Shannon M. Hinsa-Leasure
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Education

1999-Dec. 2004	Ph.D.	Dartmouth Medical School Molecular and Cellular Biology Graduate Program
1993-Fall 1997	B.S.	University of Wisconsin-Madison Department of Bacteriology

Appointments

Associate Professor, Biology, Grinnell College, 2014-present
Assistant Professor, Biology, Grinnell College, 2007-2014
Postdoctoral Fellow, Center for Microbial Ecology, Michigan State University, 2005-2007
Research assistant, Dartmouth College, Hanover, NH, 1999-2004

Research Experience

05/05-07/07	Postdoctoral Research Associate Advisor: Dr. James Tiedje Center for Microbial Ecology. NASA Astrobiology Postdoctoral Fellow Identification of traits required by *Psychrobacter arcticum* for survival in Siberian permafrost and study of microbial diversity in permafrost.
01/05-04/05	Postdoctoral Research Associate Advisor- Dr. George O'Toole
09/99-12/04	Graduate Research Assistant Advisor: Dr. George O'Toole Dept. of Microbiology & Immunology, Dartmouth Medical School Analysis of genes required for biofilm formation by *Pseudomonas fluorescens*.
10/98-08/99	Associate Research Specialist Advisor: Dr. Jeremy Glasner and Dr. Fred Blattner Department of Genetics, University of Wisconsin-Madison Employed high-throughput technology and genetic techniques to study *E. coli* genes of unknown function.

Funding

1. "Diversity of antibiotic resistance genes and transfer elements quantitative monitoring (DARTE-QM) for environmental samples". Agriculture Food and Research Initiative Foundational Competitive Grants Program. USDA-National Institute of Food and Agriculture. Adina Howe- PI, co-PIs: H. Allen, **S. Hinsa**, T. Moorman, M. Soupir and R. Williams. Budget: $999,346. Awarded 01/16-12/18
2. "Investigation of bacterial community structure and antibiotic resistance and genetic mobility gene abundance in soils fertilized with swine manure". Leopold Center for Sustainable Agriculture Grants. S. Hinsa-Leasure. Budget: $20,262. Awarded 01/16

Publications

1. **Hinsa-Leasure, S. M.,** C. Koid*, J. M. Tiedje, and J. N. Schultzhaus*. 2013. Biofilm formation by *Psychrobacter arcticus* and the role of a large adhesion in attachment to surfaces. Appl. Env Microbiol. 79:3967-3973. Cover photo for August issue.

2. **Hinsa-Leasure**, S. M., L. Bhavaraju, J. L. M. Rodrigues, C. Bakermans, D. A. Gilichinsky and J. M. Tiedje. 2010. Characterization of a bacterial community from a Northeast Siberian seacoast permafrost sample. FEMS Microbiol Ecol. 74:103-13
3. Shanks, R. M. Q., N. Caiazza, **S. Hinsa**, C. Toutain, and G. A. O'Toole. 2006. *Saccharomyces cerevisiae*-based molecular tool kit for manipulation of genes from gram-negative bacteria. Appl Env Microbiol. 72:5027-36
4. **Hinsa, S.M.** and G.A. O'Toole. 2006. Biofilm formation by *Pseudomonas fluorescens* WCS365: a role for LapD. Microbiol. 152:1375-1383.
5. **Hinsa, S.M.**, and G.A. O'Toole. 2004. Mechanisms of adhesion by *Pseudomonas*, In: *The Pseudomonads*, J.L. Ramos (ed.), Kluwer Academic/Plenum Publishers, 699-720.
6. **Hinsa, S.M.**, M. Espinosa-Urgel, J.L. Ramos, and G.A. O'Toole. 2003. Transition from reversible to irreversible attachment during biofilm formation by *Pseudomonas fluorescens* WCS365 requires an ABC transporter and a large secreted protein. Mol. Microbiol., 49:905-918.

Papers Under Revision

1. Cardenas, E., S. Kulam, Q. Wang, **S. Hinsa- Leasure**, J. R. Cole, J. M. Tiedje and T. L. Marsh. Bacterial identification through comparative 16S rRNA gene analysis, a realistic exercise amenable for large classes. Submitted to JMBE in 2012, under revision for fall 2013 resubmission.

Invited Book Chapters

1**. S. Hinsa-Leasure** and C. Bakermans. Diversity of bacteria in permafrost. *Cold-adapted Microorganisms*. Horizon Press. 2013

Meeting Presentations

1. Nartey, Q*., and **S. Hinsa-Leasure**. The antimicrobial effect of copper-alloys in hospital settings. Poster presentation. ABRCMS, Seattle, WA 11/15.
2. Colina, A*., and **S. Hinsa-Leasure**. Bacterial characterization of a hog confinement located in Poweshiek County and a potential source of antibiotic resistance bacteria discovered. Oral presentation. ABRCMS, Seattle, WA 11/15
3. Silverman*, J., T. Zachary*, and **S. Hinsa-Leasure**. Determination of antibiotic genes present in hog manure. Poster presentation. ASM General Meeting, New Orleans, LA 05/15
4. **Hinsa-Leasure, S**., Teaching microbiology through civic engagement. Microbrew presentation. ASMCUE Conference, Boston, MA 05/14
5. Quinn*, A. M., B. Ringdahl-Mayland*, and **S. Hinsa-Leasure**. The impact of environmental factors on biofilm formation by *Psychrobacter arcticus*. Poster Presentation. ASM Biofilm Conference, Miami, FL 09/12
6. **Hinsa-Leasure, S. M**., C. Koid*, and J. Schultzhaus*. Identification and characterization of a large adhesin involved in biofilm formation by *Psychrobacter arcticus*. Poster Presentation. ASM meeting, San Francisco, CA. 06/12
7. Kljaich*, J., and **S. Hinsa-Leasure**. Grand friendship- small scale: *Formica exsectoides* and associated *Actinomycetes*. Poster Presentation. Annual Meeting North Central Branch of the American Society for Microbiology, Mankato, MN, 10/10.
8. O'Brien*, M., and **S. Hinsa-Leasure**. *Wolbachia* infection in the ant species *Formica exsectoides*. Annual Meeting North Central Branch of the American Society for Microbiology, Mankato, MN, 10/10.
9. Niehaus*, J., C. Koid*, and **S. Hinsa**. Characterization of Psyc_1601 and other *Psychrobacter arcticus* biofilm forming deficient mutants. Poster Presentation. Annual

Meeting North Central Branch of the American Society for Microbiology, LaCrosse, WI, 10/09

10. Ford*, H., and **S. Hinsa**. Bacterial Diversity and Culturability in prairie phyllosphere. Poster Presentation. Annual Meeting North Central Branch of the American Society for Microbiology, LaCrosse, WI, 10/09
11. **Hinsa-Leasure, S**., L. Bhavaraju, C. Bakermans, J. Rodrigues, J. Tiedje. Isolation and Characterization of a Bacterial Community from the Siberian Permafrost. Poster Presentation. ASM meeting, Philadelphia, PA, 05/09
12. **Hinsa-Leasure, S.M**., M.F. Thomashow, J.M. Tiedje. Biofilm formation in the cold by *Psychrobacter arcticus*. Poster Presentation. ASM-Biofilms meeting, Quebec City, 03/07
13. **Hinsa, S.M.,** M.F. Thomashow, J.M. Tiedje. Low temperature growth and biofilm formation by *Psychrobacter arcticus*. Poster Presentation. Astrobiology Science Conference, Washington D.C. 03/06
14. **Hinsa, S.M** and G.A. O'Toole. Characterization of proteins involved in the early stages of biofilm formation by *Pseudomonas fluorescens* on abiotic surfaces. Poster Presentation. ISME conference, Cancun, Mexico. 08/04
15. **Hinsa, S.M.**, M. Espinosa-Urgel, J.L. Ramos, G.A. O'Toole. An ABC transporter and outer membrane protein are important for the transition from reversible attachment to irreversible attachment. Poster Presentation. ASM Biofilms conference, Victoria, BC 11/03.
16. **Hinsa, S.M.**, M. Espinosa-Urgel, J.L. Ramos, G.A. O'Toole. An ABC transporter and outer membrane protein are important for the transition from reversible attachment to irreversible attachment. Poster Presentation. International Summer School, Molecular Basis of Microbe-Plant Interactions session, Leiden University 06/03.
17. **Hinsa, S.M.**, M. Espinosa-Urgel, J.L. Ramos, G.A. O'Toole. Biofilm formation on abiotic surfaces by a fluorescent pseudomonad, Oral Presentation, American Phytopathological Society Annual Meeting, 07/02.
18. **Hinsa, S.M.**, M. Espinosa-Urgel, J.L. Ramos, G.A. O'Toole. Genes Important for the Formation of a Beneficial Biofilm by *Pseudomonas fluorescens* WCS365. Poster presentation. 10th International Congress on Molecular Plant-Microbe Interactions 2001.

*denotes a Grinnell undergraduate

TEACHING EXPERIENCE

2007-2015	Grinnell College; Tutorial- Vaccinations and Society, BIO365- Microbiology, BIO150- Survivor, Microbial Pathogenesis, BIO346- Environmental Microbiology, BIO251- Molecules, Cells, and Organisms
2004-2005	Guest Lecturer, Life on Mars? Dartmouth College
Spring 2004	Guest Lecturer, Searching for Life in the Universe, Dartmouth College.
2003-2004	Guest Lecturer, Biological Diversity course, Dartmouth College.
Winter 2003	Teaching Assistant: Life on Mars? (Interdisciplinary undergraduate level course).
Fall 2002	Guest Lecturer, Biology Seminar Series, Colby-Sawyer College
2001-present	Supervised undergraduates performing independent research projects and mentored an undergraduate in the Women in Sciences Program.

2001-2002 Guest Lecturer, undergraduate microbiology course, Colby Sawyer College.

Fall 2000-2001 Teaching Assistant: Introduction to Microbiology (Undergraduate level course).

SERVICE:

Biological Chemistry 2008-2015, Chair 2013-2015; Health Advisory Committee 2009-2015, Co-chair 2013-2015; Co-leader of SWAG (Scholarly Women's Achievement Group) 2012-present; Co-director of GSP (Grinnell Science Project) 2013-2015; Center for Prairie Studies Board 2008-2009, Biology Seminar Series 2008-2009, 2010-2011, Biology secretary 1 year, Co-Leader of Early Career Faculty Group 2009-2011.

AWARDS, MEMBERSHIPS AND SERVICE

2012	Selected to participate in The Undergraduate Research Program in Microbial Genome Annotation, held at DOE's Joint Genome Institute in Walnut Creek, CA 01/12
2009, 2010	Judge of graduate and undergraduate student presentations at the Annual Meeting North Central Branch of the American Society for Microbiology, La Crosse, WI and Mankato, MN
2007	Selected to participate in the ASM Bioinformatics Institute, Washington DC.
2006	Member of Science Advisory Group for Four-Month Arctic Mars Mission Simulation (FMARS).
2004	Selected to participate in the ASM Summer Institute for the development of microbiologists. U of Connecticut.
2003	Selected to be a member of the Remote Science Team (RST) overseeing experiments at Mars Desert Research Station (MDRS) and Flashline Mars Arctic Research Station (FMARs). Selected to be RST lead for crew 21 at MDRS.
2003	Recipient of an American Society for Microbiology Travel Award. Biofilms conference. Victoria, BC.
2003	International Summer School, Molecular Basis of Microbe-Plant Interactions. Leiden University, Selected for Best Poster and Best Proposal Team.
2002	Selected to perform a three-week Mars simulation experiment in the Arctic (FMARS), project was to isolate microbes from extreme environments, directed by Robert Zubrin. Devon Island, Nunavut Canada
2001	Received Second Place in the Dartmouth Graduate Student Poster Conference.
2000-2004	Member of the American Association for the Advancement of Science.
2000-present	Member of the American Society for Microbiology.
2000-2003	Member of the International Society for Molecular Plant-Microbe Interactions.