

The Nobel Prize for Medicine

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In news- Svante Paabo was recently awarded with the 2022 Nobel Prize in Medicine for his extraordinary discovery which proved modern humans share DNA with extinct relatives Neanderthals and Denisovans.

The discovery of Svante Paabo-

- The Swedish scientist **provided key insights into our immune system** and what makes us unique compared with our extinct cousins.
- He is credited with **developing new and innovative methodologies to extract 'clean' DNA from human fossil tens of thousands of years old**, and reading the genetic information contained therein.
- His team **sequenced the genome of the Neanderthal, an extinct relative of present-day humans(went extinct about 30,000 years ago)**, and made the sensational discovery of a previously unknown **hominin, Denisova**.
- Paabo and his team also surprisingly **found that gene flow had occurred from Neanderthals to Homo sapiens**, demonstrating that they had children together during periods of co-existence.
- In the process, Paabo, who runs the Max Planck Institute for Evolutionary Anthropology in Leipzig, Germany, **also discovered the existence of an unknown sub-species of the human family**, now called Denisovans, who lived around the same time as the Neanderthals.
- In fact, the ancestors of modern humans, Neanderthals and Denisovans co-existed for about 20,000 years, during which they not only interacted with each other, but also inter-bred, Paabo's research has shown.
- In some populations of modern human beings, between one and three per cent of the genome has been found to originate from the Neanderthals.

- It is to be noted that **Paabo's father, Sune K Bergstrom, is also a winner of Nobel Prize in Physiology, making them only the sixth father-son pair to have won a Nobel each.**

Note:

- The Nobel Prizes are five separate prizes that, according to Alfred Nobel's will of 1895, are awarded to "those who, during the preceding year, have conferred the greatest benefit to humankind."
- On 27 November 1895, Alfred Nobel signed his last will and testament, giving the largest share of his fortune to a series of prizes in physics, chemistry, physiology or medicine, literature and peace – the Nobel Prizes.
- In 1968, Sveriges Riksbank (Sweden's central bank) established The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel.