

## Biography (Longer Version)

### Prof. Emmanuelle Charpentier

#### Founding and Acting Director

Max Planck Unit for the Science of Pathogens  
Charitéplatz 1  
D-10117 Berlin  
Germany  
[www.emmanuelle-charpentier-lab.org](http://www.emmanuelle-charpentier-lab.org)



#### Scientific Director

Department of Regulation in Infection Biology  
Max Planck Institute for Infection Biology

#### Honorary Professor

Humboldt University, Berlin, Germany

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**Emmanuelle Charpentier** studied biochemistry, microbiology and genetics at the University Pierre and Marie Curie, Paris, France and obtained her Ph.D. in Microbiology for her research performed at the Pasteur Institute, Paris, France. She then continued her work in the United States, at The Rockefeller University, New York University Langone Medical Center and the Skirball Institute of Biomolecular Medicine (all in New York, NY) and at St. Jude Children's Research Hospital (in Memphis, TN). Emmanuelle returned to Europe to establish her own research group as Assistant and Associate Professor at the Max F. Perutz Laboratories of the University of Vienna in Austria where she habilitated in the field of Microbiology. She was then appointed Associate Professor at the Laboratory for Molecular Infection Medicine Sweden (MIMS, part of Nordic European Molecular Biology Laboratory (EMBL) Partnership for Molecular Medicine) at Umeå University in Sweden where she habilitated in the field of Medical Microbiology and was active as a Visiting Professor until 2017. Between 2013 and 2015, Emmanuelle was Head of the Department of Regulation in Infection Biology at the Helmholtz Centre for Infection Research, Braunschweig, and Professor at the Medical School of Hannover in Germany. In 2013, she was awarded an Alexander von Humboldt Professorship, which she held in 2014 and 2015. In 2015, Emmanuelle was appointed Scientific Member of the Max Planck Society and Director of the Department of Regulation in Infection Biology at the Max Planck Institute for Infection Biology in Berlin, Germany. Since 2016, Emmanuelle is Honorary Professor at Humboldt University and since 2018, she is Founding and Acting Director of the Max Planck Unit for the Science of Pathogens in Berlin.

Emmanuelle is recognized as a world-leading expert in regulatory mechanisms underlying processes of infection and immunity in bacterial pathogens. Her work has led to several seminal discoveries and insights into pathways governing antibiotic resistance and virulence of bacterial pathogens. With her ground-breaking findings in the field of RNA-mediated regulation based on the CRISPR-Cas9 system, Emmanuelle has laid the foundation for the development of a novel, highly versatile and specific genome editing and engineering technology that is revolutionizing life sciences research and is opening whole new opportunities in biomedical gene therapies. The field of CRISPR-Cas9 continues to develop at dazzling speed, with exciting new developments emerging almost weekly.

Emmanuelle is inventor and co-owner of the fundamental intellectual property comprising the CRISPR-Cas9 technology, and co-founder of CRISPR Therapeutics and ERS Genomics, two companies that she created together with Rodger Novak and Shaun Foy to develop the CRISPR-Cas9 genome engineering technology for biotechnological and biomedical applications.

Emmanuelle has been awarded over 70 prestigious prizes, awards and honors that include the Kavli Prize in Nanoscience, the Japan Prize, the Tang Prize for Biopharmaceutical Science, the Breakthrough Prize in Life Sciences, the Canada Gairdner International Award, the Massry Prize and many others, as well as elected memberships of national and international academies, and honorary doctorate degrees.

CRISPR-Cas9 quickly developed from a specialised field of scientific research to a major topic in global affairs. Emmanuelle and her scientific contributions have been featured in *Forbes* (Europe's Top 50 Women in Tech 2018), *TIME* magazine (2016 short list for Person of the Year, and 2015 list of the 100 Most Influential People), *Vanity Fair* (2016 list of The New Establishment, 2014 and 2015 list of the 50 Most Influential French People), *Foreign Policy* (2014 list of 100 Leading Global Thinkers) and many others.

## Biography (Shorter Version)

### Prof. Emmanuelle Charpentier

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(2018-10-09) Picture: "Hallbauer&Fioretti"

**Additional short version of Emmanuelle's Charpentier biography (200 words):**

**Emmanuelle Charpentier, Ph.D.** is Founding and Acting Director of the Max Planck Unit for the Science of Pathogens, Scientific Director at the Max Planck Institute for Infection Biology and Honorary Professor at Humboldt University, Berlin. Prior to her current appointments, she was Alexander von Humboldt Professor and Head of Department at the Helmholtz Centre for Infection Research and Professor at the Hannover Medical School, Germany, Associate and Visiting Professor at the Laboratory for Molecular Infection Medicine Sweden (EMBL Partnership), Umeå University, Sweden and Assistant and Associate Professor at the Max F. Perutz Laboratories, University of Vienna, Austria. Emmanuelle held several research associate positions in the US, at the Rockefeller University, New York University Langone Medical Center and Skirball Institute of Biomolecular Medicine, New York and St. Jude Children's Research Hospital, Memphis. She received her education in microbiology, biochemistry and genetics from the University Pierre and Marie Curie and the Pasteur Institute in Paris, France. Emmanuelle has been widely recognized for her innovative research that laid the foundation for the ground-breaking CRISPR-Cas9 genome engineering technology. She has received prestigious international awards and distinctions and is an elected member of national and international academies. She is co-founder of CRISPR Therapeutics and ERS Genomics.

**Additional short version of Emmanuelle's Charpentier biography (100 words):**

**Emmanuelle Charpentier, Ph.D.** is a French microbiologist, geneticist and biochemist. She is Founding and Acting Director of the Max Planck Unit for the Science of Pathogens, Scientific Director at the Max Planck Institute for Infection Biology and Honorary Professor at Humboldt University, Berlin, Germany. Emmanuelle has been widely recognized for her innovative research that laid the foundation for the ground-breaking CRISPR-Cas9 genome engineering technology. She has received numerous prestigious international awards and distinctions and is an elected member of national and international academies. She is co-founder of CRISPR Therapeutics and ERS Genomics.