
BIOGRAPHICAL SKETCH

NAME Carlos J. Orihuela	POSITION TITLE		
eRA COMMONS USER NAME ORIHUELA	Assistant Professor		
EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)			
INSTITUTION AND LOCATION	DEGREE (if applicable)	YEAR(s)	FIELD OF STUDY
Baylor University, Waco, TX	B.S.	1991-1996	Biology
Univ. of Texas Medical Branch at Galveston, TX	Ph.D.	1996-2001	Microbiology & Immunology

A. Positions and Honors

Employment

- 2001-2005 Postdoctoral Fellow, Department of Infectious Diseases, St. Jude Children's Research Hospital, Memphis, TN
- 2005-present Assistant Professor, Department of Microbiology & Immunology, University of Texas Health Science Center at San Antonio, TX

Professional Memberships

- 2006-present Member, Barshop Institute for Longevity and Aging Studies

Honors

- 1998 Texas Space Grant Consortium Winter Scholar
- 1998-1999 Texas Space Grant Consortium Graduate Fellowship
- 1998-2001 Science Foundation Minority Graduate Fellowship
- 1999 McLaughlin Travel Award
- 1999 Christina Fleischmann Award
- 2000-2001 Texas Space Grant Consortium Graduate Fellowship
- 2002-2003 Jeane B. Kempner Scholar
- 2007 Barshop Institute for Longevity and Aging Studies Annual Summer Training Course Training Award

B. Publications

- Orihuela CJ, Watson DA. Poor man's dot-blot apparatus. *Biotechniques* 23:1010, 1997.
- Orihuela CJ, Janssen R, Robb CW, Watson DA, Niesel DW. Peritoneal culture alters *Streptococcus pneumoniae* protein profiles and virulence properties. *Infect Immun* 68:6082-6, 2000.
- Robb CW, Orihuela CJ, Ekkelenkamp MB, Niesel DW. Identification and characterization of an in vivo regulated D15/Oma87 homologue in *Shigella flexneri* using differential display polymerase chain reaction. *Gene* 262:169-77, 2001.
- Orihuela CJ, Mills J, Robb CW, Wilson CJ, Watson DA, Niesel DW. *Streptococcus pneumoniae* PstS production is phosphate responsive and enhanced during growth in the murine peritoneal cavity. *Infect Immun* 69:7565-71, 2001.
- Xue L, Orihuela C, Tuomanen E, Morris S. Defective development and function of follicular, marginal zone, and B1 B cells in Bx110-deficient mice. *Nature Immunol* 4:855-865, 2003.
- Orihuela CJ, Gao G, McGee M, Yu J, Francis K, Tuomanen E. Organ-specific models of *Streptococcus pneumoniae* disease. *Scand J Infect Dis* 35:647-652, 2003.

7. Orihuela CJ, Radin JN, Sublett JE, Gao G, Kaushal D, Tuomanen EI. Microarray analysis of pneumococcal gene expression during invasive disease. *Infect Immun* 72:5582-5596, 2004.
8. Orihuela CJ, Gao G, Francis KP, Yu J, Tuomanen EI. Tissue-specific contributions of pneumococcal virulence factors to pathogenesis. *J Infect Dis* 190:1661-1669, 2004.
9. Sandgren A, Albiger B, Orihuela CJ, Tuomanen E, Normark S, Henriques-Normark B. Virulence in mice of pneumococcal clonal types with known invasive disease potential in humans. *J Infect Dis* 192:791-800, 2005.
10. Kadurugamuwa JL, Modi K, Yu J, Francis KP, Orihuela C, Tuomanen E, Purchio AF, Contag PR. Noninvasive monitoring of pneumococcal meningitis and evaluation of treatment efficacy in an experimental mouse model. *Mol Imaging* 4:137-142, 2005.
11. Radin JN, Orihuela CJ, Murti G, Guglielmo C, Murray PJ, Tuomanen EI. β -Arrestin 1 Participates in Platelet-Activating Factor Receptor-Mediated Endocytosis of *Streptococcus pneumoniae*. *Infect Immun* 73:7827-7835, 2005.
12. Orihuela CJ, Fogg G, DiRita V and Tuomanen E. Bacterial Interactions with Mucosal Epithelial Cells. In: *Mucosal Immunology*, 3rd Edition. Mestecky J, Strober W, et al. (eds.). Academic Press, NY; 2005.
13. Mann B, Orihuela C, Antikainen J, Gao G, Sublett J, Korhonen TK, Tuomanen E. Multifunctional role of choline binding protein g in pneumococcal pathogenesis. *Infect Immun* 74:821-829, 2006.
14. Orihuela CJ and Tuomanen EI. Models of pneumococcal disease. *Drug Discov Today: Disease Models* 3:69-75, 2006.
15. Orihuela CJ, Fillon S, Hope Smith-Sielicki S, El Kasmi, KC, Gao G, Soulis K, Patil A, Murray PJ and Tuomanen EI. Cell Wall-Mediated Neuronal Damage in Early Sepsis. *Infect Immun* 74:3783-3789, 2006.
16. Orihuela CJ & Tuomanen. *Streptococcus pneumoniae*: Invasion and Inflammation. In: *Gram-Positive Pathogens*, 2nd Edition. Fischetti V, Novick R, et al. (eds.). ASM Press, Washington, DC; 2006, pp. 253-267.
17. Obert C, Sublett J, Kaushal D, Hinojosa E, Barton T, Tuomanen EI and Orihuela CJ. Identification of a candidate *Streptococcus pneumoniae* core genome and regions of diversity correlated with invasive pneumococcal disease. *Infect Immun* 74:4766-4777, 2006.
18. Fillon S, Soulis K, Rajasekaran S, Benedict-Hamilton H, Radin JN, Orihuela CJ, El Kasmi KC, Murti G, Kaushal D, Gaber MW, Weber JR, Murray PJ, Tuomanen EI. Platelet-activating factor receptor and innate immunity: uptake of gram-positive bacterial cell wall into host cells and cell-specific pathophysiology. *J Immunol* 177(9):6182-6191, 2006.
19. Smith MW, Schmidt JE, Rehg JE, Orihuela CJ and McCullers JA. Induction of pro- and anti-inflammatory molecules in a mouse model of pneumococcal pneumonia following influenza. *Comp Med* 57(1):82-89, 2007.

C. Research Support

Completed Research Support

[Orihuela (PI)]

7/01/2006-6/30/2007

Barshop Institute / Nathan Shock Center for Excellence in the Biology of Aging Pilot Grant

Age-associated inflammation contributes to the susceptibility of the elderly to pneumococcal disease

Determine if caloric restriction, IL-10 therapy, aspirin decreases the susceptibility of elderly mice to pneumococcal infection.

[Orihuela (PI)]

11/01/2005-10/31/2006

Executive Research Committee (ERC) Research Fund

PtpA and PtpB mediated secretion of pneumolysin in *Streptococcus pneumoniae*

To determine if the protein PtpAB are involved in pneumolysin transport and *S. pneumoniae* survival in serum.

5 R01 AI27913-14 [Tuomanen (PI)]

02/01/2000-01/31/2005

NIAID

Bioactivities of Pneumococcal Cell Wall in Meningitis

Design of agents which can act as partner drugs with antibiotics to selectively control the injurious components of the host defense response.

Jeane B. Kempner Scholar [Orihuela (PI)]

07/01/2002-6/30/2003

University of Texas Medical Branch

Pathogenesis of the Pneumococcus in Sickle Cell Disease

To elucidate the mechanism(s) of enhanced susceptibility of children with sickle cell disease and suggest avenues of intervention.