella, E., Schuck, P. & Samelson, L. E. (2006). Oligomerization of signaling complexes by the multipoint binding of GRB2 to both LAT and SOS1. *Nat Struct Mol Biol* 13 (9) 798-805. [DOI: 10.1038/nsmb1133.](#) [PMID: 16906159.](#)
10. **Houtman, J. C.**, Brown, P. H., Bowden, B., Yamaguchi, H., Appella, E., Samelson, L. E. & Schuck, P. (2007). Studying multisite binary and ternary protein interactions by global analysis of isothermal titration calorimetry data in SEDPHAT: application to adaptor protein complexes in cell signaling. *Protein Sci* 16 (1) 30-42. [DOI: 10.1110/ps.062558507.](#) [PMID: 17192587.](#) [PMCID: PMC1794685.](#)

11. Johnston, J. W., Coussens, N. P., Allen, S., **Houtman, J. C.**, Turner, K. H., Zaleski, A., Ramaswamy, S., Gibson, B. W. & Apicella, M. A. (2008). Characterization of the N-acetyl-5-neuraminic acid-binding site of the extracytoplasmic solute receptor (SiaP) of nontypeable Haemophilus influenzae strain 2019. *J Biol Chem* 283 (2) 855-65. [DOI: 10.1074/jbc.M706603200](https://doi.org/10.1074/jbc.M706603200). [PMID: 17947229](https://pubmed.ncbi.nlm.nih.gov/17947229/).
12. Wen, K. K., McKane, M., **Houtman, J. C.** & Rubenstein, P. (2008). Control of the ability of profilin to bind and facilitate nucleotide exchange from G-actin. *J Biol Chem* 283 (14) 9444-53. [DOI: 10.1074/jbc.M709806200](https://doi.org/10.1074/jbc.M709806200). [PMID: 18223293](https://pubmed.ncbi.nlm.nih.gov/18223293/). [PMCID: PMC2431015](https://pubmed.ncbi.nlm.nih.gov/PMC2431015/).
13. Pigge, F. C., Dighe, M. K. & **Houtman, J. C.** (2008). Mono-, bis-, and tris(crown ether)s assembled around 1,3,5-triaroylbenzene scaffolds. *J Org Chem* 73 (7) 2760-7. [DOI: 10.1021/jo7026867](https://doi.org/10.1021/jo7026867). [PMID: 18331059](https://pubmed.ncbi.nlm.nih.gov/18331059/).
14. Bartelt, R. R., Cruz-Orcutt, N., Collins, M. & **Houtman, J. C.** (2009). Comparison of T cell receptor-induced proximal signaling and downstream functions in immortalized and primary T cells. *PLoS One* 4 (5) e5430. [DOI: 10.1371/journal.pone.0005430](https://doi.org/10.1371/journal.pone.0005430). [PMID: 19412549](https://pubmed.ncbi.nlm.nih.gov/19412549/). [PMCID: PMC2673025](https://pubmed.ncbi.nlm.nih.gov/PMC2673025/).
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 59. Arkee, T., Hostager, B. S., **Houtman, J.** & Bishop, G. A. (2021). TRAF3 in T Cells Restrains Negative Regulators of LAT to Promote TCR/CD28 Signaling. *Journal of Immunology*. [DOI: 10.4049/jimmunol.2001220](https://doi.org/10.4049/jimmunol.2001220). [PMID: 34145060](https://pubmed.ncbi.nlm.nih.gov/34145060/).
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 61. Jensen, I. J., Li, X., McGonagill, P. W., Shan, Q., Fosdick, M. G., Tremblay, M. M. **Houtman, J. C.**, Xue, H. H., Griffith, T. S., Peng, W., & Badovinac, V. P., (2021). Sepsis leads to lasting changes in phenotype and function of memory CD8 T cells. *eLife* 10. [PMID: 34652273](https://pubmed.ncbi.nlm.nih.gov/34652273/). [DOI: 10.7554/eLife.70989](https://doi.org/10.7554/eLife.70989).
 62. Welch, J. L., Xiang, J., Chang, Q., **Houtman, J. C. D.** & Stapleton, J. T. (2021). Human T cells express Angiotensin Converting Enzyme 2 at levels sufficient to interact with the SARS-CoV-2 Spike protein. *The Journal of infectious diseases*. [DOI: 10.1093/infdis/jiab595](https://doi.org/10.1093/infdis/jiab595). [PMID: 34918095](https://pubmed.ncbi.nlm.nih.gov/34918095/). [PMCID: PMC8754779](https://pubmed.ncbi.nlm.nih.gov/PMC8754779/).
 63. Furqan, M., Abu-Hejleh, T., Stephens, L. M., Hartwig, S. M., Mott, S. L., Pulliam, C. F., Petronek, M., Henrich, J. B., Fath, M. A., **Houtman, J. C.**, Varga, S. M., Bodeker, K. L., Bossler, A. D.,

- Bellizzi, A. M., Zhang, J., Monga, V., Mani, H., Ivanovic, M., Smith, B. J., Byrne, M. M., Zeitler, W., Wagner, B. A., Buettner, G. R., Cullen, J. J., Buatti, J. M., Spitz, D. R. & Allen, B. G. (2022). Pharmacological ascorbate improves the response to platinum-based chemotherapy in advanced stage non-small cell lung cancer. *Redox biology* 53 102318. DOI: [10.1016/j.redox.2022.102318](https://doi.org/10.1016/j.redox.2022.102318). PMID: [35525024](https://pubmed.ncbi.nlm.nih.gov/35525024/). PMCID: [PMC9079696](https://pubmed.ncbi.nlm.nih.gov/PMC9079696/).
64. Fosdick, M. G., Loftus, S., Phillips, I., Zacharias, Z. R. & **Houtman, J. C. D.** (2022). Glycerol monolaurate inhibition of human B cell activation. *Scientific reports* 12 (1) 13506. DOI: [10.1038/s41598-022-17432-4](https://doi.org/10.1038/s41598-022-17432-4). PMID: [35931746](https://pubmed.ncbi.nlm.nih.gov/35931746/). PMCID: [PMC9355977](https://pubmed.ncbi.nlm.nih.gov/PMC9355977/).
65. Yahashiri, A., Kaus, G. M., Popham, D. L., **Houtman, J. C. D.** & Weiss, D. S. (2022). Comparative Study of Bacterial SPOR Domains Identifies Functionally Important Differences in Glycan Binding Affinity. *Journal of bacteriology* 204 (9) e0025222. DOI: [10.1128/jb.00252-22](https://doi.org/10.1128/jb.00252-22). PMID: [36005810](https://pubmed.ncbi.nlm.nih.gov/36005810/). PMCID: [PMC9487507](https://pubmed.ncbi.nlm.nih.gov/PMC9487507/).
66. Areecheewakul, S., Adamcakova-Dodd, A., Zacharias, Z. R., Jing, X., Meyerholz, D. K., Legge, K. L., **Houtman, J. C. D.**, O'Shaughnessy, P. T., Thorne, P. S. & Salem, A. K. (2023). Immunomodulatory Effects of Subacute Inhalation Exposure to Copper Oxide Nanoparticles in House Dust Mite-Induced Asthma. *ACS Nano* 17 (15) 14586-14603. DOI: [10.1021/acsnano.3c01668](https://doi.org/10.1021/acsnano.3c01668). PMID: [37463491](https://pubmed.ncbi.nlm.nih.gov/37463491/); PMCID: [PMC10416562](https://pubmed.ncbi.nlm.nih.gov/PMC10416562/).
67. Zacharias, Z. R. & **Houtman, J. C. D.** (2023). OMIP-099: 31-color spectral flow cytometry panel to investigate the steady-state phenotype of human T cells. *Cytometry A*. DOI: [10.1002/cyto.a.24799](https://doi.org/10.1002/cyto.a.24799). PMID: [37814476](https://pubmed.ncbi.nlm.nih.gov/37814476/); PMCID: [PMC10842108](https://pubmed.ncbi.nlm.nih.gov/PMC10842108/).
68. Sonkar, V. K., Eustes, A. S., Ahmed, A., Jensen, M., Solanki, M. V., Swamy, J., Kumar, R., Fidler, T. P., **Houtman, J. C. D.**, Allen, B. G., Spitz, D. R., Abel, E. D. & Dayal, S. (2023). Endogenous SOD2 (Superoxide Dismutase) Regulates Platelet-Dependent Thrombin Generation and Thrombosis During Aging. *Arteriosclerosis, thrombosis, and vascular biology* 43 (1) 79-91. DOI: [10.1161/ATVBAHA.121.317735](https://doi.org/10.1161/ATVBAHA.121.317735). PMID: [36325902](https://pubmed.ncbi.nlm.nih.gov/36325902/). PMCID: [PMC9780178](https://pubmed.ncbi.nlm.nih.gov/PMC9780178/).
69. Sandouk, A., Xu, Z., Baruah, S., Tremblay, M., Hopkins, J. B., Chakravarthy, S., Gakhar, L., Schnicker, N. J. & **Houtman, J. C. D.** (2023). GRB2 dimerization mediated by SH2 domain-swapping is critical for T cell signaling and cytokine production. *Scientific reports* 13 (1) 3505. DOI: [10.1038/s41598-023-30562-7](https://doi.org/10.1038/s41598-023-30562-7). PMID: [36864087](https://pubmed.ncbi.nlm.nih.gov/36864087/). PMCID: [PMC9981690](https://pubmed.ncbi.nlm.nih.gov/PMC9981690/).

Chapters

1. **Houtman, J. C.**, Wiepz, G. J. & Bertics, P. J. (2000). The coordinate regulation of preadipocyte growth and differentiation by EGF and growth hormone. In Ntambi, J. M. (Eds.) *Adipocyte biology and hormone signaling*. Biomedical and Health Research, IOS Press, Amsterdam, Netherlands.

Reviews

1. **Houtman, J. C.**, Barda-Saad, M. & Samelson, L. E. (2005). Examining multiprotein signaling complexes from all angles. *FEBS J* 272 (21) 5426-35. DOI: [10.1111/j.1742-4658.2005.04972.x](https://doi.org/10.1111/j.1742-4658.2005.04972.x). PMID: [16262684](https://pubmed.ncbi.nlm.nih.gov/16262684/). PMCID: [PMC1431607](https://pubmed.ncbi.nlm.nih.gov/PMC1431607/).
2. Bartelt, R. R. & **Houtman, J. C.** (2013). The adaptor protein LAT serves as an integration node for signaling pathways that drive T cell activation. *Wiley Interdiscip Rev Syst Biol Med* 5 (1) 101-10. DOI: [10.1002/wsbm.1194](https://doi.org/10.1002/wsbm.1194). PMID: [23150273](https://pubmed.ncbi.nlm.nih.gov/23150273/). PMCID: [PMC3883108](https://pubmed.ncbi.nlm.nih.gov/PMC3883108/).
The review was entirely written by my laboratory.
3. Chapman, N. M. & **Houtman, J. C.** (2014). Functions of the FAK family kinases in T cells: beyond actin cytoskeletal rearrangement. *Immunol Res* 59 (1-3) 23-34. DOI: [10.1007/s12026-014-8527-y](https://doi.org/10.1007/s12026-014-8527-y). PMID: [24816556](https://pubmed.ncbi.nlm.nih.gov/24816556/). PMCID: [PMC4125427](https://pubmed.ncbi.nlm.nih.gov/PMC4125427/).
This review was entirely written by my laboratory.
4. Bilal, M. Y. & **Houtman, J. C.** Transmission of T Cell Receptor-Mediated Signaling via the GRB2 Family of Adaptor Proteins. *CRC Press/Taylor & Francis*. DOI: [10.1201/9781315371689-9](https://doi.org/10.1201/9781315371689-9). PMID: [30427631](https://pubmed.ncbi.nlm.nih.gov/30427631/).
5. Zaher, A., Stephens, L. M., Miller, A. M., Hartwig, S. M., Petronek, M. S., Zacharias, Z. R., Wadas, T. J., Monga, V., Cullen, J. J., Furqan, M., **Houtman, J. C. D.**, Varga, S. M., Spitz, D. R., Allen, B.

G. & Stolwijk, J. M. (2022). Pharmacological ascorbate as a novel therapeutic strategy to enhance cancer immunotherapy. *Frontiers in immunology* 13 989000. [PMID: 36072595](#). [DOI: 10.3389/fimmu.2022.989000](#).

I helped write this review article.

6. Mapuskar K.A., London B., Zacharias Z.R., **Houtman J.C.D.**, Allen B.G. (2025). Immunometabolism in the Aging Heart. *J Am Heart Assoc* 14 (1) eo39216. DOI: [10.1161/JAHA.124.039216](#) PMID: 39719411

I assisted in the writing of this review.

Non-peer-reviewed journal articles

1. Hindman B.J., Olinger C.R., Woodroffe R.W., Zanaty M., Streese C.D., Zacharias Z.R., **Houtman J.C.D.**, Wendt L.H., Eyck P.P.T., O'Connell-Moore D.J., Ray E.J., Lee S.J., Waldschmidt D.F., Havertape L.G., Nguyen L.B., Chen P.F., Banks M.I., Sanders R.D., Howard M.A. 3rd (2024). Exploratory Randomised Trial of Tranexamic Acid to Decrease Postoperative Delirium in Adults Undergoing Lumbar Fusion: A trial stopped early. *medRxiv* 10.16.24315638. [DOI:10.1101/2024.10.16.24315638](#). PMID: [39484259](#)

Active Grants

1. Purchase CellScape by Canopy Microscope; Roy J. Carver Charitable Trust; Houtman, Jon CD (Principal Investigator), Randy Nessler (co-PI)
 - 24-5817
 - Feb 1, 2024 - May 15, 2025
 - Amount: \$377,200.00, Direct Cost: \$377,200.00, 0% effort
2. Redox Regulation of Immunological Responses During Cancer Therapy Using Novel Small Redox Active Molecule Approaches that Both Enhance Anti-Tumor Immune Responses as well as Limit Normal Tissue Injury; University of Iowa; Houtman, Jon (Principal Investigator)
 - P3 Award
 - Jul 1, 2022 - Jun 30, 2025
 - Amount: \$600,000.00, Direct Cost: \$300,000.00, 0% effort
 - Total Amount Requested: \$600,000.00
3. ICARE-Iowa Cancer Research Experience; American Cancer Society; Simons-Burnett, Andrean (Co-Principal), Houtman, Jon CD (Investigator)
 - DICR POST-BACC-22-1041993-01-DPBACC
 - Jan 1, 2023 - Dec 31, 2025
 - Amount: \$660,000.00, Direct Cost: \$200,000.00, 10% effort
 - Total Amount Requested: \$660,000.00
4. University of Iowa HCCC Cancer Support Grant; US Department of Health & Human Services, National Institutes of Health; Burkard, Mark (Director), Houtman, Jon CD (Senior Personnel)
 - P30 CA086862
 - Apr 1, 2017 - Mar 31, 2026
 - Direct Cost: \$0.00, 5% effort
5. MMP-9 based immune-driven mechanisms of neovascular AMD; US Department of Health & Human Services, National Institutes of Health; Sonka, Milan (Multi-PI), Sohn, Elliott (Multi-PI), Houtman, Jon CD (Multi-PI)
 - R01 EY035435
 - Sep 1, 2023 - Jan 31, 2027
 - Amount: \$2,161,756.00, Direct Cost: \$347,549.00, 10% effort
 - Total Amount Requested: \$2,161,756.00

6. T-cell mediated RGC damage in glaucoma; US Department of Health & Human Services, National Institutes of Health; Kuehn, Markus (Principal Investigator), Houtman, Jon CD (Senior Personnel)
 - R01 EY034534
 - Mar 1, 2023 - Nov 3, 2027
 - 10% effort
7. Institutional Seed Grant Program at HCCC; American Cancer Society; Houtman, Jon CD (Principal Investigator)
 - IRG-24-1291246-49-IRG
 - Jan 1, 2025 - Dec 31, 2027
 - Amount: \$360,000.00, Direct Cost: \$120,000.00, 0% effort
8. Cancer Research Opportunities at IOWA (CROI); American Cancer Society; Houtman, Jon CD (Principal Investigator)
 - DICR INTR-24-1297273-01-DICR INTR
 - Jan 1, 2025 - Dec 31, 2027
 - Amount: \$132,000.00, Direct Cost: \$44,000.00, 0% effort
9. Cancer Research Opportunities at IOWA (CROI); US Department of Health & Human Services, National Institutes of Health; Houtman, Jon CD (Principal Investigator)
 - R25 CA273964
 - Sep 11, 2023 - Aug 31, 2028
 - Amount: \$1,768,761.00, Direct Cost: \$254,771.00, 15% effort
 - Total Amount Requested: \$1,768,761.00
10. ICARE-Iowa Cancer Research Experience; American Cancer Society; Simons-Burnett, Andrea (Co-Principal), Houtman, Jon CD (Principal Investigator)
 - Jan 1, 2026 - Jun 30, 2027
 - Amount: \$500,000.00, Direct Cost: \$250,000.00, 10% effort

Presentations

Conference Presentations

2006	Presented at T Cell Activation Session Chair, 35th Annual Autumn Immunology Conference
2008	Presented at T Cell Activation Session Chair, 37th Annual Autumn Immunology Conference
2016	Presented at Session Chair Adaptive Immunity-T cell development and signaling session, 45th Annual Autumn Immunology Conference
2018	Presented at Trainee Success Session, CABTRAC Annual Conference
2021	Presented at CRTEC Session, CABTRAC Annual Conference
2022	Presented at CRTEC Session, CABTRAC Annual Conference
2023	Presented at CRTEC Session, CABTRAC Annual Conference
2024	Presented at CRTEC Session and R25 YES Session, CABTRAC Annual Conference

Invited Lectures

2002	Presented at LCB Seminar Series, Laboratory of Cell Biology, National Cancer Institute/National Institutes of Health.
2002	Presented at Trends in Biocalorimetry Symposium, Hamner Center.

2003 Presented at Protein-Protein Interaction Symposia, NIH Research Festival, National Institutes of Health.

2004 Presented at LCB Seminar Series, Laboratory of Cell Biology, National Cancer Institute/National Institutes of Health.

2004 Presented at 15th Meeting of Methods in Proteins Structural Analysis, University of Washington.

2005 Presented at LCS Seminar Series, Laboratory of Cell Signaling, National Heart, Lung, and Blood Institute/National Institutes of Health.

2005 Presented at South Dakota Health Research Foundation.

2005 Presented at Annual Meeting of the Association of Biomolecular Resource Facilities Savannah International Trade & Convention Center.

2005 Presented at Department of Microbiology, University of Iowa.

2006 Presented at Division of Science and Mathematics, University of Minnesota at Morris.

2007 Presented at Committee on Cancer Biology, University of Chicago.

2010 Presented at Department of Pathology, University of New Mexico Cancer Center.

2010 Presented at Theoretical Biology and Biophysics Group, Theoretical Division, Los Alamos National Laboratories.

2011 Presented at FASEB Summer Research Conference on Signal Transduction in the Immune System.

2011 Presented at Department of Biochemistry, Iowa State University.

2011 Presented at MARC Program, University of Arizona.

2014 Presented at FASEB Summer Conference on Protein Interactions, Structures, Technologies and Networks.

2016 Laboratory of Cellular and Molecular Biology, National Institutes of Health.

2016 Grinnell College.

2019 University of Minnesota at Duluth.

2021 Kansas University Cancer Center.

2022 University of Pittsburg.