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Innovation

Brain storm

SCIENTISTS at the University of Washington in Seattle have accomplished the bizarre feat of getting pieces of the human brain to have epileptic fits inside test tubes, **writes Robert Temple.**

Dr Philip Schwartzkroin and Dr W Douglas Knowles of the university's department of neurological surgery took sections of brain tissue from six epileptic patients.

They discovered that the slices of epileptics' brains displayed spontaneous and rhythmic discharges of electricity at the synapses – nerve junctions.

Separate electrodes spaced some distance apart in the brain slices recorded that the rhythmic patterns of electric firing were taking place in apparent synchronization over a very wide area.

How are these spontaneous events synchronized? And what makes them happen at all? What now seems clear is that the brain tissue of epileptics is itself faulty.

The imperfect tissue has now been more precisely localized than was previously possible. We now know that the "bad wiring" is in the so-called mesial temporal cortex rather than the lateral temporal cortex. And this promises to bring us closer to the day when we can understand epilepsy.