NOVA 1

Source: TW

Recent research suggests that **genetics played a key role in the evolution of human speech,** with scientists linking the **NOVA1 (Neuro-Oncological Ventral Antigen 1)** gene to the development of spoken language.

- **NOVA1:**
  - **NOVA1** is a gene that **produces a protein** found in most mammals, playing a **key role** in **processing genetic information, brain development,** and **neuron activity.**
  - **Modern humans** have a **unique variant of this gene**, distinguishing it from those found in **Neanderthals** and **Denisovans** (ancient human species).
- **NOVA 1 Role in Speech Evolution:**
  - Scientists in an experiment **replaced the NOVA1 variant in mice with the human version** using **CRISPR gene-editing**.
  - The **modified mice** showed **distinct vocalizations,** with **altered distress calls** in infants and **more complex social squeaks in males,** indicating that the gene influenced communication.
- **FOXP2:**
  - **FOXP2** is also a gene linked to **speech and language.** It is found in **both humans and Neanderthals**, while **NOVA1 is unique to Homo sapiens,** making it more likely to explain human speech evolution.

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