



MEDIA RELEASE

Neuroscientist discovers new region in the human brain

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World-renowned cartographer of the brain, Scientia Professor George Paxinos AO, from Neuroscience Research Australia (NeuRA) has announced the discovery of an unknown region of the human brain. This new region is found near the brain- spinal cord junction. Professor George Paxinos has named it the *Endorestiform Nucleus*.

Professor Paxinos is the author of the most cited publication in neuroscience and another 52 books of highly detailed maps of the brain. The maps chart the course for neurosurgery and neuroscience research, enabling exploration, discovery and the development of treatments for diseases of the brain.

Professor Paxinos suspected the existence of the *Endorestiform Nucleus* 30 years ago and now with better staining and imaging techniques he is able to prove it.

Commenting on this discovery, Professor Paxinos says it can be likened to finding a new star.

“There is nothing more pleasant for a neuroscientist than identifying a hitherto unknown area of the human brain. In this case there is also the intrigue that this area is absent in monkeys and other animals,” said Professor Paxinos, adding, “there have to be some things that are unique about the human brain besides its larger size, and this may be one of them.”

The discovery of new brain regions helps researchers to explore cures for diseases including Alzheimer’s, dementia, Parkinson’s disease and motor neuron disease.

The *Endorestiform Nucleus* was noticed when Professor Paxinos introduced the use of chemical stains, combined with imaging techniques, in the production of his latest atlas.

The *Endorestiform Nucleus* is located within the inferior cerebellar peduncle, an area that **integrates** sensory and motor information to refine our posture, balance and fine movements.

“The function of this newly discovered part of the brain is yet to be determined, but now that it has been mapped it can be explored by the wider research community,” said Professor Paxinos.

Most scientists researching neurological or psychiatric diseases, in humans or animal models, use Professor Paxinos’ maps and concepts of brain organisation. His human brain atlases are heralded as the most accurate for identification of brain structures and are used in surgical theatres.

An increasingly detailed understanding of the architecture and connectivity of the central nervous system has been central to most major discoveries in neuroscience in the last 100 years.

“Professor Paxinos’ atlases showing detailed morphology and connections of the human brain and spinal cord, provide a critical framework for researchers to test hypotheses from synaptic function to treatments for diseases of the brain,” said Professor Peter Schofield, CEO at Neura.

“It is truly an honour for Elsevier to be continuing Professor Paxinos’ legacy of publishing with us,” said Natalie Farra, Senior Editor at Elsevier. “His books are world-renowned for their expertise and utility for brain mapping, and for their contributions to our understanding of the structure, function and development of the brain.”

The discovery of the *Endorestiform Nucleus*, is detailed in Professor Paxinos latest book titled [*Human Brainstem: Cytoarchitecture, Chemoarchitecture, Myeloarchitecture*](#) available for order this November, 2018.

Find out more

- Publication: [*Human Brainstem: Cytoarchitecture, Chemoarchitecture, Myeloarchitecture*](#)
- Advanced copies will start circulating to scientific community late November 2018
- Selected lectures will occur globally November/December 2018

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Available:

- + video interview with Professor Paxinos
- + digital content in his map room
- + selection of high detailed images
- + selection of images of Professor Paxinos
- + 3D animation of the new hemisphere