

Jesse S. Wright

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RESEARCH INTERESTS

My research combines the power of bacterial genetics, biochemistry, and systematics to dissect the link between microbial cell-cell communication and social behaviors. I have recently developed a model to analyze the complex social lives of staphylococci and determine their effects on the development of cooperative behaviors and the allocation of group benefits.

EDUCATION

Postdoctoral Fellowship, Bacterial Pathogenesis. New York University, New York, NY	2001-2004
Doctor of Philosophy, Microbiology. University of Virginia, Charlottesville, VA	1994-2000
Bachelor of Arts, Biology, <i>cum laude</i> . Lehigh University, Bethlehem, PA	1990-1994

ACADEMIC POSITIONS

Postdoctoral Fellow, New York University and the Skirball Institute, New York, NY Department of Microbiology and Program in Molecular Pathogenesis Staphylococcal Quorum Sensing and Pathogenesis Advisor: Richard P. Novick, M.D.	2001-Present
Graduate Fellow, University of Virginia, Charlottesville VA Department of Microbiology Signal Transduction Schemes in <i>Escherichia coli</i> Advisor: Robert J. Kadner, Ph.D.	1994-2000
Undergraduate Fellow, Lehigh University, Bethlehem, PA Department of Molecular Biology Mechanisms of <i>Clostridium difficile</i> Virulence Advisor: Jeffrey A. Sands, Ph.D.	1993-1994

PUBLICATIONS

Wright, J.S. Cooperative social migration in the staphylococci. (manuscript in preparation)

Wright, J.S., Jin, R., and Novick, R.P. The staphylococcal secretome sets a molecular ambush against the host's immune system. (manuscript in preparation)

Wright, J.S., Traber, K.E., Corrigan, R., Benson, S.A., Musser, J.M., Novick, R.P. The *agr* radiation: an early event in the evolution of staphylococci. *J. Bacteriol.* 187:5585-94 (2005) [PDF]

Wright, J.S., Jin, R., Novick, R.P. Transient interference with staphylococcal quorum sensing attenuates abscess formation. *Proc. Natl. Acad. Sci. USA.* 102:1691-1696 (2005) [PDF]

Wright, J.S., Lyon, G.J., George, E.A., Muir, T.W., Novick, R.P. Hydrophobic interactions drive receptor-ligand recognition for activation and inhibition of staphylococcal quorum sensing. *Proc. Natl. Acad. Sci. USA*. 101:16168-73 (2004) [PDF]

Wright, J.S., Novick, R.P. Virulence mechanisms in MRSA pathogenesis. *MRSA: Current Perspectives*. Horizon Scientific Press (2003)

Lyon, G.J., **Wright, J.S.**, Muir, T.W., Novick, R.P. Determinants of receptor specificity in the *agr* signal transduction system. *Biochemistry*. 41:10095-104 (2002) [PDF]

Lyon, G.J., **Wright, J.S.**, Christopoulos, A., Novick R.P., Muir, T.W. Reversible and specific extracellular antagonism of receptor histidine-kinase signaling. *J. Biol. Chem.* 277:6247-53 (2001) [PDF]

Wright, J.S., Kadner, R.J. The phosphoryl transfer domain of UhpB interacts with the response regulator UhpA. *J. Bacteriol.* 183:3149-3159 (2001) [PDF]

Wright, J.S., Oleknovich, I.N., Touchie, G., Kadner R.J. The histidine kinase domain of UhpB inhibits UhpA action at the *Escherichia coli* *uhpT* promoter. *J. Bacteriol.* 182:6279-6286 (2000) [PDF]

INVITED LECTURES & SPEAKING ENGAGEMENTS

American Society for Microbiology Symposia on Expression of Virulence Determinants in Vivo	2005
New York Academy of Sciences Session on Emerging Infectious Diseases	2004
Gordon Research Conference on the Staphylococci	2003
Bacterial Locomotion and Signal Transduction Meeting V	1999

RESEARCH PRESENTATIONS

American Society for Microbiology	2003
New York University Minority Scholars Research Day	2002
UCLA Department of Microbiology. Host: Olaf Schneewind	2000
University of Washington Department of Microbiology. Host: Samuel I. Miller	2000
Washington University Department of Microbiology. Host: Eduardo A. Groisman	2000
Albert Einstein School of Medicine Department of Microbiology. Host: William R. Jacobs	2000
Emory University Department of Microbiology. Host: June R. Scott	2000
American Society for Microbiology	1998
Virginia Branch of the American Society for Microbiology	1996

FUNDING & SCHOLARSHIP

NRSA Postdoctoral Fellowship Award, F32AI055242	2002-2004
NIH Infectious Diseases Training Grant, T32AI107180-21	2001-2002
NCI Molecular Basis of Carcinogenesis Training Grant, 5T32CA09109	1994-1995
Iacocca Scholarship for Biomedical Research, Lehigh University	1993-1994

TEACHING INTERESTS & PHILOSOPHY

I am interested in teaching primarily at the graduate level in the areas of general bacteriology, bacterial genetics, and microbial pathogenesis or an advanced seminar series in any of these areas for upper level undergraduates. I plan to adopt a teaching method that incorporates current and historically significant examples from the primary literature to illustrate general biological concepts. I would also enjoy running a journal club for 1st and 2nd year graduate students.

PROFESSIONAL SOCIETIES & ACTIVITIES

American Society for Microbiology	2000-Present
American Association for the Advancement of Science	1997-Present
New York Academy of Sciences	2002-Present
<i>Ad hoc</i> reviewer for the <i>J Bacteriol</i> , <i>Mol Microbiol</i> , <i>PNAS</i> , <i>Science</i> and <i>Nature</i>	1998-Present
New York University Minority Scholars Program	2001-2002
University of Virginia Undergraduate Scholars Program	1998-1999
University of Virginia School of Medicine Microbiology Instructor	1995

AWARDS & HONORS

Iacocca Scholar, Lehigh University	1993-1994
First Prize for Research, Lehigh University Molecular Biology Symposium	1994
Scholar Athlete Award, Lehigh University	1993
Varsity Letterwinner In Football, Lehigh University	1990-1993
Nick Timko Award for Best Offensive Player, Lehigh University	1990
Captain, McDonalds Lehigh Valley All-Star Football Classic	1990

REFERENCES

Richard P. Novick, M.D. (Postdoctoral Advisor)
 Professor of Microbiology and Medicine
 NYU School of Medicine
 Skirball Institute for Biomolecular Medicine
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 University of Virginia School of Medicine
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Tom W. Muir, Ph.D. (Collaborator)
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 The Rockefeller University
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William A. Petri Jr., Ph.D., M.D.
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