

ANCHOR

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ANCHOR Latest News

Recently, the Indian Institute of Technology Madras (IIT Madras) has released the world's most detailed 3D Atlas of human brainstem called ANCHOR.

About ANCHOR

- ANCHOR stands for **Atlas of Neurochemical Characterization of the human brainstem with 3D Reconstruction**.
- It is the world's most **detailed 3D Atlas of human brainstem**.
- It comprises the most comprehensive, multi-modal, 3D maps and atlases of the human brainstem to date spanning from **prenatal period to childhood and adult brains**.
- **Developed by:** It is developed by **Sudha Gopalakrishnan Brain Centre (SGBC) at IIT Madras**.
- **Key Features**
 - It encompasses more than **200 brainstem nuclei and fiber tracts**, reconstructed from hundreds of serial sections.

- **Technology used:** This is a multimodal framework integrated **MRI, histology and detailed chemo-architecture**.
- It has been reconstructed by eight complementary immunostains overlaid across more than **500 sections, enabling detailed mapping**.
- It allows users to zoom in nearly 1,000 times closer than MRI and allows researchers to look at cells at the micron level.
- **Significance**
 - It acts as a navigational map of the brain which **could allow scientists to explore the landscape of neural networks** and cellular clusters and study how the brain changes from the fetal stage to old age.
 - It could eventually help **reveal how diseases affect different regions of the brain**, allowing clinical practitioners a faster way to catch neurodegenerative diseases.

Source: PIB

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