Leopoldina
Nationale Akademie
der Wissenschaften

Curriculum Vitae Professor Dr Carmen Buchrieser

Name: **Carmen Buchrieser**
Born: **6 August 1961**

Research Priorities: Pathogenesis of infections with intracellular bacteria

Carmen Buchrieser is an Austrian biologist. She works in the field of infection biology and genetics of pathogenic bacteria. She is considered a specialist for pathogens such as Listeria, Yersinia and Legionella, which can cause severe infectious diseases in humans.

Academic and Professional Career

2014	Research Stay, Fellow, Alexander von Humboldt Foundation, Bonn, Institute of Microbiology, University of Greifswald, Max Planck Institute for Infection Biology, Berlin, Germany
since 2014	Professor, Institut Pasteur, Paris, France
since 2008	Head of the Biology of Intracellular Bacteria Unit, Institut Pasteur, Paris, France
2005 - 2013	Professor by Special Appointment (Directeur de Recherche, IP), Institut Pasteur, Paris, France
2000 - 2005	Professor by Special Appointment (Chargée de Recherche, IP), Institut Pasteur, Paris, France
1995 - 1998	Postdoctoral Fellow, Fellow, Austrian Academy of Sciences, Vienna, Austria, Yersinia Laboratory, Institut Pasteur, Paris, France
1992 - 1995	Research Associate, Food Research Institute, University of Wisconsin-Madison, Madison, USA
1991 - 1992	Postdoctoral Fellow, Listeria Laboratory, Institut Pasteur, Paris, France
1987 - 1990	Research Assistant, Hygiene Institute, University of Graz, Graz, Austria

1986	PhD in Microbiology, Paris Lodron University Salzburg, Salzburg, Austria
1984	Magister rer. nat., University of Graz, Graz, Austria

Functions in Scientific Societies and Committees

since 2014	Member, Scientific Advisory Committee, Institut Pasteur, Paris, France
since 2014	Member, Scientific Advisory Committee, Fondation pour la Recherche Médicale, Paris, France
2005 - 2010	Member, Managing Board, European Network of Excellence “EuroPathgenomics”
2005 - 2012	Member, Scientific Advisory Board, Austrian Genome Research Programme “GEN-AU”, Austria
2004 - 2008	Member, Scientific Evaluation Committee, Institut Pasteur, Paris, France
2003 - 2010	Member, Election Committee for the Scientific Advisory Board, Bayerisches Genom-Forschungsprogramm “BayGen” (Bavarian Genome Research Programme), Germany
2003	Member, Scientific Evaluation Committee, Institut Pasteur, Paris, France
2002 - 2006	Vice Chairwoman, Scientific Advisory Board, ERA-Net “Pathogenomics”, European Union

Honours and Awarded Memberships

2019	Jacques Piraud Award, French Foundation for Medical Research (FRM), France
since 2014	Member, German National Academy of Sciences Leopoldina, Germany
2014	Fellow, American Academy of Microbiology (AAM), USA
2014	Elected Member, European Molecular Biology Organization (EMBO), Heidelberg, Germany
2013	Gay-Lussac Humboldt Prize, Alexander von Humboldt Foundation, Bonn, Germany
2009	Pasteur Vallery-Radot Prize, National Library of France, France
2007	Descartes Prize, European Commission
2005	Charles-Louis de Saulces de Freycinet Award, Institut de France, Paris, France
1995 - 1998	APART Fellow, Austrian Academy of Sciences, Austria

Research Priorities

Carmen Buchrieser is an Austrian biologist. She works in the field of infection biology and genetics of pathogenic bacteria. She is considered a specialist for pathogens such as Listeria, Yersinia and Legionella, which can cause severe infectious diseases in humans.

In recent years, her work has mainly focused on researching the pathogen of Legionnaires' disease (Legionellosis). In her research, Carmen Buchrieser investigates and characterises molecular, genetic and cellular causes of an infection with Legionella in humans. Legionnaires' disease is a dreaded infection that can be associated with severe pneumonia. For people with a weakened immune system in particular, the course of the disease can be extremely severe or even fatal. At molecular and cell biological level, Carmen Buchrieser describes the strategies used by certain bacteria proteins in order to manipulate their host cells and to allow intracellular replication of Legionella. She coined the phrase "Molecular mimicry", the concept of Legionella proteins that mimic host cell proteins and manipulate them to the pathogens' advantage.

Carmen Buchrieser led efforts to clarify and compare the genome of various strains of Legionellosis as part of a project that investigated more than 200 pathogenic strains of Legionella pneumophila. This research led to the detection of three genes that allow the identification of any Legionella pneumophila. These genes are responsible for more than 80 percent of Legionellosis cases worldwide. Based on this research, a rapid test to detect Legionella in the environment and in patients could be developed.