

CURRICULUM VITAE

Name	: SANSONETTI	
First name	: Philippe	Middle Name : Joseph
Date of birth	: 9th April 1949	
Citizenship	: French	

Current employments

1 - **Professeur titulaire**, Chaire de Microbiologie et Maladies Infectieuses, Collège de France
Address : Collège de France, 11 Place Marcelin Berthelot, 75005, Paris

philippe.sansonetti@college-de-France.fr

2 - **Professeur “classe exceptionnelle”**, Institut Pasteur

Head “Unité de Pathogénie Microbienne Moléculaire & Unité INSERM 786”

Address : Institut Pasteur, 25-28 Rue du Docteur Roux, 75015, Paris

philippe.sansonetti@pasteur.fr

Telephone : 33(0)145688342

Fax : 33(0)145393174

Education

- MD, Faculty of Medicine, Paris, France (1979).

 Certified in Internal Medicine (1985).

 Certified in Clinical Microbiology (1979).

- MS, Biochemistry/Microbiology, Faculté des Sciences, Paris 7, France (1976)

- Advanced Courses of Institut Pasteur : Microbiology, Virology, Immunology (1976-1977)

- Post-doctoral training at Walter Reed Army Institute of Research (Washington DC, USA)

Fellowship from National Research Council of USA (1979-1981)

Residencies and medical duties

- *Interne des Hôpitaux de Paris* :

5 years residency in Internal medicine/Infectious & Tropical diseases (1974-1979)

- *Chef de Clinique-Assistant des Hôpitaux de Paris*

4 years of Chief-Residency in Infectious & Tropical Diseases (1981-1985)

- Head, Out-patient Clinic, Institut Pasteur Hospital (1985-1995)

- Medical Director Institut Pasteur (1995-2000)

Principal Honors, Awards.

Prix Jacques Monod for Excellence in Molecular Biology (1983)

Grand Prix of the French Academy of Medicine (1990)

EMBO member (1993)

Chevalier de la Légion d'Honneur (1994)

Louis-Jeantet Prize of Medicine (Switzerland, 1994)

Elected member to the American Academy of Microbiology (1994)

Robert Koch Prize (Germany, 1997)

AGF-Athena Prize (French Academy of Sciences, Institut de France, 2000)

André Lwoff Medal « For outstanding service to Microbiology in Europe » (Federation of European Microbiology Societies, 2000)

Howard Hughes Medical Institute Scholar (2000-2005, renewed 2005-2010)

Elected member to the French Academy of Sciences (2001)

Invited speaker to the Jubilee Symposium « Beyond Genes », 100th Anniversary of the Nobel Prize (Stockholm, 2001)

Elected correspondent to the French Academy of Medicine (2002)
Elected member to the *Deutsche Akademie der Naturforscher Leopoldina* (2002)
Officier de l'Ordre National du Mérite (1993).
Elected member American Academy of Art and Sciences (2006)
Elected external member to the Max Planck Society (2007)
Elected Member to the Swedish Academy of Biotechnology (2008)
Awarded European Research Council (ERC) Advanced Grant (HOMEOPATH, 2008-2013)
GSK Foreign scientist of the Year Award, American Society for Microbiology & American Academy of Microbiology (2009)
Award of the coordination of a major European Union grant (STOPENTERICS) for the development of novel vaccines against *Shigella* and Enterotoxigenic *Escherichia coli* (2010)
Duquesne Prize (2011)
Member (2010) and President (2011) of the European Academy of Microbiology
Awarded (with Prof. Pascale Cossart) the coordination of a Laboratory of Excellence (Integrative Biology of Emerging Infectious Diseases) in the framework of the national program "Investments for the future" (2011)
Commandeur de l'Ordre National du Mérite (2012)
Elected foreign member to the US National Academy of Sciences (2012)
Senior Foreign Member of the Howard Hughes Medical Institute (2012-2017)
Grand Prix de l'INSERM (2012, highest recognition in biomedical research in France)

Society memberships: American Society for Microbiology, *Société Française de Microbiologie*

Edition of scientific Journals:

Editor, *Infection & Immunity* (1992-1998)
Editor / creator, *Cellular Microbiology* (1999-...)
Senior Editor, *EMBO Molecular Medicine* (2008-...)
Advisor/member of editorial board of several journals (*EMBO J.*, *EMBO Repts*, *PloS Medicine*, *Nature Microbiology Reviews*, *Trends in Microbiology*, *Microbes and Infection*, *Cell Host & Microbe*).

Major national/international leadership positions.

National leadership positions

Medical Director of Institut Pasteur (1995-1999)
Member INSERM Scientific Council (1994-1998)
Chairman of the National Program of Microbiology and Infectious Diseases (1997-2001)
Chairman, Scientific Council, *Fondation Recherche Médicale* (2002-2006)
Chairman, Scientific Committee « Biology & Health », *Agence Nationale de la Recherche* (2009-)

International leadership positions

Chairman ,WHO Steering Committee for Enteric Vaccines Development (1995-2006)
Vice-Chairman, Scientific Advisory Board Bernhardt Nocht Tropical Medicine Institute (Hamburg, Germany, (2000-2006)
Chairman, Scientific Advisory Board of the Max Planck Institute für Infektionsbiologie, (Berlin, Germany, 2000-2006).
Chairman, *Infection & Immunity Panel*, ERC Young Investigators Program (2009-2011).
Now regular panel member (2011-)

Direction of Thesis

Direction of 12 Medical Thesis
Direction of 20 Scientific (Ph.D.) Thesis

Direction of Post-Docs

Direction of 40 foreign post-docs plus 8 presently in the Laboratory
Fellowships for post-docs awarded by EMBO, Deutsche Forschung Gemeinschaft, *Fondation pour la Recherche Médicale*, *Association pour le Développement de l'Institut Pasteur*, Thrasher Research Fund, Pasteur Foundation, European Union Marie Curie, Fullbright, INSERM, NIH, Damon Runyon, Medical Research Council of Canada, Human Frontiers Research Program.

Publications (ISI, November 2012)

489 publications in peer reviewed international journals, 24,958 citations
Recognized among most cited French scientists (ISI, 2000),
current h-index = 87

Patents : Total number of active patents : 10
In the last 10 years : 5 (plus 8 ongoing applications)

10 representative publications

- PEDRON, T., MULET, C., DAUGA, C., FRANGEUL, L., CHERVAUX, C., GROMPONE, G., SANSONETTI, P.J. 2012. A Crypt Specific Core Microbiota resides in the mouse colon. *mBio*, 3:e00116-12
- MARTEYN B, WEST NP, BROWNING DF, COLE JA, SHAW JG, PALM F, MOUNIER J, PREVOST MC, SANSONETTI PJ*, TANG CM*. 2010. Modulation of *Shigella* virulence in response to available oxygen *in vivo*. *Nature*, 465:355-358 (* co-corresponding authors)
- DUPONT N, LACAS-GERVAIS S, BERTOUT J, PAZ I, FRECHE B, VAN NHIEU GT, VAN DER GOOT FG, SANSONETTI PJ, LAFONT F. 2009. *Shigella* phagocytic vacuolar membrane remnants participate in the cellular response to pathogen invasion and are regulated by autophagy. *Cell Host Microbe*, 6:137-149
- SPERANDIO B, REGNAULT B, GUO J, ZHANG Z, STANLEY SL JR, SANSONETTI PJ*, PEDRON T. 2008 Virulent *Shigella flexneri* subverts the host innate immune response through manipulation of antimicrobial peptide gene expression. *J Exp Med.*, 205:1121-1132 (* corresponding author)
- ROHDE, J. R., BREITKREUTZ, A. CHENAL, A., SANSONETTI, P. J., PARSOT, C. 2007 Type III secretion effectors of the IpaH family are E3 ubiquitin ligases. *Cell Host Microbe*, 1: 77-83
- ARBIBE L., KIM D.W., BATSCHE E., PEDRON T., MATEESCU B., MUCHARDT C., PARSOT C., SANSONETTI, P.J., 2007 An injected bacterial effector targets chromatin access for nuclear factor kappa B to alter transcription of host immune genes. *Nature Immunology*, 8:47-56
- WEST NP*, SANSONETTI PJ*, MOUNIER J, EXLEY RM, PARSOT C, GUADAGNINI S, PREVOST MC, PROCHNICKA- CHALUFOUR A, DELEPIERRE M, TANGUY M, TANG CM, 2005. Optimization of virulence functions through glucosylation of *Shigella* LPS. *Science*, 307: 1313-1317 (*co-first authors) (citations: 122)
- PEDRON, T., THIBAUT, C., SANSONETTI, P.J., 2003 The invasive phenotype of *Shigella flexneri* directs a distinct gene expression pattern in the human intestinal epithelial cell line Caco-2. *J. Biol. Chem.*, 278:33878-33886
- GIRARDIN SE, BONECA IG, CARNEIRO LAM, ANTIGNAC A, JÉHANNO M, VIALA J, TEDIN K, TAHA MH, LABIGNE A, ZÄHRINGER U, COYLE AJ, DISTEFANO PJ,

BERTIN J, SANSONETTI PJ, PHILPOTT DJ, 2003 Nod1 detects specifically Gram-negative bacteria through GlcNAc-MurNAc tripeptide, a peptidoglycan motif. *Science*, 300:1584-1587

- GIRARDIN, S., GOMPERTS-BONECA, I., VIALA, J., LABIGNE, A., PHILPOTT, D.J., SANSONETTI, P.J., 2003. Nod2 is a general sensor of peptidoglycan through muramyl dipeptide (MDP) detection. *J. Biol. Chem.*, 278:8869-8872

2 – Major reviews in past 10 years:

Reviews: I have selected a series of reviews which, based on high number of citations and downloadings, I believe strongly contributed to provide a framework to the quickly evolving field of cellular microbiology in areas such as mechanisms of bacterial pathogenesis, innate immune sensing of pathogens, and their discrimination from commensals, how pathogens manipulate host sensing of danger signals and the immune response by post-translational modification of « selected » immune effectors, a novel angle to the concept of pathogenesis. How all these mechanisms may relate to disease.

- KUFER, TA, SANSONETTI, PJ. 2011 NLR functions beyond pathogen recognition. 2011. *Nat. Immunol.*, 12:121-128.

- SANSONETTI PJ. 2011. To be or not to be a pathogen: that is the mucosally relevant question. *Mucosal Immunol.*, 4:8-14

- SANSONETTI PJ, MEDZHITOV R. 2009. Learning tolerance while fighting ignorance. *Cell*, 138:416-420.

- PHALIPON A, SANSONETTI PJ. 2007. *Shigella's* ways of manipulating the host intestinal innate and adaptive immune system: a tool box for survival? *Immunol Cell Biol.*, 85:119-129

- SANSONETTI, PJ., DI SANTO, J., 2007 Debugging how bacteria manipulate the immune response. *Immunity*, 26:149-161

- SANSONETTI, P.J. 2006. The innate signaling of dangers and the dangers of innate signaling. *Nat. Immunol.*, 7:1237-1242

- SANSONETTI, PJ, 2004. War and peace at mucosal surfaces. *Nature Rev. Immunol.*, 4:953-964

- COSSART, P., SANSONETTI P.J., 2004 Bacterial invasion : the paradigms of enteroinvasive pathogens. *Science*, 304 (5668) : 242-248 (citations: 407) One very influential review on the molecular and cellular pathogenesis of enteroinvasive bacteria.

- GIRARDIN S.E., HUGOT J.-P., SANSONETTI P.J., 2003. Lessons from Nod2 studies : towards a link between Crohn's disease and bacterial sensing. *Trends in Immunol.*, 24:652-658

Principal active grants

STOPENTERICS, PJ Sansonetti, European Union, 7th Framework Program, 2010-2015. "Vaccination against *Shigella* and ETEC: novel paradigms, novel antigens". (Coordinator).

To develop novel vaccines against shigellosis and ETEC infections (11 Million Euros, 12 groups).

HOMEOEPIETH, PJ Sansonetti, European Research Council Advanced Grant, 2009-2013 (Principal investigator). Supports transition towards the study of gut homeostasis in the presence of the microbiota (2 Million Euros).

TORNADO, European Union 7th Framework Program. Subtitled "The healthy gut", 2009-2014 (Sven Pettersson, coordinator). TORNADO is aimed, on the overall, at maintaining our gut healthy by understanding the parameters of intestinal homeostasis in the presence of commensals and its rupture in the presence of pathogens. (Work-package leader: pathogenesis, immune regulation at intestinal mucosal surface). Contribution on the biology

of Segmented Filamentous Bacteria (SFB): (i) to establish possible growth *in vitro*, and to develop the cell biology of SFB-epithelial cell interactions, (ii) to identify *Lactobacillus casei* factors that interact with host nutrition (....).

PATHIMMUN PJ Sansonetti, Agence Nationale de la Recherche, 2011-2013. Special Thematic Program “Inflammation” (Principal investigator). To analyse the mechanisms of immune regulation by *Shigella* to identify novel targets to develop immunomodulatory and anti-inflammatory drugs (300 000 Euros)

ARC, PJ Sansonetti, Association de la Recherche Contre le Cancer, 2012-2013, “A role for the microbiota in colon cancer ?” (Principal investigator). “Proof of concept grant” to establish the primary elements of interaction between *Streptococcus gallolyticus* and the gut (50 000 Euros).

HHMI Senior Foreign Member, 2012-2017). Non targeted support to entire laboratory project (450 000 US Dollars).