



Curriculum Vitae Professor Dr Svante Pääbo



Image: Frank Vinken | Max-Planck-Gesellschaft

Name: Svante Pääbo

Date of birth: 20 April 1955

Research Priorities: Paleogenetics, molecular anthropology, development and origin of modern humans, evolution research, ancient DNA, genetic drift, selection, population history

Svante Pääbo is a Swedish molecular biologist and palaeogeneticist. He is considered the founder of palaeogenetics, which deals with the analysis of genetic samples of fossil and historical remains. Pääbo was the first to succeed in cloning the DNA of a mummy. With specially developed analysis techniques, he was able to decode the genome of the Neanderthal, determine the proportion of Neanderthal genes in the genome of people living today and investigate their role in the development of diseases. In 2022, he was awarded the Nobel Prize for Medicine or Physiology for his research on human evolution.

Academic and Professional Career

- since 2020 Adjunct Distinguished Professor, Okinawa Institute of Science and Technology, Onna, Japan
- since 2016 Honorary Research Fellow, Natural History Museum, London, UK
- 2003 - 2015 Visiting Professor for Comparative Genetics, Uppsala University, Uppsala, Sweden
- since 1999 Honorary Professor of Genetics and Evolutionary Biology, University of Leipzig, Leipzig, Germany
- since 1997 Director, Max Planck Institute for Evolutionary Anthropology, Leipzig, Germany
- 1990 - 1998 Professor of General Biology, Ludwig-Maximilians-Universität (LMU Munich), Munich, Germany
- 1990 Habilitation in Genetics, Uppsala University, Uppsala, Sweden

- 1987 - 1990 Postdoctoral Fellow, Institute of Biochemistry, University of California (UC) Berkeley, Berkeley, USA
- 1987 Researcher, Imperial Cancer Research Fund, London, UK
- 1986 - 1987 Postdoctoral Fellow, Institute of Molecular Biology II, University of Zurich, Zurich, Switzerland
- 1986 Doctorate, Uppsala University, Uppsala, Sweden
- 1981 - 1986 Postdoctoral Research, Institute for Cell Research, Uppsala, Sweden
- 1979 - 1980 Lecturer and Researcher, Institute for Cellular Biology, Uppsala, Sweden, and Roche Institute for Molecular Biology, Nutley, USA
- 1977 - 1980 Degree in Medicine, Uppsala University, Uppsala, Sweden
- 1975 - 1981 Degree in History of Science, Egyptology and Russian, Uppsala University, Uppsala, Sweden

Functions in Scientific Societies and Committees

- 2016 - 2020 Member, Editorial Board, Cell
- since 2014 Member, Scientific Advisory Board, SciLifeLab, Solna, Sweden
- since 2008 Member, Scientific Advisory Board, Cold Spring Harbor Asia, Suzhou, China
- 2007 Organiser, "Symposium on the Evolution of Brain, Behaviour & Intelligence", Hinxton, UK
- 2007 Organiser, "Linnaeus Classification of Humans Revisited", Uppsala, Sweden
- 2005 - 2007 Chairperson, Scientific Advisory Board, Uppsala Centre for Comparative Genomics, Uppsala, Sweden
- 2004 - 2006 Member, Scientific Advisory Board, Department of Energy, Joint Genome Institute, Walnut Creek, USA
- 2004 - 2006 Organiser, Meeting "The Biology of Genomes", Cold Spring Harbor Asia, Suzhou, China
- 2001 - 2005 Member, Board of Trustees, Leipzig Foundation for Innovation and Technology Transfer, Leipzig, Germany
- 2000 - 2003 Member, Scientific Advisory Board, Pyrosequencing AB, Uppsala, Sweden
- 2000 Member, Editorial Advisory Board, Trends in Ecology and Evolution
- 1997 - 2005 Member, Supervisory Board, Programme "Genome Research" and "Cell Factory for functional Genomics", Foundation for Strategic Research, Stockholm, Sweden
- 1997 - 2002 Member, Editorial Advisory Board, Human Heredity

German National Academy of Sciences Leopoldina
www.leopoldina.org

- 1997 - 2000 Member, Editorial Advisory Board, Ancient Biomolecules
- 1997 Main Organiser, Annual Meeting of the Society for Molecular Biology and Evolution, Garmisch-Partenkirchen, Germany
- 1996 Member, Expert Committee, Biological Instrumentation Programme, European Molecular Biology Laboratory (EMBL), Heidelberg, Germany
- 1996 - 2006 Member, Editorial Advisory Board, BioTechniques
- 1995 - 2002 Member, Editorial Advisory Board, Biological Chemistry
- 1993 - 1996 Panel Member, Ancient Biomolecules Initiative, Science & Engineering Research Council, UK
- 1992 - 1993 Member, Life Sciences Group, European Community Programme "Human Capital and Mobility", European Commission (EC)
- 1991 - 1995 Member, Committee for Human Genetic Diversity, Human Genome Organisation (HUGO), Farmington, USA
- since 1991 Member, Editorial Advisory Board, Molecular Phylogenetics and Evolution
- 1991 - 2004 Member, Editorial Advisory Board, Genome Research
- 1990 - 1993 Co-Editor, Journal of Human Evolution

Honours and Awarded Memberships

- 2022 Nobel Prize in Physiology or Medicine, Nobel Assembly at Karolinska Institutet, Stockholm, Sweden
- 2021 Massry Prize, Meira and Shaul Massry Foundation, Los Angeles, USA
- 2020 Japan Prize, The Science and Technology Foundation of Japan, Onna, Japan
- 2019 Wiley Prize in Biomedical Sciences, Wiley Foundation, New York City, USA
- 2019 Honorary Doctorate, Okinawa Institute of Science and Technology, Onna, Japan
- 2019 Darwin-Wallace Medal, The Linnean Society of London, London, UK
- 2018 Körber European Science Prize, Körber Foundation, Hamburg, Germany
- 2018 Nierenberg Prize, Scripps Institution of Oceanography, San Diego, USA
- 2018 Princess of Asturias Award for Technical and Scientific Research, Princess of Asturias Foundation, Madrid, Spain
- 2018 Nakasone Award, Human Frontier Science Program (HFSP), Strasbourg, France
- 2017 Dan David Prize, Tel Aviv University, Tel Aviv, Israel
- 2017 Nomis Distinguished Scientist Award, NOMIS Foundation, Zurich, Switzerland

- 2017 Honorary Member, New York Academy of Sciences, New York City, USA
- 2016 Foreign Member, Royal Society, UK
- 2016 Keio Medical Science Prize, Keio University, Tokyo, Japan
- 2016 Breakthrough Prize in Life Sciences, Rubenstein Communications Inc., New York City, USA
- 2015 Member, Académie des sciences, Paris, France
- 2015 Lomonosov Gold Medal, Russian Academy of Sciences, Russia
- 2015 Honorary Doctorate, National University of Ireland, Dublin, Ireland
- 2014 Learning Ladder Prize, Stockholm, Sweden
- 2014 Allen Distinguished Investigator, Allen Institute, Seattle, USA
- 2013 Gruber Genetics Prize, Peter and Patricia Gruber Foundation, Saint Thomas, American Virgin Islands
- 2013 Foreign Member, Royal Swedish Academy of Engineering Sciences, Sweden
- 2012 H.M. The King's Medal, Stockholm, Sweden
- 2012 Honorary Doctorate, Karolinska Institute, Solna, Sweden
- 2012 Corresponding Member, Croatian Academy of Sciences and Arts, Croatia
- 2011 Newcomb Cleveland Prize, American Association for the Advancement of Science (AAAS), USA
- 2011 Foreign Member, American Academy of Arts and Sciences, USA
- 2011 Award for Biochemical Analytics, German Society for Clinical Chemistry and Laboratory Medicine (DGKL), Germany
- 2010 Theodor Bücher Medal, Federation of European Biochemical Societies
- 2010 Honorary Member, Croatian Anthropological Society, Croatia
- 2009 Kistler Prize, Foundation for the Future, Merrifield, USA
- 2009 Great Cross of Merit with Star, Federal Republic of Germany
- 2009 Darwin Badge, German National Academy of Sciences Leopoldina, Germany
- 2009 De Anatomische Les, Amsterdam, The Netherlands
- 2008 Order of Terra Mariana, 3rd Class, Estonia
- 2008 Gorjanović-Kramberger Medal for Anthropology, Croatian Anthropological Society, Croatia
- 2008 Honorary Doctorate, Graduate University, Chinese Academy of Sciences (CAS), China

- 2008 Academy of Achievement Honoree, Washington D.C., USA
- since 2008 Member, Orden Pour le Mérite for Science and Arts, Berlin, Germany
- 2008 Honorary Doctorate, Royal Institute of Technology, Sweden
- 2007 100 Most Influential People in the World, Time Magazine, New York City, USA
- 2007 Honorary Member, Academie Internationale de Philosophie des Sciences
- 2005 Louis-Jeantet Prize for Medicine, Louis-Jeantet Foundation, Geneva, Switzerland
- 2005 Virchow Medal, Julius Maximilians Universität of Würzburg, Würzburg, Germany
- 2004 Foreign Member, National Academy of Sciences, USA
- 2003 Leipzig Science Award, Saxon Academy of Sciences and Humanities in Leipzig, Germany
- 2003 Ernst Schering Prize, Schering Stiftung, Berlin, Germany
- since 2003 Member, Saxon Academy of Sciences and Humanities in Leipzig, Leipzig, Germany
- since 2002 Member, German National Academy of Sciences Leopoldina, Germany
- 2002 Foreign Member, Finnish Academy of Science and Letters, Finland
- 2000 Honorary Member, University of Helsinki, Helsinki, Finland
- 2000 Olof Rudbeck Prize, Uppsala Medical Society, Uppsala, Sweden
- 2000 Member, Royal Swedish Academy of Sciences, Sweden
- since 1999 Associate Member, Berlin-Brandenburg Academy of Sciences and Humanities, Berlin, Germany
- 1999 Carus Medal and Carus Award, German National Academy of Sciences Leopoldina and City of Schweinfurt, Germany
- since 1999 Member, European Molecular Biology Organization (EMBO)
- since 1998 Member, Academia Europaea
- 1998 Max Delbrück Medal, Max-Delbrück Center for Molecular Medicine (MDC), Berlin, Germany
- 1996 Distinguished Visitor Lecture, EMBL, Heidelberg, Germany
- 1994 Honorary Doctorate, University of Zurich, Zurich, Switzerland
- 1992 Gottfried Wilhelm Leibniz Award, German Research Foundation (DFG), Germany
- 1987 - 1989 Long-term Fellowship, EMBO
- 1987 Scholarship, Federation of European Biochemical Societies (FEBS)
- 1986 Short-term Fellowship, EMBO

Research Priorities

Svante Pääbo is a Swedish molecular biologist and palaeogeneticist. He is considered the founder of palaeogenetics, which deals with the analysis of genetic samples of fossil and historical remains. Pääbo was the first to succeed in cloning the DNA of a mummy. With specially developed analysis techniques, he was able to decode the genome of the Neanderthal, determine the proportion of Neanderthal genes in the genome of people living today and investigate their role in the development of diseases. In 2022, he was awarded the Nobel Prize for Medicine or Physiology for his research on human evolution.

Svante Pääbo was the first to show DNA in Egyptian mummies. He then developed completely new methods for determining genetic sequences from historical remains ("ancient DNA"). In this Using these techniques, he was able to obtain mitochondrial DNA sequences from the bone of a Neanderthal man and sequence over three billion base pairs of cell nucleus genomes from extinct prehistoric man. This made it possible to compare the genome of modern humans with that of Neanderthals for the first time.

Pääbo developed his research methods further and decoded the entire Neanderthal genome. With his team, he was able to show that Neanderthals passed on their genes to all modern humans living outside of Africa. Approximately between one and four percent of current human genetic material stems from Neanderthals. Thus, the researchers found proof that early Europeans mixed with Neanderthals. In this work, they also discovered a new, already extinct group of humans, the Denisova humans, who were related to Neanderthals. Some of the genes which were passed down from Neanderthals are advantageous for humans today. However, many contribute to increased susceptibility to disease. Pääbo also studies the role of these genes in the genesis of diseases.

Svante Pääbo's research opens up new perspectives on evolutionary processes and provides detailed insights into the relationships between extinct human groups. He has, on the one hand, investigated the factors which directly influence the genome, such as mutation, recombination, and genetic drift. On the other hand, he has also examined the effects of selection and population history.

Researchers around the world use the methods developed by Pääbo. They use them to investigate the tissue of extinct animals only preserved in museums, such as mammoths or giant sloths. In 2007, Time Magazine named Pääbo as one of the 100 most influential people in the world. In 2022, he was awarded the Nobel Prize in Medicine for his research into human evolution.