



Jean-Pierre GORVEL, PhD

Group leader: Immunology and cell biology
of pathogen/host cell interactions

Background

- 2007-2009 Director, RTRA FINOVI, foundation Innovation in infectiology, Lyon
- 2006-2008 Director, Centre d'Immunologie de Marseille-Luminy
- 2004-2007 Director GDR Biodefence and virulence factors
- 2002 Sabbatical, Project director in vitro assays, Aventis-Pasteur, Toronto, Canada
- 1992- Group leader, Centre d'Immunologie de Marseille-Luminy
- 1989-1991 Post-doctoral fellow EMBL, Heidelberg, (Ger)
- 1987-1990 Ph. D, Centre de Biochimie et de Biologie Moléculaire, Marseille, FR

Awards

- 1982 Société Française de Chimie Biologique.
- 1987 Fondation de la Recherche Médicale in Cell Biology.
- 1993 Société pour la Recherche sur le Cancer FEGGEFLU.
- 2007 Charles-Louis de Saulces de Freycinet, French Academy of Sciences.
- 2010 Jacques Piraud from the Fondation pour la Recherche Médicale.

Membership

Société Française d'Immunologie
Elected Member of the American Academy of Microbiology

Main achievements

First discovery of the role of the small GTPases of the Rab family in membrane trafficking. Rab5 was discovered to be the control key of membrane fusion in endocytosis.

Characterization of the replication niche of the bacterial pathogen Brucella as the endoplasmic reticulum. This allowed the identification and characterization of Brucella virulence factors such as The LPS, the cyclic glucan, the RicA effector and also host cell factors such as the small GTPase Rab2, the GAPDH enzyme and the small GTPase Sar1.

First characterization of the Toll-like receptor domain-containing Brucella protein (Btp1), the function is to down-modulate dendritic cell maturation.

Identification of the SKIP host cell protein as a receptor for the SifA Salmonella effector protein secreted by the Salmonella type III secretion system.

Selected publications

- Gorvel JP, Chavier P, Zerial M and Gruenberg J. Rab 5 controls early endosome fusion in vitro. *Cell*. 1991. 64:915-925.
- Celli, J., de Chastellier C., Franchini D.-M, Pizarro-Cerda J., Moreno E. and Gorvel JP. Brucella evades macrophage killing via VirB-dependent sustained interactions with the endoplasmic reticulum. *Journal Experimental Medicine* 2003 198:545-556.
- Arellano-Reynoso B, Lapaque N, Salcedo S, Briones G, Ciocchini AE, Ugalde R, Moreno E, Moriyon I, Gorvel JP. Cyclic beta-1,2-glucan is a brucella virulence factor required for intracellular survival. *Nat Immunol*. 2005 (6):618-625.
- Boucrot E, Henry T, Borg JP, Gorvel JP, Meresse S. The intracellular fate of Salmonella depends on the recruitment of kinesin. *Science*. 2005 308(5725):1174-8.
- Salcedo et al., Brucella control of dendritic cell maturation is dependent on the Btp1 protein. *PLoS Pathog*. 2008 Feb 8;4(2):e21.
- Lelouard H, Henri S, De Bovis B, Mugnier B, Chollat-Namy A, Malissen B, Méresse S, Gorvel JP. Pathogenic bacteria and dead cells are internalized by a unique subset of Peyer's patch dendritic cells that express lysozyme. *Gastroenterology*. 2010 Jan;138(1):36-9.