Biography (Long Version)
Emmanuelle Charpentier

Emmanuelle Charpentier studied biochemistry, microbiology and genetics at the University Pierre and Marie Curie (now Sorbonne University), Paris, France (1986-1992) and obtained her Ph.D. in microbiology for her research performed at the Pasteur Institute, Paris, France (1992-1995). She then pursued her scientific career in the United States, at The Rockefeller University (1996-1997), New York University Medical Center (now NYU Langone Health) (1997-1999) and the Skirball Institute of Biomolecular Medicine (1999-2002) (all in New York City, NY) and at St. Jude Children's Research Hospital (in Memphis, TN) (1999). Emmanuelle returned to Europe to establish her own research group as a guest and then assistant professor (2002-2005) at the Institute of Microbiology and Genetics and as an associate professor (2006-2009) at the Max F. Perutz Laboratories (now Max Perutz Labs) at the University of Vienna in Austria, where she habilitated in the field of microbiology. In 2009, she was appointed as 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 (2009-2013), where she habilitated in the field of medical microbiology and served as a visiting professor (2013-2017). In 2013, Emmanuelle was appointed as the founder and head of the Department of Regulation in Infection Biology at the Helmholtz Centre for Infection Research, Braunschweig and as a full 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. From 2015 to 2017, Emmanuelle founded, was scientific director and head of the Department of Regulation in Infection Biology at the Max Planck Institute for Infection Biology in Berlin, Germany. Since 2016, Emmanuelle has been an honorary professor at Humboldt University. In 2018, she founded the Max Planck Unit for the Science of Pathogens (MPUSP), an independent institute affiliated with the Max Planck Society where she serves as both scientific and managing director. Since 2021, she has also been the head of administration of MPUSP.

Emmanuelle is recognized as a world expert in the regulatory mechanisms underlying the infection and immune processes of bacteria that cause disease in humans. Her laboratory's work has led to several fundamental discoveries and a better understanding of the molecular pathways that regulate antibiotic resistance and virulence in bacterial pathogens. Through her pioneering and groundbreaking work in the field of CRISPR-Cas9-based RNA regulation, mainly in the human pathogen *Streptococcus pyogenes*, she has laid the foundation for the development of the highly versatile and specific CRISPR genome editing and engineering technology. This technology is transforming and revolutionizing life science research, opening up new possibilities in biotechnology and biomedical gene, with considerable societal impact. The field of CRISPR-Cas continues to develop at lightning speed, with new and exciting advances almost every week.

Emmanuelle is inventor and co-owner of the core intellectual property of the CRISPR-Cas9 technology. Together with Rodger Novak and Shaun Foy, she co-founded CRISPR Therapeutics and ERS Genomics to develop the CRISPR-Cas gene editing technology for biotechnological and biomedical applications.

For her and her team's contribution to the discovery of CRISPR-Cas9, Emmanuelle has received numerous international distinctions, including decorations, honours, prizes, awards and honorary doctorates from Europe, Asia and North America, as well as elected memberships of national and international scientific academies. Her most prestigious awards include the Nobel Prize in Chemistry, the Japan Prize, the Kavli Prize in Nanoscience, the Wolf Prize, the Tang Prize for Biopharmaceutical Science, the Breakthrough Prize in Life Sciences, the Canada Gairdner International Prize and the Massry Prize. She has also received the L'Oréal-UNESCO Award for Women in Science.

CRISPR-Cas9 has quickly moved from a specialized area of scientific research to a major topic in global news. Emmanuelle and her scientific contributions have been featured in numerous journals and magazines, including recognition by *OOOM* (2017, 2018, 2019, 2020, 2022, 2023, 2024, 2025), *Forbes* (Europe's Top 50 Women in Tech 2018, World's Top 50 Women in Tech 2018, 50 over 50 EMEA 2022), *TIME* magazine (2016 short list for Person of the Year and 2015 list of the 100 Most Influential People in the World), *Global Leaders Today* (Global 100 Inspirational Leaders 2022), *Vanity Fair* (2014, 2015, 2018 lists of the 50 most influential French people, 2016 list of The New Establishment), *Foreign Policy* (2014 list of 100 Leading Global Thinkers).

Official title: Prof. Dr. Drs. h.c. Emmanuelle Charpentier, ForMemRS

More information about Emmanuelle is available at <www.emmanuelle-charpentier.org>.

Biography (Shorter Versions – 1/2)
Emmanuelle Charpentier

Shorter Version (#400 words)

Emmanuelle Charpentier studied biochemistry, microbiology and genetics at the University Pierre and Marie Curie (now Sorbonne University), Paris, France and obtained her Ph.D. in microbiology for her research performed at the Pasteur Institute, Paris, France. She then pursued her scientific career in the United States, at The Rockefeller University, New York University Medical Center (now NYU Langone Health) and the Skirball Institute of Biomolecular Medicine (all in New York City, NY) and at St. Jude Children's Research Hospital (in Memphis, TN). Emmanuelle returned to Europe to establish her own research group as a guest and then assistant professor at the Institute of Microbiology and Genetics and as an associate professor at the Max F. Perutz Laboratories (now Max Perutz Labs) at the University of Vienna in Austria, where she habilitated in the field of microbiology. She was then appointed as 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 served as a visiting professor. Emmanuelle continued her career by founding and heading the Department of Regulation in Infection Biology at the Helmholtz Centre for Infection Research, Braunschweig and by becoming a full professor at the Medical School of Hannover in Germany. She was awarded an Alexander von Humboldt professorship, which she held in 2014 and 2015. Emmanuelle was then appointed scientific member of the Max Planck Society. She founded, was scientific director and head of the Department of Regulation in Infection Biology at the Max Planck Institute for Infection Biology in Berlin, Germany. Since 2016, Emmanuelle has been an honorary professor at Humboldt University. In 2018, she founded the Max Planck Unit for the Science of Pathogens (MPUSP), an independent institute affiliated with the Max Planck Society where she serves as both scientific and managing director. Since 2021, she has also been the head of administration of MPUSP.

Emmanuelle has laid the foundations for the development of a highly versatile and specific genome engineering and editing technology – CRISPR-Cas9 – which is revolutionizing life sciences, biotechnology and medicine. For her groundbreaking discovery and innovative research, she has received numerous prestigious international awards and honors, including the 2020 Nobel Prize in Chemistry. She is an elected member of many national and international scientific academies and has received honorary doctorates from several universities around the world. She co-founded CRISPR Therapeutics and ERS Genomics with Rodger Novak and Shaun Foy.

Official title: Prof. Dr. Drs. h.c. Emmanuelle Charpentier, ForMemRS

More information about Emmanuelle is available at <www.emmanuelle-charpentier.org>.

Short Version (#280 words)

Emmanuelle Charpentier is the founder, scientific and managing director of the Max Planck Unit for the Science of Pathogens (MPUSP) (since 2018), head of administration of MPUSP (since 2021), as well as honorary professor at Humboldt University (since 2016), Berlin, Germany. Prior to her current appointments, she was scientific director at the Max Planck Institute for Infection Biology, Berlin (2015-2017); Alexander von Humboldt professor, department head at the Helmholtz Centre for Infection Research, Braunschweig and full professor at the Hannover Medical School, Germany (2013-2015); visiting and associate professor at the Laboratory for Molecular Infection Medicine Sweden (EMBL Partnership), Umeå University, Sweden (Visiting Professor 2013-2017 and associate professor 2009-2013; habilitated in microbiology in 2013); associate professor at the Max F. Perutz Laboratories (now Max Perutz Labs), University of Vienna, Austria (2006-2009) (habilitated in microbiology in 2006); guest and assistant professor, Institute of Microbiology and Genetics, University of Vienna, Austria (2002-2005). Emmanuelle held several research associate positions in the USA (1996-2022): Skirball Institute of Biomolecular Medicine, New York (1999-2002), St. Jude Children's Research Hospital, Memphis (1999), New York University Medical Center (now NYU Langone Health) (1997-1999) and The Rockefeller University (1996-1997). She received her education in microbiology, biochemistry and genetics at the University Pierre and Marie Curie and the Pasteur Institute in Paris, France (Bachelor studies 1986-1991, Master studies 1991-1992, PhD in microbiology 1992-1995). Emmanuelle has been widely recognized for her pioneering and groundbreaking research, which laid the foundations for the revolutionary CRISPR-Cas9 genome engineering and editing technology. She has received numerous prestigious international awards and distinctions, and is an elected member of many national and international scientific academies. She co-founded CRISPR Therapeutics and ERS Genomics with Rodger Novak and Shaun Foy.

More information about Emmanuelle is available at <www.emmanuelle-charpentier.org>.

Biography (Shorter Versions – 2/2)
Emmanuelle Charpentier

Short Version (#230 words)

Emmanuelle Charpentier is the founder, scientific and managing director and head of administration of the Max Planck Unit for the Science of Pathogens, as well as honorary professor at Humboldt University, Berlin, Germany. Prior to her current appointments, she was scientific director at the Max Planck Institute for Infection Biology, Berlin; Alexander von Humboldt professor, head of department at the Helmholtz Centre for Infection Research, Braunschweig and full professor at the Hannover Medical School, Germany; visiting and associate professor at the Laboratory for Molecular Infection Medicine Sweden (EMBL Partnership), Umeå University, Sweden; associate professor at the Max F. Perutz Laboratories, and guest and assistant professor at the Institute of Microbiology and Genetics, University of Vienna, Austria. Emmanuelle held several research associate positions in the USA: The Rockefeller University, New York University 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 at the University Pierre and Marie Curie and the Pasteur Institute in Paris, France. Emmanuelle has been widely recognized for her pioneering and groundbreaking research that laid the foundations for the revolutionary CRISPR-Cas9 genome engineering and editing technology. She has received numerous prestigious international awards and honors, and is an elected member of many national and international scientific academies. She co-founded CRISPR Therapeutics and ERS Genomics with Rodger Novak and Shaun Foy.

More information about Emmanuelle is available at <www.emmanuelle-charpentier.org>.

Short Version (#175 words)

Emmanuelle Charpentier is a French microbiologist, geneticist and biochemist. She completed her scientific education at the University Pierre and Marie Curie and the Pasteur Institute in Paris, France. She is the founder, scientific and managing director of the Max Planck Unit for the Science of Pathogens, as well as honorary professor at Humboldt University, Berlin, Germany. Prior to her current appointments, she held professorship positions at the Helmholtz Centre for Infection Research and Hannover Medical School, Germany, Umeå University, Sweden and University of Vienna, Austria. She also held research associate positions at The Rockefeller University, New York University Medical Center and Skirball Institute of Biomolecular Medicine, New York, and St. Jude Children's Research Hospital, Memphis. Emmanuelle has been widely recognized for her pioneering and groundbreaking research, which laid the foundations for the revolutionary CRISPR-Cas9 genome editing technology. She has received numerous prestigious international awards and honours, including the 2020 Nobel Prize in Chemistry, and is an elected member of national and international scientific academies. She co-founded CRISPR Therapeutics and ERS Genomics with Rodger Novak and Shaun Foy.

More information about Emmanuelle is available at <www.emmanuelle-charpentier.org>.

Short Version (#110 words)

Emmanuelle Charpentier is a French microbiologist, geneticist and biochemist. She pursued her academic scientific career at research institutions in France, the United States, Austria, Sweden and Germany. She is the founder, scientific and managing director of the Max Planck Unit for the Science of Pathogens, as well as honorary professor at Humboldt University, Berlin, Germany. Emmanuelle has been widely recognized for her pioneering and groundbreaking research, which laid the foundations for the revolutionary CRISPR-Cas9 genome editing technology. She has received numerous prestigious international awards and honours, and is an elected member of many national and international scientific academies. She co-founded CRISPR Therapeutics and ERS Genomics with Rodger Novak and Shaun Foy.

More information about Emmanuelle is available at <www.emmanuelle-charpentier.org>.

Short Version (#430 characters incl. spaces)

Emmanuelle Charpentier is a French microbiologist, geneticist and biochemist. She is the founder, scientific and managing director of the Max Planck Unit for the Science of Pathogens in Berlin. She co-founded CRISPR Therapeutics and ERS Genomics with Rodger Novak and Shaun Foy. She has received numerous prestigious international awards and honours, and is an elected member of many national and international scientific academies.

More information about Emmanuelle is available at <www.emmanuelle-charpentier.org>.