

Brain donation and brain banking in Italy: Is it possible?

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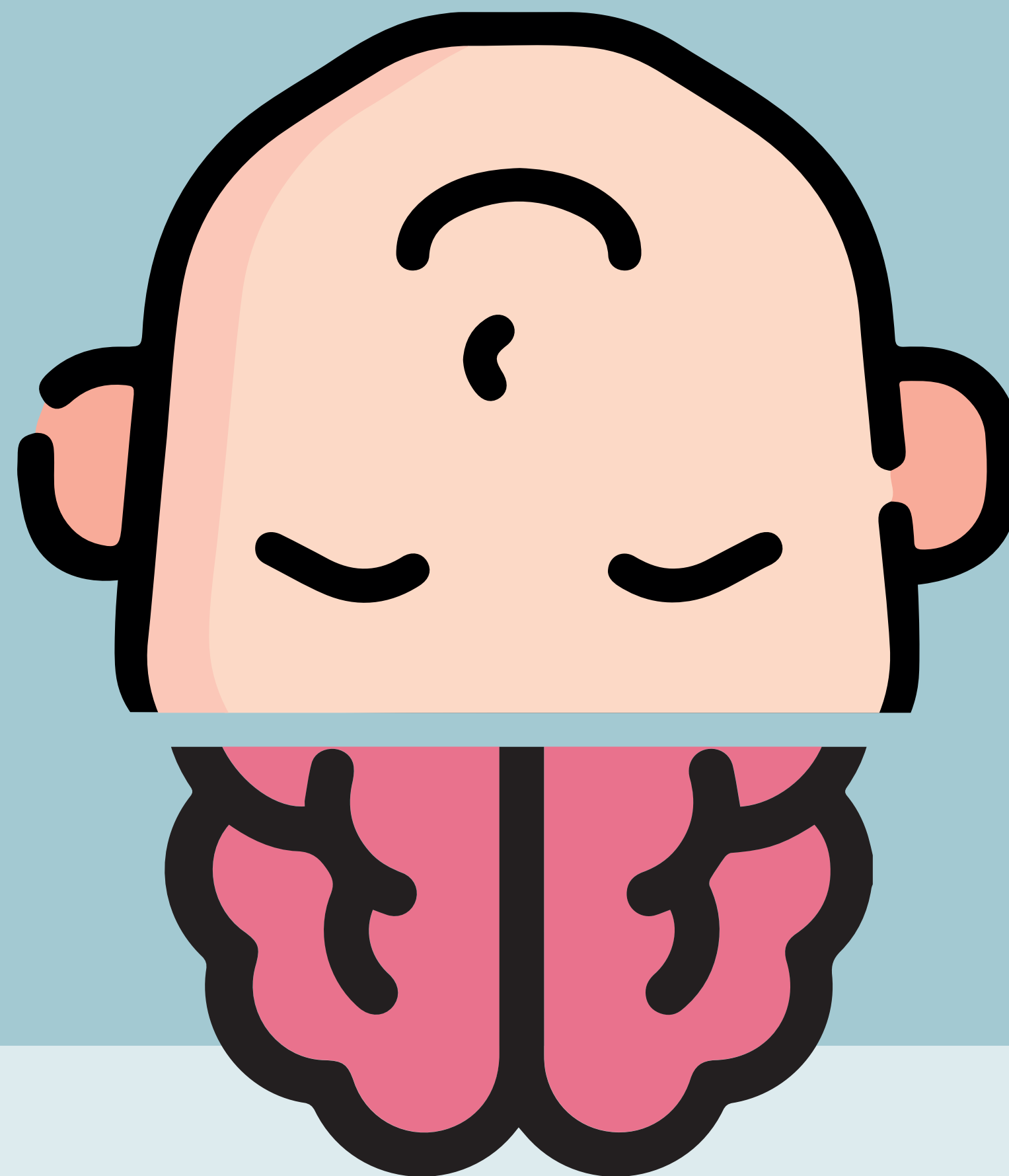
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Brain banking represents a crucial frontier in the field of neuroscience

Animal or cellular models cannot fully explain human pathophysiology

As the post-mortem interval increases, biological information is progressively lost (e.g. reduction in synaptic density, RNA deterioration)



Histopathological characterization and post-mortem biochemical analyses on brain tissue are necessary to develop "precision neurology"

Italian law for brain donation is not *biobanking-oriented*

Law 10 February 2020 n. 10

Registered advance treatment directives signed both by the interested subject and a trusted person

24h post-mortem observation period at the morgue

Mobilisation of the competent reference structure within 48h to obtain the body

Return of the body to the family after usage within 1 year



Issues

Brain tissue deterioration

Need to become a reference structure, thus need to be a university or a research hospital

Need to cover all the procedure costs, even those related to body disposal

The rapid collection of a single tissue is not contemplated

No consideration is given to the family's grieving process or their wishes regarding whether or not to hold any funeral rites

Suggestions from our experience

*Reach out individuals who might be part of a brain donation program by addressing their concerns, inquiries and expectation:
a donor-centered approach*

*Completing the legislative framework to resolve challenges associated with specific tissues' donation, as with **post-mortem corneal harvesting** for transplantation purposes*



*Establish organizational protocols that meet brain banks requirements, encompassing all activities related to collection, characterization, storage and distribution of brain material. **How?***

See our protocol for brain donation and brain banking

