

Growing mini ‘brains’ from skin cells offers promise for personalized medicine

Imagine the following transformation. A pea-sized chunk of your skin breaks apart in a dish of salts and serums. The mixture is infected with viruses that make some cells smaller, more circular, and clump together. They’ve turned into stem cells. Then, a bath of other salts, serums, and factors coax them into becoming mature neurons. The neurons divide and organize themselves into three dimensional spheres. Inside the spheres, the neurons layer themselves like the neurons in your cerebral cortex.

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This may seem like a perverse form of human cloning carried out by a neuroscientist turned witch-doctor. But it’s real: an emerging laboratory model system that might one day help treat you or a loved one’s debilitating neurological disorder.

They are called brain spheroids (or three-dimensional brain cultures or cerebral organoids) and are a relatively new [creation](#). They were first described in a splashy [study](#) published in Nature in 2013 and are one of the most technically impressive forms of tissue culture.

What brain spheroids are not, however, is as important as what they are. They’re not ‘mini-brains’. They’re not generating thoughts and emotions. Without any sensory input they lack grounding in the physical world.

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[B]rain spheroids make a new type of personalized medicine feel closer to being achievable in neurology. **Read full, original post:** [Growing Brains in Lab](#)