

Jean CELLI, Ph.D.

Paul G. Allen School for Global Animal Health
College of Veterinary Medicine
Washington State University
Pullman, WA 99164-9070

Phone: 509-335-4040
Email: jcelli@vetmed.wsu.edu

EDUCATION

- 1994-1997 Doctor of Philosophy (Ph.D.)
University Pierre et Marie Curie, Paris VI, France.
- 1990-1993 Bachelor of Science (B.Sc.)
University Pierre et Marie Curie, Paris VI, France.

PROFESSIONAL EXPERIENCE

- 2013-present Associate Professor
Paul G. Allen School for Global Animal Health, Washington State
University, Pullman, WA, USA
- 2012-2013 NIH Senior Investigator
Tularemia Pathogenesis Section, Laboratory of Intracellular Parasites,
Rocky Mountain Laboratories, NIAID, NIH, Hamilton, MT, USA
- 2004-2012 NIH Tenure-Track Investigator
Tularemia Pathogenesis Section, Laboratory of Intracellular Parasites,
Rocky Mountain Laboratories, NIAID, NIH, Hamilton, MT, USA
- 2001-2004 INSERM Research Scientist
Centre d'Immunologie INSERM-CNRS de Marseille-Luminy, Marseille,
France.
- 1998-2001 Postdoctoral Fellow
Biotechnology Laboratory, University of British Columbia, Vancouver, BC,
Canada.
Advisor: Dr B. Brett Finlay

INVITED SEMINARS AND PRESENTATIONS

- Dec 2015 68th Brucellosis Research Conference, Chicago, IL
- Nov 2015 ASM Northwest Branch Annual Meeting, Seattle, WA
- Oct 2015 Keynote Speaker, 4th Congress of Biochemistry and Molecular Biology of
Bacteria, Mexican Society of Bacteriology, Puebla, Mexico
- May 2014 Symposium "Intracellular Innate immunity against bacterial pathogens:
who's the winner?" 114th ASM General Meeting, Boston, MA

May 2014 Department of Medical Microbiology and Immunology, UC Davis School of Medicine, Davis, CA

Nov 2013 ASM Northwest Branch Annual Meeting, Seattle, WA

Feb 2013 Department of Molecular Microbiology, Washington University School of Medicine, St Louis, MO

Apr 2012 Department of Microbiology and Immunology, University of North Carolina at Chapel Hill, NC

Mar 2012 Infectious Diseases and Microbial Immunology Seminar Series, Washington State University, Pullman, WA

Feb 2012 Department of Microbiology, Molecular Genetics and Immunology, University of Kansas Medical Center, Kansas City, KS

Nov 2011 Department of Biological Sciences, University of Montana, Missoula, MT

Sept 2011 Department of Clinical Microbiology, Umeå University, Umeå, Sweden

May 2011 Department of Microbiology and Immunology, University of Rochester Medical Center, Rochester, NY

Mar 2011 2011 Gordon Research Conference on "Chemical and Biological Terrorism Defense", Mar 20-25th, 2011, Ventura Beach, CA

Oct 2010 Department of Microbiology and Immunology, Brody School of Medicine, East Carolina University, Greenville, NC

May 2010 Symposium "Exploitation of host secretory pathways by intracellular pathogens", 110th ASM General meeting, San Diego, CA

Apr 2010 Department of Microbiology, McGill University, Montreal, QC, Canada

Mar 2010 Spring Seminar Series, Department of Microbiology, UT Southwestern Medical Center, Dallas, TX

Dec 2009 AAVI-ACVM Symposium on Molecular Mechanisms of Intracellular Pathogens, Conference of Research of Workers on Animal Diseases (CRWAD), Dec 6, 2009, Chicago, IL

Oct 2009 Institute of Arctic Biology, University of Alaska Fairbanks, Fairbanks, AK

Sept 2009 Center for Immunotherapies to Zoonotic Diseases, Montana State University, Bozeman, MT

Sept 2009 6th International Conference on Tularemia, Sep 13-16, 2009, Berlin, Germany

Sept 2008 Center for Molecular Microbiology and Infection, Imperial College London, London, UK

Sept 2008 EMBO conference "Cellular Microbiology and Cell Biology", Sep 20-25, Villars-sur-Ollon, Switzerland

Sept 2008 Institute of Microbiology, ETH Zürich, Switzerland

April 2008 6th Tularemia Workshop, March 30-April 1, Bolton Landing, NY

Mar 2008 81st General Meeting of the Japanese Society for Bacteriology, March 24-26, Kyoto, Japan,

Feb 2008	Plenary Session “Macrophage interactions with BioDefense agents”, 6th ASM BioDefense and Emerging Diseases Research Meeting, Feb 23-27, Washington, DC
July 2007	FASEB Research Summer Conference “Microbial Pathogenesis: Mechanisms of Infectious Diseases”, July 21-26, 2007, Snowmass, CO
Nov 2006	Section of Microbial Pathogenesis, Yale University School of Medicine, New Haven, CT.
Nov 2006	5 th International Conference on Tularemia, Nov 1-4, 2006, Woods Hole, MA
May 2006	Colloquium “Cellular Microbiology of NIAID Category A and B Bacterial Pathogens”, 106 th ASM General Meeting, May 21-25, 2006, Orlando, FL
Nov 2005	Tularemia Workshop, Nov 6-8, 2005, Jiminy Peak Resort, Hancock, MA
Sept 2005	Cold Spring Harbor Meeting “Microbial Pathogenesis and host response”, Sep 14-18, 2005, Cold Spring Harbor, NY
Sept 2005	Dept of Molecular Genetics and Microbiology, Center for Infectious Diseases, Stony Brook University, Stony Brook, NY
Mar 2005	Dept of Medical Microbiology and Immunology and Dept of Veterinary Pathobiology, Texas A&M University, College Station, TX.
Jan 2005	Department of Biochemistry, University of Montana, Missoula, MT
Jan 2005	NIH, NICHD, CBMB, Bethesda, MD
Oct 2004	Biozentrum, Basel, Switzerland
Feb 2004	INSERM U627, Faculté de Médecine de Nice, Nice, France
July 2002	Laboratory of Intracellular Parasites, NIH, NIAID, Rocky Mountain Laboratories, Hamilton, Montana, USA

CONFERENCE ORGANIZATION:

Convener of the Symposium “Intracellular innate immunity against bacterial pathogens: Who’s the winner?”, 114th ASM General meeting, Boston, MA, May 17-20, 2014

Member of the Organizing Committee and chair of the “*Francisella* interactions with host cells” session of the 7th International Tularemia Conference, Breckenridge, CO, Sept 17-20, 2012

Chair of the “Microbial metabolism and virulence” session, FASEB Summer Research Conference “Microbial Pathogenesis: Mechanisms of Infectious Disease”. Snowmass, CO, July 24-29, 2011

Co-chair of the Division B Symposium “Exploitation of host secretory pathways by intracellular pathogens”, 110th ASM General meeting, San Diego, CA, May 23-27, 2010

Chair of the “Cell Biology” session, 6th International Conference on Tularemia, Berlin, Germany, September 13-16, 2009.

Chair of the “Cell Biology of Infection” session, FASEB Summer Research Conference “Microbial Pathogenesis: Mechanisms of Infectious Disease”. Snowmass, CO, July 19-24, 2009

Chair of the “Cell Biology” Session, Tularemia Workshop, Bolton Landing, NY, Mar 30-Apr 1, 2008

Chair of the “Cell Biology” Session, Tularemia Workshop, Rocky Mountain Laboratories, Hamilton, MT, October 2004

PROFESSIONAL SERVICE

Editorial Board Member

Infection and Immunity (2010-present)
Frontiers in Cellular and Infection Microbiology (2010-present)
Microbial Pathogenesis (2013-present)

Ad hoc reviewer

Cell Host & Microbe
PNAS
PLoS Pathogens
Molecular Microbiology
Cellular Microbiology
Journal of Clinical Investigation
Journal of Experimental Medicine
Nature Reviews in Microbiology
Nature Communications
Infection and Immunity
Journal of Bacteriology
American Journal of Pathology
Journal of Cell Science
Journal of Infectious Diseases
Trends in Microbiology
Trends in Cell Biology
Applied and Environmental Microbiology
Frontiers in Cellular and Infection Microbiology
FEBS Letters
FEMS Immunology and Medical Microbiology
Journal of Medical Microbiology
Journal of Clinical Microbiology
Microbes and Infection
Microbial Pathogenesis
PLoS ONE
Microbiology and Immunology
Biochemical Pharmacology

Grant reviewing

Ad Hoc reviewer for the NIH CSR Special Emphasis panel on Bacterial Pathogenesis ZRG1 IDM-B 80 - Oct 2014
Ad Hoc reviewer for the NIH CSR Special Emphasis panel on Bacterial Pathogenesis ZRG1 IDM-B 80 - Mar 2015

PROFESSIONAL AFFILIATIONS

Member of the American Society for Microbiology

PUBLICATIONS – RESEARCH ARTICLES

1. Knodler LA, Crowley SM, Sham HP, Yang H, Wrande M, Ma C, Ernst RK, Steele-Mortimer O, **Celli J**, Vallance BA (2014) Noncanonical inflammasome activation of caspase-4/caspase-11 mediates epithelial defenses against enteric bacterial pathogens *Cell Host Microbe*, 16(2):249-256 PMID 25121752
2. Robertson GT, Case ED, Dobbs N, Ingle C, Balaban M, **Celli J**, Norgard MV (2014) FTT0831c/FTL_0325 contributes to *Francisella tularensis* cell division, maintenance of cell shape, and structural integrity. *Infect Immun.*, 82:2935-2948 PMID 24778115
3. Di Russo-Case E, Chong A, Wehrly, TD, Hansen B, Child R, Hwang S, Virgin HW and **Celli J** (2014) The *Francisella* O-antigen mediates survival in the macrophage cytosol via autophagy avoidance. *Cell Microbiol.* doi:10.1111/cmi.12246 PMID: 24286610
4. Myeni, S, Child R, Ng TW, Kupko JJ, Wehrly TD, Porcella SF, Knodler LA and **Celli J** (2013) *Brucella* modulates secretory trafficking via multiple Type IV secretion effector proteins. *PLoS Pathogens*, 9(8):e1003556
5. Robertson GT, Child R, Ingle C, **Celli J**, Norgard MV (2013) IgE is an outer membrane-associated lipoprotein essential for intracellular survival and murine virulence of Type A *Francisella tularensis*, *Infect Immun.*, 81:4026-4040 PMID: 23959721
6. Chong A, Child R, Wehrly, TD, Rockx-Brouwer D, Qin A, Mann BJ and **Celli J** (2013) Structure-function analysis of DipA, a *Francisella tularensis* virulence factor required for intracellular replication. *PLoS ONE*, 8(6): e67965. doi:10.1371/journal.pone.0067965
7. de Jong MF, Starr T, Winter MG, den Hartigh AB, Child R, Knodler LA, van Dijk JM, **Celli J**, Tsolis RM. (2013). Sensing of bacterial type IV secretion via the unfolded protein response. *mBio* 4(1):e00418-12. doi: 10.1128/mBio.00418-12.
8. Chong A, Wehrly TD, Child R, Hansen B, Hwang S, Virgin HW and **Celli J** (2012) Cytosolic clearance of replication-deficient mutants reveals *Francisella tularensis* interactions with the autophagic pathway. *Autophagy*, 8(9):1342-56. doi: 10.4161/auto.20808.
9. Rockx-Brouwer D, Chong A, Wehrly TD, Child R, Crane DD, **Celli J*** and Bosio CM* (2012) Low dose vaccination with attenuated *Francisella tularensis* strain SchuS4 mutants protects against tularemia independent of the route of vaccination. *PLoS ONE*, 10.1371/journal.pone.0037752
10. *: equally contributing authors - Recommended by the Faculty of 1000 (<http://f1000.com/717748052>)
11. Starr T, Child R, Wehrly TD, Hansen B, Hwang, S, C. López-Otin, Virgin HW and **Celli J** (2012) Selective subversion of autophagy complexes facilitates completion of the *Brucella* intracellular cycle. *Cell Host Microbe*, 11(1): 33-45

Recommended by the Faculty of 1000 (<http://f1000.com/13941964>); subject of a Commentary in *Cell Host&Microbe* (11(1):2-4) and a Research Highlight in *Nature Reviews in Microbiology* (doi:10.1038/nrmicro2749)
12. Geier H and **Celli J** (2011) Phagocytic receptors dictate phagosomal escape and intracellular proliferation of *Francisella tularensis*. *Infect Immun.*, 79(6): 2204-2214
13. Knodler LA, Vallance BA, **Celli J**, Winfree S, Hansen B, Montero M, and Steele-Mortimer O (2010) Dissemination of invasive *Salmonella* via bacterial-induced extrusion of mucosal epithelia. *Proc. Natl. Acad. Sci*, 107 (41) 17733-17738
14. Edwards J. A., Rockx-Brouwer D., Nair V., and **Celli J**. (2010) Restricted cytosolic growth of *Francisella tularensis* subsp. *tularensis* by IFN- γ activation of macrophages. *Microbiology*, 156(2): 327-339

15. Child R., Wehrly T.D., Rockx-Brouwer D, Dorward D. W. and **Celli J.** (2010) Acid phosphatases do not contribute to the pathogenesis of Type A *Francisella tularensis*. *Infect Immun.*, 78(1): 59-67
16. Barker J. R., Chong A., Wehrly T. D., Yu, J-J., Rodriguez, S. A. Liu, J., **Celli J.**, Arulanandam, B. P. and Klose, K. E. (2009) The *Francisella tularensis* Pathogenicity Island Encodes a Secretion System that is required for Phagosome Escape and Virulence. *Mol. Microbiol.* 74(6): 1459-1470
17. Wehrly T. D., A. Chong, K. Virtaneva, D. E. Sturdevant, R. Child, J. A. Edwards, D. Brouwer, V. Nair, E. R. Fischer, L. Wicke, A. J. Curda, J. J. Kupko III, C. Martens, D. D. Crane, C. M. Bosio, S. F. Porcella and **Celli J.** (2009) Intracellular biology and virulence determinants of *Francisella tularensis* revealed by transcriptional profiling inside macrophages. *Cell. Microbiol.* 11(7): 1128-1150
18. Ninio S, **Celli J**, Roy CR. (2009) A *Legionella pneumophila* effector protein encoded in a region of genomic plasticity binds to Dot/Icm-modified vacuoles. *PLoS Pathog.* Jan 5(1): e1000278.
19. Chase JC, **Celli J**, Bosio CM. (2009) Direct and indirect impairment of human dendritic cell function by virulent *Francisella tularensis* Schu S4. *Infect Immun.* 77(1): 180-95.
20. Chong A, Wehrly TD, Nair V, Fischer ER, Barker JR, Klose KE, **Celli J.** (2008) The early phagosomal stage of *Francisella tularensis* determines optimal phagosomal escape and *Francisella* pathogenicity island protein expression. *Infect Immun.* 76(12): 5488-99.
21. Starr, T. W. Ng, T. D. Wehrly, L. A. Knodler, and **J. Celli** (2008) *Brucella* Intracellular Replication Requires Trafficking Through the Late Endosomal/Lysosomal Compartment *Traffic* 9 (5): 678–694
22. C. Checroun, T. D Wehrly, E. R. Fisher, S. F. Hayes and **J. Celli.** (2006) Autophagy-mediated reentry of *Francisella tularensis* into the endocytic compartment following cytoplasmic replication. *Proc. Natl. Acad. Sci. USA*, 103(39): 14578-14583.
23. R. Pechous, **J. Celli**, R. Penoske, S. F. Hayes, D. W. Frank, and T. C. Zahrt. (2006) Construction and characterization of an attenuated purine auxotroph in *Francisella tularensis* LVS. *Infect. Immun.*, 74(8);4452-4461
24. **J. Celli**, S. P. Salcedo, and J.-P. Gorvel. (2005) *Brucella* coopts the small GTPase Sar1 for intracellular replication. *Proc. Natl. Acad. Sci. USA*, 102(5):1673-1678.
25. **J. Celli**, C. de Chastellier, D.-M. Franchini, J. Pizarro-Cerda, E. Moreno and J.P. Gorvel. (2003) *Brucella* evades macrophage killing via VirB-dependent sustained interactions with the endoplasmic reticulum. *J. Exp. Med.*, 198:545-556.
26. C. L. Kurz, S. Chauvet, E. Andrès, M. Aurouze, I. Vallet, G. P.F. Michel, M. Uh, **J. Celli**, A. Filloux, S. de Bentzmann, I. Steinmetz, J. A. Hoffmann, B. B. Finlay, J-P. Gorvel, D. Ferrandon and J. J. Ewbank. (2003) Virulence factors of the human opportunistic pathogen *Serratia marcescens* identified by *in vivo* screening. *EMBO J.*, 22(7): 1451-1460
27. L. A. Knodler, **J. Celli**, W.-D. Hardt, B. A. Vallance, C. Yip and B. B. Finlay. (2002) *Salmonella* effectors within a single pathogenicity island are differentially expressed and translocated by separate type III secretion systems. *Mol. Microbiol.*, 43(5):1089-1104
28. **J. Celli**, M. Olivier and B. B. Finlay. (2001) Enteropathogenic *Escherichia coli* mediates antiphagocytosis through the inhibition of PI 3-kinase-dependent pathways. *EMBO J*, 20 (6): 1245-1258.
29. D. L. Goosney, **J. Celli**, B. Kenny and B. B. Finlay. (1999) Enteropathogenic *Escherichia coli* inhibits phagocytosis. *Infect Immun*, 67(2): 490-495.

30. **J. Celli** and P. Trieu-Cuot. (1998) Circularisation of Tn916 is required for expression of the transposon-encoded transfer functions: Identification of long tetracycline-inducible transcripts reading through the attachment site. *Mol Microbiol*, 28(1): 103-117.
31. **J. Celli**, C. Poyart and P. Trieu-Cuot. (1997) Use of an excision reporter plasmid to study the intracellular mobility of the conjugative transposon Tn916 in Gram-positive bacteria. *Microbiology*, 143: 1253-1261.
32. C. Poyart, **J. Celli** and P. Trieu-Cuot. (1995) Conjugative transposition of Tn916-related elements from *Enterococcus faecalis* to *Escherichia coli* and *Pseudomonas fluorescens*. *Antimicrob. Agents Chemother.* 39: 500-506.
33. F. Arigoni, P. A. Kaminski, **J. Celli** and C. Elmerich. 1992. Transcriptional analysis of the *fixABCXORF1* region of *Azorhizobium caulinodans* suggests posttranscriptional processing of the *fixABCXORF1* mRNA. *Mol. Gen. Genet.* 235: 422-431.

PUBLICATIONS – INVITED REVIEW ARTICLES/BOOK CHAPTERS

1. **Celli J** (2015) The changing nature of the *Brucella*-containing vacuole *Cell. Microbiol.* 17(7):951-958. PMID: 25916795
2. **Celli J** and Tsolis RM (2015) Bacteria, the endoplasmic reticulum and the unfolded protein response: friends or foes? *Nature Rev. Microbiol.* 13(2):71-82 doi: 10.1038/nrmicro3393 PMID: 25534809
3. **Celli J** and Zahrt TC (2013) Mechanisms of *Francisella tularensis* pathogenesis. *Cold Spring Harb Perspect Med* 3:a010314 doi: 10.1101.cshperspect.a010314 PMID: 23545572
4. **Celli J** (2013) LRSAM1, an E3 Ubiquitin ligase with a sense for bacteria. *Cell Host Microbe* 12:735-736 doi: 10.1016/j.chom.2012.11.007 PMID: 23245317
5. Knodler LA and **Celli J** (2011) Eating the strangers within: host control of intracellular bacteria via xenophagy. *Cell. Microbiol.*, 13(9):1319-1327
6. Chong A and **Celli J** (2010) The *Francisella* intracellular life cycle: toward molecular mechanisms of intracellular survival and proliferation. *Front. Microbiol.* 1:138. doi: 10.3389/fmicb.2010.00138
7. Sturdevant DE, Virtaneva K, Martens C, Bozinov D, Ogundare O, Castro N, Kanakabandi K, Beare PA, Omsland A, Carlson JH, Kennedy AD, Heinzen RA, **Celli J**, Greenberg DE, Deleo FR, Porcella SF (2010) Host-microbe interaction systems biology: lifecycle transcriptomics and comparative genomics. *Future Microbiol* 5: 205-219
8. **Celli J**, Knodler LA. (2008) Of microbes and membranes: pathogenic subversion of host cell processes. *Cell Host Microbe.* 4(6): 514-8.
9. **Celli J**. (2008) Intracellular localization of *Brucella abortus* and *Francisella tularensis* in primary murine macrophages. *Methods Mol Biol.* 431:133-45.
10. **J. Celli**. (2006) Surviving inside a macrophage: the many ways of *Brucella*. *Res. Microbiol*, 157:93-98
11. **J. Celli** and J.P. Gorvel. (2004) Organelle robbery: *Brucella* interactions with the endoplasmic reticulum *Curr. Op. Microbiol.*, 7(1):93-97
12. **J. Celli** and B. B. Finlay. Bacterial avoidance of phagocytosis. (2002) *Trends Microbiol.*, 10(5): 232-237
13. L. A. Knodler, **J. Celli** and B. B. Finlay. (2001) Pathogenic trickery: deception of host cell processes. *Nat Rev Mol Cell Biol*, 2: 578-588

14. **J. Celli**, W. Deng and B.B. Finlay. (2000) Enteropathogenic *Escherichia coli* (EPEC) attachment to epithelial cells: exploiting the host cell cytoskeleton from the outside. *Cell Microbiol*, 2(1): 1-9.