

# Stem cell palsy hope

BRIGID O'CONNELL

## Researchers plan newborn brain injury trials

MELBOURNE researchers plan to give stem cell-rich umbilical cord blood to newborns suspected of suffering brain injury during labour, as they aim for the earliest possible prevention of cerebral palsy.

The project comes as researchers further uncover the different ways separate stem cells in cord blood play their own unique role in promoting brain repair, while the delivery of different cells at different times may prove crucial.

The Cerebral Palsy Alliance had already started recruiting for a national safety trial using a sibling's cord blood frozen at birth for stem cell infusion for children with cerebral palsy.

But the alliance is now working with the Ritchie Centre at the Hudson Institute of Medical Research to secure funding and start a national newborn trial as early as next year.

Ritchie Centre deputy director Graham Jenkin said his team had shown for the first time that different tracts — the neural pathways connecting distant areas of the brain — did not connect well in sheep with these injuries.

"The association is if those tracts don't join up, you get problems with movement, but also intellectual and learning disability," Prof Jenkin said.

He said the team aimed to

harness the three properties of umbilical stem cells — their ability to reduce inflammation, to improve the environment so native stem cells could better do their job, and to stimulate blood vessel growth.

"The holy grail is to prevent it before it happens and protect the brain," Prof Jenkin said.

A newborn trial has started in the US, as a one-off dose.

Cerebral Palsy Alliance research head Iona Novak said it

planned to use bigger, multiple doses in its trial.

"If you have a stroke, you wouldn't want to wait a couple of years before you tried a treatment," Prof Novak said.

"For children with a brain injury, we need treatments to use in the neonatal period."

Ritchie Centre postdoctoral fellow Courtney McDonald told a conference hosted by the centre this week, that the timing of when cells were given to

animal models impacted their effectiveness.

"If one cell type is good at suppressing inflammation, we might want to give that in the first week," Dr McDonald said.

"But one promoting blood vessel repair, we may give that later."

Prof Novak said the lack of funding in Australia for safety studies, not involving pharmaceutical companies, meant philanthropic support would be vital to starting the trial.

[brigid.oconnell@news.com.au](mailto:brigid.oconnell@news.com.au)  
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Pictures: DAVID CAIRD

### EWE KNOW I'M BOSS

**GENEVIEVE ALISON**

SHE may be many times the little pup's size, but Tilly the sheep will soon learn who is boss when Enzo starts his new job as the resident sheepdog at Ballarat Wildlife Park.

The 11-week-old red kelpie will become part of the park's new attraction, giving tourists the chance to experience farm life first-hand.

The sheep herding show will become part of the 1850s style Bushman's Hut exhibition, with dog training and shearing all on display for visitors.

Ballarat Wildlife Park owner Julia Leonard said Enzo was already showing all the signs of a working dog.

"He's met a few of the sheep already, and for such a little thing, he's not scared at all," she said.



The pup has started basic training and Ms Leonard predicted within six months he'll be ready to take on the sheep paddock.

"He's a smart dog and it's instinctive for him," she said.

Staff at the park hope the new attraction will be up and running early next year.

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