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Researchers in Punjab develop new prototype to generate neurovascular organoids from autologous blood

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Researchers are in the process of filing a patent for this at the Punjab State Council for Science and Technology



Researchers of Post Graduate Institute of Medical Education & Research (PGIMER), Chandigarh have come up with a prototype for establishment and characterisation of novel self-organising neurovascular organoids/ embryoids (NVOEs) entirely from autologous blood without any genetic maneuvering or morphogen supplementation.

This new model for generating mass of neurovascular tissues or neurovascular organoids/embryoids (NVOEs) from autologous blood can help in the investigation of impaired brain functioning and development by analysing in neuroimaging (preclinical) scans, correlating with altered blood supply.

The field of neural organoids is rapidly progressing and has fueled the hope (and hype) for improved understanding of brain development and functions, modeling of neural diseases, discovery of new drugs, and supply of surrogate sources of transplantation.

The researchers who are in the process of filing a patent for this at the Punjab State Council for Science and Technology, Chandigarh, are employing these models to understand the genetic basis of neurosensory hearing loss and auditory comprehension challenges (altered central auditory activity) in children with congenital Sensorineural Hearing Loss (SNHL) (early onset), with and without comorbid features (autistic- like behaviour) or neurodevelopmental defects (intellectual disability, language disorders).