

CURRICULUM VITAE

Fernando P. Polack, M.D

Current Appointments

Cesar Milstein Associate Professor
Vanderbilt Vaccine Center &
Division of Infectious Diseases
Department of Pediatrics
Vanderbilt University
Nashville, Tennessee
Ph: 615-936-7852

Director,
Fundación INFANT
Gavilán 94
CABA, CP1406
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Education

Colegio Nacional de Buenos Aires, University of Buenos Aires, Argentina; Bachelor Degree. 1985

School of Medicine, University of Buenos Aires, Buenos Aires, Argentina; Medical Education. 1990

CLINICAL ACTIVITIES

Certification

Licensure

1990	Argentinean Medical License. License # 83428, Date 06/03/15
1993	Michigan Medical License
1999	Maryland Medical License
2009	Tennessee Medical License – in process.

Hospital Appointments

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1999-2008 Attending Physician. Pediatric Infectious Diseases. Department of Pediatrics. Johns Hopkins University. Baltimore, MD. Effort: 10%

Advisory Committees

2003-to date Executive Director, Fundacion INFANT

2004 Ad-Hoc Reviewer. 27th Red Book. American Academy of Pediatrics.

2004 Reviewer. Public Health Grants. Secretary of Foreign Affairs. Denmark.

2005 Temporary Advisor, World Health Organization, Healthy Environments for Healthy Children Initiative, Buenos Aires, Argentina.

2007 Advisor, Medical Science Committee, CONICET, Argentina.

2007 Member, Medical Science Committee, CONICET, Argentina

2007 Reviewer, Thrasher Research Fund, Salt Lake City, Utah

2009 Reviewer, Burroughs Wellcome Foundation, UK

2009 Reviewer, Special Challenge Awards, NIAID, National Institutes of Health.

2009 Study Section Member, Partnerships for Development of Vaccines for Selected Pathogens, NIAID, National Institutes of Health.

2010 Reviewer, Project Grant Application, NHRMC, Australia.

Boards

2003 Diplomat in Pediatrics, American Board of Pediatrics (recertification)

2001 Diplomat in Pediatric Infectious Diseases, American Board of Pediatrics

1996 Diplomat in Pediatrics, American Board of Pediatrics

1993 FLEX part I and part II

1992 ECFMG part I and part II

Postgraduate and Fellowship Training

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Department of Pediatrics, French Hospital, University of Buenos Aires, Buenos Aires, Argentina. Intern and Resident. 1991-1993

Department of Pediatrics, William Beaumont Hospital, Royal Oak, Michigan. Intern and Resident. 1993-1996

Division of Pediatric Infectious Diseases Department of Pediatrics, The Johns Hopkins University, Baltimore, Maryland. Post-doctoral Fellow. 1996-1999

Academic Appointments

1999-2006 Assistant Professor, Division of Infectious Diseases, Department of Pediatrics, School of Medicine, The Johns Hopkins University, Baltimore, Maryland

2003- Scientific Director, INFANT Foundation, Buenos Aires, Argentina.

2006-2009 Associate Professor, Division of Infectious Diseases, Department of Pediatrics, School of Medicine, The Johns Hopkins University, Baltimore, Maryland

2006-2009 Director. Pan-American Infant Network. Department of Pediatrics, School of Medicine, The Johns Hopkins University, Baltimore, Maryland.

2009- Associate Professor, Division of Infectious Diseases, Department of Pediatrics, Vanderbilt University, Nashville, Tennessee.

2009- Cesar Milstein Chair in Pediatric Immunology, Vanderbilt Vaccine Center, Vanderbilt University, Nashville, Tennessee.

Joint Appointments

2000-2009 Joint Appointment, Department of Molecular Microbiology and Immunology, School of Hygiene and Public Health, The Johns Hopkins University, Baltimore, Maryland

2001- 2009 Joint Appointment, Department of International Health, School of Hygiene and Public Health, The Johns Hopkins University, Baltimore, Maryland

EDUCATIONAL ACTIVITIES

Classroom and Clinical Instruction

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- 1999-2003 Pediatric Infectious Disease Lecture Series for Pediatric Residents. Mon-Thurs discussion of common infectious disease problems encountered during pediatric practice. Department of Pediatrics. Johns Hopkins University.
- 2003 Teaching Attending for Medical Students. Department of Pediatrics. Johns Hopkins University.
- 2007- Co-Director. Translational Health Science Internship in Argentina. Georgetown University.

CME Instruction

- 1999 Trends in Pediatrics, Johns Hopkins University, Baltimore, Maryland. Vaccines for the 21st century. Speaker.
- 2000 Trends in Pediatrics, Johns Hopkins University, Baltimore, Maryland. Respiratory vaccines for the next century. Speaker.
- 2000 Allergy and Immunology for the Practitioner, Johns Hopkins University, Baltimore, Maryland. Antibiotic management of otitis media. Speaker.
- 2002 Trends in Pediatrics, Johns Hopkins University, Baltimore, Maryland. Vaccines in the 21st century. Speaker.
- 2004 The Seventh Annual Conference on Vaccine Research. National Foundation for Infectious Diseases. Antibody maturation and its role in immune protection. Arlington, VA. Speaker.
- 2004 Interscience Conference on Antimicrobial Agents and Chemotherapy. Washington, DC. Enhanced diseases caused by vaccines against paramyxoviruses. Speaker.
- 2007 Trends in Pediatrics, Johns Hopkins University, Baltimore, Maryland. The human metapneumovirus. Speaker.

Mentoring

Faculty

- 2009- Kathryn Miller, MD (USA). Assistant Professor, Department of Pediatrics, Vanderbilt University
- 2009- Guillermina A. Melendi, MD (USA/Argentina). Assistant Investigator. Fundacion INFANT, Buenos Aires, Argentina

Postdoctoral

- 2001-2002 Dario R. Lirman, MD (USA). Subsequent position: Pediatric resident; Children's Hospital of Pennsylvania, University of Pennsylvania.
- 2001-2003 Federico R. Laham, MD (Argentina & USA). Award: Pediatric Resident Research award, American Academy of Pediatrics. Subsequent position: Pediatric resident; Jackson Hospital, University of Miami.
- 2003- 2007 Maria Elina Serra, MD (Argentina). Subsequent position: Medical ViceDirector, Unitrials S.A., Buenos Aires, Argentina.
- 2004- 2008 Maria Ines Klein, MD (Argentina). Award: Iberoamerican Society for Neonatology Award 2005. Subsequent Position: Director, Infant Andes, Neuquen, Argentina
- 2004- Guillermina A. Melendi, MD. (USA). Awards: Early Career Research Award, Thrasher Foundation. Fogarty Early Career Award, NIH. Subsequent Position: Faculty (Assitant Investigator) at INFANT Foundation.
- 2007- Niranjan Bhat, MD (USA). Awards: Pediatric Infectious Diseases Society MedImmune Award 2007; Bauerschmidt Research Award, Johns Hopkins University 2008. Subsequent Position: Assistant Professor, Department of Pediatrics, Johns Hopkins University.
- 2007- Johanna Hernandez, MD (USA)
- 2008- Romina Libster, MD (Argentina)
- 2008- Jimena Bugna Hortonedo (Argentina). Award: Arturo Onativia Award, Ministry of Argentinean Health, Argentina.
- 2009- Maria Florencia Delgado, PhD (Argentina). Award: Post-Doctoral Training Grant of the National Council for Scientific Research (CONICET) 2009

- 2010- Georgina Di Gennaro, MD (Argentina).
- 2010- Martin Ferolla, MD (Argentina). Award: Doctoral Training Grant of the National Council for Scientific Research (CONICET) 2010
- 2010- Jimena Bugna Hortonedo (Argentina). Award: Fogarty Early Career Award, NIH. Post Doctoral fellow at Fundación INFANT.

Predoctoral

- 2003-2008 Maria Florencia Delgado, MS. (Argentina) PhD candidate. University of Buenos Aires. Awards: International Fellowship Award from American Society for Microbiology 2004 - Doctoral Training Grant of the National Council for Scientific Research (CONICET) 2006- Travel Award RSV Symposium 2007- Marco Island.
- 2003-2006 Maria Paula Schiatti, MS. (Argentina) PhD candidate. University of Buenos Aires. Award: Doctoral Training Grant of the National Council for Scientific Research (CONICET) 2005. Subsequent position: Wyeth Lederle.
- 2003- Silvina A. Coviello, MS (Argentina). PhD candidate. University of Buenos Aires. Award: Doctoral Training Grant of the National Council for Scientific Research (CONICET) 2005.
- 2006 Ana Clara Monsalvo, MS. (Argentina) PhD candidate. University of Buenos Aires. Award: Doctoral Training Grant of the National Council for Scientific Research (CONICET) 2007.
- 2006- Juan Pío Batalle, MS. (Argentina) PhD candidate. University of Buenos Aires. Award: Doctoral Training Grant of the National Council for Scientific Research (CONICET) 2007.
- 2009- Paula Scalzo, MS (Argentina) Award: Doctoral Training Grant of the National Council for Scientific Research (CONICET) 2009
- 2009- Patricio Acosta, MS (Argentina) Award: Doctoral Training Grant of the National Council for Scientific Research (CONICET) 2009
- 2010 Maria Florencia López (Argentina)

Student and Post-Doc Recognition Awards (excluding training grants)

- 2004 Maria Florencia Delgado, PhD Candidate at INFANT Foundation. Award: International Fellowship Award from American Society for Microbiology. Project: Mechanisms of lack of affinity maturation in inactivated vaccines against respiratory syncytial virus.
- 2005 Maria Ines Klein, MD. Post-Doctoral fellow at INFANT Foundation. Sociedad Iberoamericana de Neonatología (SIBEN; Iberoamerican Society of Neonatology). Project: The preventive role of breastfeeding in rehospitalization of very low birth weight infants with acute lower respiratory infection.
- 2005 Federico R. Laham, MD. Pediatric Resident at Jackson Memorial, Miami, FL. Award: American Academy of Pediatrics Research Award. Project: Modulation of the cytotoxic T lymphocyte response against human metapneumovirus by the conserved cysteine-rich region of the attachment glycoprotein of respiratory syncytial virus.
- 2006 María Inés Klein, MD. Post-Doctoral fellow at INFANT. Project: The preventive role of breastfeeding in rehospitalization of very low birth weight infants with acute lower respiratory infection. Pediatric Hospital J. P. Garrahan Best Research Project Award.
- 2005 Niranjana Bhat, MD. Post-doctoral fellow at Johns Hopkins. Project: The role of human rhinovirus in asthmatic exacerbations. Pediatric Infectious Diseases Society MedImmune Award 2007.
- 2006 Niranjana Bhat, MD. Post-doctoral fellow at Johns Hopkins. Project: Evaluation of low dose influenza vaccine in infants and young children. Bauerschmidt Research Award. Department of Pediatrics. Johns Hopkins University
- 2008 Guillermina A. Melendi, MD. Post-doctoral fellow at Johns Hopkins. Project: The role of type I interferon in severe pediatric influenza. Early Career Thrasher Award, Thrasher Foundation.
- 2008 Maria Ines Klein, MD. Post-Doctoral fellow at INFANT Foundation. Project: Differential gender response to the protective effect of breast milk. Luis Pasteur Award, National Academy of Medicine, Argentina.
- 2009 Guillermina A. Melendi, MD. Post-doctoral fellow at Vanderbilt University. Project: Materno-fetal transmission of dengue virus in NE Argentina. Fogarty Early Training Grant, NIH.
- 2009 Jimena Bugna Hortonedá, MD. Post-doctoral fellow at INFANT. Project: Seroepidemiology of dengue virus type 1 and 3 in NE and

NW Argentinean infants. Arturo Onativia Ministry of Health Award, Argentina.

2010 Jimena Bugna Hortonedá, MD. Post-doctoral fellow at Fundaci3n INFANT. Scholarship award to attend "2nd Summer Institute in Statistics and Modeling in Infectious Diseases". University of Washington. Seattle, USA

2010 Jimena Bugna Hortonedá, MD. Post-doctoral fellow at Fundaci3n INFANT. Fogarty International Clinical Research Fellows Program Award. National Institutes of Health. USA

Thesis Committees

2002- Sally Permar. PhD candidate. Johns Hopkins University. Bloomberg School of Public Health. Member of committee.

2003- Garry Blinderg. PhD candidate. Johns Hopkins University. Bloomberg School of Public Health. Member of committee.

2004- Joshua Shinhoff. PhD candidate. Johns Hopkins University. Bloomberg School of Public Health. Member of committee.

Editorial Activities

Editorial Board

Environmental Health Perspectives (NIEHS)

Ad-Hoc Reviewer

Viral Immunology
European Journal of Respiratory Diseases
Journal of Virology
Journal of Pediatric Hematology and Oncology
Journal of Infectious Diseases
Microbiology and Molecular Biology Reviews
Pediatric Infectious Disease Journal
Antimicrobial Agents and Chemotherapy
Journal of Clinical Microbiology
Journal of General Virology
American Journal of Pathology
American Journal of Epidemiology

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Virology
Cell Host & Microbe
Pediatrics
Vaccine
Journal of Immunology
Cell
Mucosal Immunology

ORGANIZATIONAL ACTIVITIES

Professional Societies

Society for Pediatric Research
Pediatric Infectious Diseases Society
Sociedad Argentina de Pediatría
American Society for Microbiology

RECOGNITION

Awards & Honors

- | | |
|------|--------------------------------------------------------------------------------------------------------------------------------------------|
| 1990 | Graduated with Honors, School of Medicine, University of Buenos Aires, Argentina. |
| 1995 | House Staff Representative, Research Institute Board of Governors, William Beaumont Hospital, Royal Oak, Michigan |
| 1997 | Harriet Lane House Staff Recognition Award, Department of Pediatrics, The Johns Hopkins Hospital, Baltimore, Maryland |
| 1998 | Infectious Diseases Society of America, Pasteur Mérieux Connaught Laboratories Fellowship in Pediatrics |
| 2001 | The Thomas and Carol McCann Award in Innovative Respiratory Research. Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland |
| 2006 | Young Investigator Award, Society for Pediatric Research |
| 2008 | Luis Pasteur Award, National Academy of Medicine, Argentina |
| 2009 | Cesar Milstein Endowed Chair in Pediatric Immunology, Vanderbilt University, Nashville, Tennessee |

- 2009 Personalidad Destacada de la Ciencia (“Distinguished Citizen in the Field of Sciences”) de la Ciudad de Buenos Aires. Buenos Aires Legislature, Argentina
- 2010 Society for Pediatric Research E. Mead Johnson Award for Research in Pediatrics

Research Program

Grants

- 1999-2004 Co-Investigator. Bill & Melinda Gates Foundation. Development of a measles vaccine for infants. Principal Investigator: Diane E. Griffin, PhD. Effort: 5%
- 1999-2005 Co-Investigator. N01AI15444. Phase 1 testing of respiratory virus vaccines. Principal Investigator: Ruth A. Karron, MD. NIAID, National Institutes of Health. Effort: 10%
- 2003-2006 Principal Investigator. Role of innate immunity in severity of RSV disease in infants (Buenos Aires, Argentina). Total direct cost: \$544,000. Current year direct cost: \$297,000. Percent effort: 25%
- 2004-2007 Co-Investigator. Bill & Melinda Gates Foundation. Development of a rhesus macaque model of dengue hemorrhagic fever. Principal Investigator: Anna Durbin, MD. Effort: 5%
- 2004-2005 Principal Investigator. R21AI54952. Pathogenesis of enhanced respiratory syncytial virus disease. Total direct cost: \$225,000 Current year direct cost: \$225,000. NIAID, National Institutes of Health. Effort: 50%.
- 2005-2010 Principal Investigator. R01AI54952. Pathogenesis of enhanced respiratory syncytial virus disease. Total direct cost: \$1,125,000. Current year direct cost: \$225,000. NIAID, National Institutes of Health. Effort: 50%.
- 2007-2009 Principal Investigator, Thrasher Research Fund. The role of human metapneumovirus in asthmatic exacerbations in pediatric patients. Total direct cost: \$399,000. Current year direct cost: \$199,500. Effort: 10%
- 2007-2012 Principal Investigator. National Institute of Environmental Health Sciences, NIH. Director’s Challenge. Role of antioxidant genes in

debilitating diseases in very low birth weight infants (Buenos Aires, Argentina). Total direct cost: \$1,075,000. Current year direct cost: \$215,000. Percent effort: 25%

2008-2011 Principal Investigator, UBS/ Optimus Foundation. Understanding dengue hemorrhagic fever. Total direct cost: \$570,000. Current year direct cost: \$190,000.

2008-2013 Principal Investigator, Translational Research Program on Pediatric Respiratory Diseases, SeCyT (Secretary of Health and Technology), Argentinean Ministry of Health, Total direct cost: \$582,000. Research Activities

2010-2011 Principal Investigator, Abbott Nutrition. Identify breast milk components that promote production of type I interferons against RSV and influenza virus infections in the upper respiratory tract.. Total direct cost: 140,000. Current year direct cost: \$80,000.

Grants In Review

2011-2016 Principal Investigator. R01AI54952. (Revision Pending) Pathogenesis of enhanced respiratory syncytial virus disease. NIAID, National Institutes of Health. Total direct cost: \$1,250,000.

Peer Reviewed Articles

1. **Polack FP**, Tufaro PC, Viard MV, Polack NR. Pediatric Crohn's disease in an adolescent. *Arch Arg Pediatr* 1993; 91:303-307
2. **Polack FP**, Transue DJ, Belknap WM, Freij BJ, Aughton DJ. Transient elevation of sweat chloride concentration in a malnourished girl with the Mauriac syndrome. *J Pediatr* 1995; 126: 261-263
3. **Polack FP**, Freij BJ. Atypical Kawasaki disease in infants: clinical and laboratory manifestations. *Arch Arg Pediatr* 1997; 95: 39- 44
4. **Polack FP**, Coluccio M, Ruttimann R, Gaivironsky RA, Polack NR. Infected stingray injury. *Pediatr Infect Dis J* 1998, 17: 349,360
5. **Polack FP**, Harrington S, Winkelstein JA, Merz W, Willoughby RE. Recurrent Francisella philomiragia in chronic granulomatous disease *Pediatr Infect Dis J* 1998; 17: 442-443

6. Willoughby RE, **Polack FP**. Meningitis in Children. *Contemporary Pediatrics* 1998; 15: 49-70.
7. **Polack FP**, Kahn N, Maisels MJ. Changing formulas. The dance of infant formula changes. *Clin Pediatr* 1999, 38: 703-708.
8. **Polack FP**, Auwaerter PG, Lee SH, Nousari HC, Valsamakis A, Leiferman KIVI, Diwan AD, Adams RJ, Griffin DE. Atypical measles: evidence for disease mediated by immune complex formation and eosinophils in the presence of fusion inhibiting antibodies. *Nature Med* 1999; 5: 629-634.
9. Willoughby RE, **Polack FP**. What's new in meningitis in children? *Patient Care* 1999; 33: 237-54
10. **Polack FP**, Flayhart DC, Zahurak MA, Dick JD, Willoughby RE. Colonization and antibiotic resistance of *Streptococcus pneumoniae* in children infected with the human immunodeficiency virus. *Pediatr Infect Dis J* 2000; 19: 608-612.
11. **Polack FP**, Lee SH, Permar S, Manyara E, Nousari HC, Mustafa F, Valsamakis A, Adams RJ, Robinson HL, Griffin DE. DNA vaccines against measles virus: Protection associated with neutralizing antibodies against either the H or F protein in the absence of atypical measles. *Nature Med* 2000; 6: 776-781.
12. Moss WJ, **Polack FP**. Immune responses to measles and measles vaccines. Challenges for reducing measles mortality and the elimination of measles. *Viral Immunol* 2001; 14:297-309.
13. **Polack FP**, Hoffman SJ, Moss WJ, Griffin DE. Altered synthesis of interleukin-12, type 1 and type 2 cytokines in rhesus macaques during measles and atypical measles. *J Infect Dis* 2002; 15:13-19
14. **Polack FP**, Teng MN, Collins PL, Prince GA, Exner M, Regele H, Lirman DD, Rabold R, Hoffman SJ, Karp CL, Kleeberger SR, Wills-Karp M, Karron RA. A role for immune complexes in enhanced respiratory syncytial virus disease. *J Exp Med* 2002; 196: 859-65* *Science*, Editor's Choice: Oct 11,2002 & Faculty 1000, Top Ten Hidden Jewels in Microbiology 9/2002
15. **Polack FP**, Hoffman SJ, Moss WJ, Griffin DE. Cytokine responses to measles virus challenge after priming with measles DNA vaccines encoding the hemagglutinin and/or fusion protein. *J Infect Dis*. 2003; 187:1794-800.

16. Permar SR, Klumpp SA, Mansfield KG, Kim WK, Gorgone DA, Lifton MA, Williams KC, Schmitz JE, Reimann KA, Axthelm MK, **Polack FP**, Griffin DE, Letvin NL. Role of CD8(+) lymphocytes in control and clearance of measles virus infection of rhesus monkeys. *J Virol* 2003, 77:4396-400.
17. **Polack FP**, Hoffman SJ, Crujeiras G, Griffin DE. A role for nonprotective complement fixing antibodies with low avidity for measles virus in atypical measles. *Nature Med* 2003, 9:1209-1213. *Selection in Faculty 1000
19. Hoffman SJ, **Polack FP**, Hauer D, Billiter M, Shingh M, Griffin DE. Vaccination of rhesus macaques with a recombinant measles virus expressing interleukin-12 alters humoral and cellular immune responses. *J Infect Dis.* 2003 188:1553-61
20. Hoffman SJ, **Polack FP**, Hauer D, Griffin DE. Measles virus infection of rhesus macaques affects neutrophil expression of IL-12 and IL-10. *Viral Immunol.* 2003;16: 369-79.
21. Laham FR, Israele V, Casellas JM, Garcia AM, Lac Prugent CM, Hoffman SJ, Hauer D, Thumar B, Name MI, Pascual A, Taratutto A, Ishida MT, Balduzzi M, Maccarone M, Gaivironsky RA, Karron RA; **Polack NR, Polack FP**. Differential production of inflammatory cytokines between primary infection with human metapneumovirus and other common respiratory viruses of infancy. *J Infect Dis.* 2004; 189:2047-56.
21. **Polack FP**, Karron RA. The future of RSV vaccine development. *Pediatr Infect Dis J* 2004; 23:S65-73.
22. Permar SR, Klumpp SA, Mansfield KG, Kim WK, Gorgone DA, Lifton MA, Williams KC, Schmitz JE, Reimann KA, Axthelm MK, **Polack FP**, Griffin DE, Letvin NL. Limited contribution of humoral immunity to the clearance of measles viremia in rhesus monkeys. *J Infect Dis.* 2004; 190:998-1005.
23. Hoffman SJ, Laham FR, **Polack FP**. Mechanisms of illness during respiratory syncytial virus infection: the lungs, the virus and the immune response. *Microbes Infect.* 2004; 6:767-72.
24. Serra ME, Witeeven R, **Polack FP**. The human metapneumovirus: what impact on your patients? *Contemporary Peds* 2004; 25:18-28.
25. Delgado MF, **Polack FP**. Involvement of antibody, complement and cellular immunity in the pathogenesis of enhanced respiratory syncytial virus disease. *Expert Rev Vaccines* 2004; 3:693-700.

26. Karron RA, Wright PF, Belshe RB, Thumar B, Casey R, Newman F, **Polack FP**, Randolph VB, Deatly A, Hackell J, Gruber W, Murphy BR, Collins PL. Identification of a recombinant live attenuated respiratory syncytial virus vaccine candidate that is highly attenuated in infants. *J Infect Dis*. 2005; 191:1093-104.
27. Coviello S, **Polack FP**. Prophylactic and therapeutic approaches against respiratory syncytial virus. *Curr Med Chem-Anti-Infect Agents* 2005; 4:67-73
28. **Polack FP**, Irusta PM, Hoffman SJ, Schiatti MP, Melendi GA, Delgado MF, Laham FR, Thumar B, Hendry RM, Melero JA, Karron RA, Collins PL, Kleeberger SR. The cysteine-rich region of respiratory syncytial virus attachment protein inhibits innate immunity elicited by the virus and endotoxin. *Proc Natl Acad Sci* 2005, 102: 8996-9001. *Selection in Faculty 1000
29. Pan CH, Valsamakis A, Colella T, Nair N, Adams RJ, **Polack FP**, Greer CE, Perri S, Polo JM and Griffin DE. Modulation of disease, T cell responses and measles virus clearance in monkeys vaccinated with H-encoding alphavirus replicon particles. *Proc Natl Acad Sci* 2005, 102:11581-8.
30. Klein MI, Coviello S, Bauer G, Benitez A, Serra ME, Schiatti MP, Delgado MF, Melendi GA, Novalli L, Gonzalez Pena H, Karron RA, Kleeberger SR, **Polack FP**. The impact of infection with human metapneumovirus and other respiratory viruses in young infants and children at high risk for severe pulmonary disease. *J Infect Dis* 2006, 193:1544-51.
31. Bukreyev A, Serra ME, Laham FR, Melendi GA, Kleeberger SR, Collins PL, **Polack FP**. The cysteine-rich region and secreted form of the attachment G glycoprotein of respiratory syncytial virus enhance the cytotoxic T lymphocyte response despite lacking MHC class I-restricted epitopes. *J Virol* 2006, 80:5854-61. Editor's Choice.
32. Melendi GA, Laham FR, Monsalvo AC, Casellas JM, Israele V, Polack NR, Kleeberger SR, **Polack FP**. Virus-specific cytokine signatures in the respiratory tract during primary infection. *Pediatrics* 2007; 120: e410-5.
33. Melendi GA, Hoffman SA, Karron RA, Irusta PM, Laham FR, Humbles A, Schofield B, Pan CH, Rabold R, Thumar B, Thumar A, Gerard NP, Mitzner W, Barnum SR, Gerard C, Kleeberger SR, **Polack FP**. C5 modulates airways hyperreactivity and pulmonary eosinophilia during enhanced respiratory syncytial virus disease by decreasing C3a receptor expression. *J Virol* 2007; 81:991-99. Editor's Choice.

34. Melendi GA, Zavala F, Bucholz UJ, Collins PL, Kleeberger SR, **Polack FP**. Mapping and characterization of the primary and anamnestic H-2^d restricted cytotoxic T lymphocyte response against human metapneumovirus. *J Virol*. 2007; 81:11461-7.
35. **Polack FP**. Atypical measles and enhanced respiratory syncytial virus disease made simple. *Pediatr Res* 2007; 62:111-5.
36. Klein MI, Coviello S, Bauer G, Bergel E, Benitez A, Serra ME, Delgado MF, Schiatti MP, Melendi GA, Aspres N, Irusta PM, Rodriguez S, Kleeberger SR, **Polack FP**. Differential gender response to the protective effect of breast milk. *Pediatrics* 2008, 121:e1510-6.
37. Pasetti MF, Resendiz-Albor A, Ramirez K, Stout R, Papania M, Adams RJ, **Polack FP**, Ward B, Burt D, Chabot S, Ulmer J, Barry EM, Levine MM. Heterologous prime-boost strategy to immunize very young infants against measles: pre-clinical studies in rhesus macaques. *Clin Pharmacol Ther*. 2007; 82: 672-8.
38. Pan CH, Nair N, Adams RJ, Zink MC, Lee EY, **Polack FP**, Singh M, O'Hagan DT, Griffin DE. Dose-dependent protection or exacerbation of disease by a PLG microparticle-adsorbed, alphavirus-based measles DNA vaccine in rhesus macaques. *Clin Vaccine Immunol*. 2008; 15:214-21
39. Cho HY, Imani F, Miller-Degraff L, Walters D, Melendi GA, Yamamoto M, Polack FP, Kleeberger SR. Antiviral Activity of Nrf2 in a Murine Model of Respiratory Syncytial Virus (RSV) Disease. *Am J Respir Crit Care Med*. 2009; 179:138-50.
40. Delgado MF; Coviello S; Monsalvo AC; Melendi GA; Hernandez JZ; Batalle JP; Diaz L; Trento A; Chang H-Y; Mitzner W; Ravetch J; Melero JA; Irusta PM; **Polack FP**. Lack of antibody affinity maturation due to poor Toll stimulation led to enhanced RSV disease. *Nature Med* 2009;14:34-41*
* Science Editor's Choice *Nat Biotechnology Editor's Choice
41. Libster R, Bugna-Hortonedo J, Laham F, Casellas JM, Israele V, Klein MI, **Polack FP**. *Pediatr Infect Dis J* 2009; 28:131-4.
42. Libster R, Bugna J, Coviello S, Hijano DR, Dunaiewsky M, Reynoso N, Cavalieri ML, Guglielmo MC, Areso MS, Gilligan T, Santucho F, Cabral G, Gregorio GL, Moreno R, Lutz MI, Panigasi AL, Saligari L, Caballero MT, Egües Almeida RM, Gutierrez Meyer ME, Neder MD, Davenport MC, Del Valle MP, Santidrian VS, Mosca G, Garcia Domínguez M, Alvarez L, Landa P, Pota A, Boloñati N, Dalamon R, Sanchez Mercol VI, Espinoza M, Peuchot JC, Karolinski A, Bruno M, Borsa A, Ferrero F, Bonina A, Ramonet

M, Albano LC, Luedicke N, Alterman E, Savy V, Baumeister E, Chappell JD, Edwards KM, Melendi GA, **Polack FP**. Pediatric hospitalizations associated with 2009 pandemic influenza A (H1N1) in Argentina. *N Engl J Med*. 2010; 362:45-55.

43. Melendi GA, Coviello S, Bhat N, Zea-Hernandez J, Martin Ferolla F, **Polack FP**. Breastfeeding is associated with production of type I interferon in infants infected with influenza virus. *Acta Paediatr*. 2010 May 3

Book Chapters

1. Goetting MG, **Polack FP**. Status Epilepticus, in Jaimovich D, Vidyasagar D(eds.). Handbook of Pediatric and Neonatal Transport Medicine. Hanley and Belfus, Philadelphia; 1996; 241-256
2. Melendi GA, **Polack FP**. The human metapneumovirus, in Jaimovich (ed.). Pediatric Infectious Diseases for the Practitioner. Editorial Panamericana, 2006.

Abstracts

1. **Polack FP**, Freij BJ, Riggs T, Weinhouse E, Fink-Bennet D. Pericholecystic and periportal fluid collections without gallbladder hydrops and diminished hepatic gallium- 67 citrate uptake in an 11 week old girl with atypical Kawasaki disease. *Pediatr Res* 1995; 37: 1102.
2. **Polack FP**, Freij BJ. Atypical Kawasaki disease in infants six months of age or younger: 1. Is it the same disorder as Infantile periarteritis nodosa? *Pediatr Res* 1995; 37:1100.
3. **Polack FP**, Freij BJ. Atypical Kawasaki disease in infants six months of age or younger- 11. Clinical, laboratory, and cardiac features. *Pediatr Res* 1995; 37: 1101.
4. Batton DG, **Polack FP**, Swails TL. Cystic periventricular leukomalacia.. incidence, timing, and clinical setting. *Pediatr Res* 1995; 37:1483.
5. **Polack FP**, Kahn N, Maisels MJ. Changing partners. The dance of infant formula changes. *Pediatr Res* 1996; 39: 814
6. **Polack FP**, Flayhart DC, Zahurak MA, Dick JD, Willoughby RE. Nasopharyngeal carriage of *Streptococcus pneumoniae* in children infected with the human immunodeficiency virus. *Pediatr Res* 1998; 43: 892

7. **Polack FP**, Valsamakis A, Adams RJ, Jeng Y, Griffin DE. Antibody response to measles virus formalin inactivated vaccine or measles virus live attenuated vaccine in rhesus monkeys. *American Society of Virology* 1998; #W24-6.
8. **Polack FP**, Lee SH, Nousari HC, Adams RJ, Valsamakis A, Manyara E, Jeng Y, Griffin DE. Immune response to formalin inactivated, alum-precipitated, measles virus vaccine and "atypical" measles in rhesus monkeys. *Infectious Diseases Society of America* 1998, A714.
9. **Polack FP**, Lee SH, Jeng Y, Valsamakis A, Adams RJ, Robinson HL, Griffin DE. Immunogenicity, safety and protective efficacy of cDNA vaccines against measles in rhesus macaques. *Keystone Symposia on Molecular and Cellular Biology* 1999; AI 28.
10. **Polack FP**, Auwaerter PG, Lee SH, Nousari HC, Valsamakis A, Leiferman KM, Diwan AD, Adams RJ, Griffin DE. Atypical measles: Immune complex deposition and eosinophilia. *American Society of Virology* 1999: P268.
11. Griffin DE, **Polack FP**, Robinson HR. Measles DNA vaccines. *Negative strand virus meeting*. Sienna, Italy, 2002
12. **Polack FP**, Karron RA, Hoffman SJ, Laham FR, Barnum SR, Gerard C. Complement component C5 regulates bronchoconstriction during enhanced respiratory syncytial virus disease. *RSV Symposium*, Atlanta, GA 2003.
13. Laham FR, Karron RA, Israele V, Casellas JM, Lac Prugent CM, Gaivronsky RA, Polack NR, **Polack FP**. Differential production of inflammatory cytokines between primary infection with human metapneumovirus and other common respiratory viruses of infancy. *RSV Symposium*, Atlanta, GA 2003.
14. Melendi GA, Karron RA, Thumar B, Kleeberger SR, **Polack FP**. The severe pulmonary disease caused by co-infection of respiratory syncytial virus and human metapneumovirus is associated with enhanced production of inflammatory cytokines. *ICAAC*; 174 (V); Washington DC 2004.
15. Klein MI, Bauer G, Benitez A, Coviello S, Aspres L, Bouzas H, Gonzalez Pena H, **Polack FP**. Epidemiology of respiratory infections in infants at high risk for pulmonary disease in a developing country. Iberoamerican Society of Neonatology (SIBEN); Isla Margarita, Venezuela 2005.
16. Melendi GA, Zavala F, Bucholz UJ, Collins PL, Kleeberger SR, **Polack FP**. Mapping and characterization of the primary and anamnestic H-2^d restricted

cytotoxic T lymphocyte response against human metapneumovirus. *ICAAC*; San Francisco, CA 2006.

17. Klein MI, Coviello S, Bauer G, Bergel E, Benitez A, Serra ME, Delgado MF, Schiatti MP, Melendi GA, Aspres N, Irusta PM, Rodriguez S, Kleeberger SR, **Polack FP**. Differential gender response to the protective effect of breast milk. *IDSA 2007*. Toronto, Canada.
18. Delgado MF, Coviello S, Melendi GA, Trento A, Hernandez JZ, Kleeberger SR, Melero JA, **Polack FP**. A critical role for TLR activation in the pathogenesis of enhanced RSV disease. *RSV Symposium, Marco Island 2007*.
19. Serra ME, Marzec J, Salim M, Coviello S, Melendi GA, Delgado MF, Monsalvo AC, Batalle J, Kleeberger SR, **Polack FP**. The association between TLR4 and severe RSV bronchiolitis. *RSV Symposium, Marco Island 2007*.
20. Coviello S, Batalle JP, Delgado MF, Melendi GA, Pontoriero A, Collins PC, Savvy V, **Polack FP**. TLR4 interaction with the RSV glycoproteins determines antibody production. *RSV Symposium, Marco Island 2007*.
21. Melendi GA, **Polack FP**, Irusta PM. The role of cysteine residues in the modulatory effect of RSV G. *ICAAC 2008*, Washington DC.
22. Batalle JP, Melendi GA, Delgado MF, **Polack FP**. A murine model of dengue hemorrhagic fever. *Society of Argentinean Virology 2009*, Buenos Aires.
23. Libster R, Bugna Hortoneda R, Klein MI, **Polack FP**. Breastfeeding protects full term infant females better than males against respiratory infections. *Society of Argentinean Virology 2009*, Buenos Aires.
24. Delgado MF, Coviello S, Monsalvo AC, Melendi GA, **Polack FP**. The role of avidity in enhanced respiratory syncytial virus disease. *Society of Argentinean Virology 2009*, Buenos Aires.

Invited Talks

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| 1996 | Pediatric Grand Rounds, William Beaumont Hospital, Royal Oak, Michigan. Title: <i>Atypical Kawasaki disease</i> . |
| 1999 | Pediatric Grand Rounds, Johns Hopkins University, Baltimore, Maryland. Title: <i>Pathogenesis of atypical measles</i> . |

- 2001 Pediatric Grand Rounds, University of Buenos Aires French Hospital, Buenos Aires, Argentina. Title: *The role of antibodies in enhanced diseases associated with inactivated paramyxovirus vaccines.*
- 2001 Gates Foundation, Consultation for a new measles vaccine, Baltimore, Maryland. Title: *Atypical measles: antibodies and eosinophils.*
- 2002 Pediatric Grand Rounds, Hospital Materno Infantil San Isidro, Buenos Aires, Argentina. Title: *Respiratory syncytial virus. Mechanisms of illness and genetic predisposition to severe lower respiratory tract disease.*
2002. Pediatric Grand Rounds, Hospital Frances, Buenos Aires, Argentina. Title: *Respiratory syncytial virus. Mechanisms of illness and genetic predisposition to severe lower respiratory tract disease.*
- 2002 Biological function of antibodies. Symposium. The Henry Jackson Foundation. National Institutes of Health, Bethesda, Maryland. Title: *Role of affinity maturation in protection mediated by antibody. The atypical measles story.*
- 2002 Pulmonary Pathobiology Seminar Series, National Institute of Environmental Health Sciences, NIH, Research Triangle, North Carolina. Title: *Enhanced respiratory syncytial virus disease.*
- 2002 Pediatric Grand Rounds, William Beaumont Hospital, Royal Oak, Michigan. Title: *From a cow to the bench: designing vaccines for the 21st century.*
- 2003 Biological Sciences Research Seminar Series, University of Texas San Antonio, San Antonio, Texas. Title: *The role of complement and antibody in enhanced respiratory syncytial virus disease.*
- 2003 Pediatric Grand Rounds, Johns Hopkins University, Baltimore, Maryland. Title: *The immune system during RSV infection.*
- 2003 Pediatric Grand Rounds, Hospital de Pediatria Juan P. Garrahan, Buenos Aires, Argentina. Title: *The human metapneumovirus.*
- 2003 Pediatric Grand Rounds, Hospital Nacional Posadas, Buenos Aires, Argentina. Title: *The human metapneumovirus.*

- 2003 Congreso Argentino de Pediatria, Mar del Plata, Buenos Aires, Argentina. Title: *From a cow to the bench: designing vaccines for the 21st century.*
- 2004 Pediatric Grand Rounds, Bayview Hospital, Johns Hopkins Medical Institutions, Baltimore, Maryland. Title: *The human metapneumovirus.*
- 2004 Microbiology Seminar Series. Department of Microbiology. University of Buenos Aires, Buenos Aires, Argentina. Title: *Measles virus. Disease potentiation, immune suppression and other problems.*
- 2004 The Seventh Annual Conference on Vaccine Research. National Foundation for Infectious Diseases. Antibody maturation and its role in immune protection. Arlington, VA. Title: *The role of antibody affinity maturation in atypical measles.*
- 2004 Interscience Conference on Antimicrobial Agents and Chemotherapy. Washington, DC. Enhanced diseases caused by vaccines against paramyxoviruses. Title: *Enhanced diseases after vaccination with inactivated vaccines against paramyxoviruses.*
- 2004 Microbial Immunity and Vaccine Development Seminar Series. Bloomberg School of Public Health. Title: *Pathogenesis of enhanced respiratory syncytial virus disease: Role of complement, antibody and cellular immunity.*
- 2005 Respiratory Infections in Premature Babies and Infants. Abbott Laboratories Symposium. Buenos Aires, Argentina. Title: *The human metapneumovirus in infants and young children.*
- 2005 Pediatric Dengue Vaccine Initiative. Gates Foundation. Vail, CO. Title: *Pathogenesis of enhanced respiratory syncytial virus disease: Role of complement, antibody and cellular immunity.*
- 2005 The French Hospital Second International Pediatric Meeting, Buenos Aires, Argentina. Title: *New Vaccines: From a cow to the bench.*
- 2005 Healthy Environments, Healthy Children. World Health Organization/ National Institute of Environmental Health Sciences, Buenos Aires, Argentina. Title: *Respiratory syncytial virus pathogenesis: from bench to bedside.*
- 2006 Respiratory infections in high risk populations. Abbott Laboratories, Buenos Aires, Argentina. Title: *Role of human metapneumovirus in populations at high risk for severe lung disease.*

- 2006 Presidential Plenary. Young Investigator Award 2006. Society for Pediatric Research. Title: *Role of antibody in enhanced diseases due to paramyxoviruses.*
- 2006 Pediatric Dengue Vaccine Initiative. Gates Foundation. Arlington, MD. Title: *A rhesus macaque model of atypical measles.*
- 2006 Infectious Diseases Grand Rounds. Vanderbilt University. Nashville, TN. Title: *Respiratory syncytial virus pathogenesis. From bench to bedside.*
- 2006 Seminars in Respiratory Diseases. Laboratory of Respiratory Biology, NIEHS, NIH, Raleigh, NC. Title: *Respiratory syncytial virus pathogenesis. From bench to bedside.*
- 2006 Translational Science Seminars. Argentinean Medical Association, Buenos Aires, Argentina. Title: *Respiratory syncytial virus glycoproteins and their role in pulmonary disease.*
- 2007 Seminars in Pediatric Pulmonary Diseases. Pontificia Universidade Catolica de Porto Alegre, Porto Alegre, Brazil. Title: *Respiratory syncytial virus pathogenesis. From bench to bedside.*
- 2007 Latinoamerican Meeting on Respiratory Diseases; Rio de Janeiro, Brazil. Title: *Vaccines against respiratory syncytial virus and Impact of respiratory viruses in children.*
- 2007 Pediatric Grand Rounds. Hospital Nacional Juan Fernandez, Buenos Aires, Argentina. Title: *Respiratory syncytial virus pathogenesis. From bench to bedside.*
- 2007 Abbott European Meeting on Respiratory Diseases; Athens, Greece. Title: *Vaccines against respiratory syncytial virus.*
- 2007 6th Respiratory Syncytial Virus International Meeting. Marco Island, Florida. Title: *Respiratory syncytial virus pathogenesis. From bench to bedside.*
- 2007 International Perinatology Conference, Buenos Aires, Argentina. Title: *Development of a translational research program in a developing country.*

- 2008 University of Miami International Meeting in Infectious Diseases. Title; *Bronchiolitis: the role of TLR4 and the immune system in pathogenesis.*
- 2008 FUNDASAMIN Research Symposium, Buenos Aires, Argentina. Title: *Respiratory syncytial virus pathogenesis. From bench to bedside.*
- 2008 Municipalidad de Mendoza, Mendoza, Argentina. Title: *The role of gender on breastfeeding-mediated protection.*
- 2008 Hospital San Rafael, Mendoza, Argentina. Title: *The role of gender on breastfeeding-mediated protection.*
- 2008 Argentinean Society of Virology Meeting, Buenos Aires, Argentina. Title: *Respiratory syncytial virus pathogenesis. From bench to bedside.*
- 2008 Instituto de Pesquisas, Porto Alegre, Brazil. Title: *Respiratory syncytial virus pathogenesis. From bench to bedside.*
- 2008 Resistencia Children's Hospital, Resistencia, Chaco. Title: *The role of gender on breastfeeding-mediated protection.*
- 2009 Turkish Neonatology Meeting, Izmir, Turkey. Title: *The complex relationship between RSV and asthma.*
- 2009 Abbott Neonatology Symposium, Izmir, Turkey. Title: *The role of breastfeeding in protection against respiratory diseases.*
- 2009 Oran State Hospital, Oran, Salta, Argentina. Title: *Dengue: thinking forward.*
- 2009 Bolivian-Argentinean Joint Medicine Meeting, Bermejo, Bolivia. Title: *Dengue: Thinking forward.*
- 2009 Wyeth-Lederle Virology Section Invited Speaker. Wyeth-Lederle, Pearl River, NY. Title: *Respiratory syncytial virus pathogenesis. From bench to bedside.*
- 2009 Jornada Brasileira da Atencao a Saude da Mulher. Porto Alegre, Brazil. Title: *Preventive role of breastfeeding against respiratory viral infections.*

- 2010 Pulmonary Grand Rounds. Vanderbilt University, Nashville, TN. Title: Pandemic influenza: impact in children and insights into pathogenesis.
- 2010 Turkish Neonatology Congress, Badrum, Turkey. Title: Respiratory syncytial virus pathogenesis. From bench to bedside.
- 2010 Presidential Plenary. E. Mead Johnson Award 2010. Society for Pediatric Research. Title: Respiratory infections, the burden of the past.
- 2010 XV Neonatology Meeting Santa Casa, Sao Paulo, Brazil. Title: Preventive role of breastfeeding against respiratory viral infections.

Inventions and Patents

- 2005 The cysteine-rich region of respiratory syncytial virus attachment protein inhibits innate immunity elicited by the virus and endotoxin. Principal Investigator. JHU Reference number 4477. USA and EEC patents.
- 2007 A protective role for estrogen in breast milk-mediated protection against respiratory disease. Principal Investigator. JHU Reference number