

# China stroke drug holds promise

By CHEAN UI-HOON

UNTIL today, there isn't an effective drug in Western medicine that helps stroke patients regain their cognitive and motor abilities. But there is hope in one Chinese drug, which is now undergoing trials so that it can be fully accepted in the Western world.

What makes NeuroAid a one-of-its-kind drug for stroke recovery? To understand its uniqueness, one has to first understand the physiology of a stroke, says David Picard, the CEO and co-founder of Moleac, a Singapore-based company.

"What happens after a stroke is that brain cells die. In an ischaemic stroke, the blood stops flowing into an area of the brain, and hence the cells die. In a haemorrhagic stroke, the cells are drowned in the bleeding and die.

"If you look at the brain on MRI after a stroke, you would see three different areas in the brain: dead cells, healthy cells, and some cells which are in-between, in the grey area (called the penumbra)."

In the first phase of recovery, the neuroprotection phase, the cells in the grey area are either going to survive or die, he explains. As some cells tend to recover, this impacts the physical recovery of the patients.

These improvements are usually seen in the first few days after the stroke, and probably not more than 10 days after the onset of stroke.

"In the second phase of recovery, the neuroplasticity phase, when the damage in the brain is done, one has to create new circuits of information to substitute those which have been impaired by the stroke."

After all, brain impairment results in neurological deficits, leading to the loss of functional and social abilities, he pointed out.

So stroke recovery, in established Western practices, largely involves physical, occupational and speech therapy - where patients are stimulated to recreate "new circuits of information". Focused, repetitive practice is the same kind of practice used by all people when they learn a new skill.

"Our brain has the capacity to reorganise our

**'NeuroAid probably helps build new circuits of information that would substitute the ones damaged through stroke.'**

- Mr Picard

healthy neurons to orchestrate new information circuits. When this happens in the brain, this process is called neuroplasticity, which is a longer process of healing."

But so far, in Western medicine, most pharmaceutical research to date has been directed at neuroprotection. "And over 50 molecules tested in 114 trials ended up being negative," he says.

"The latest failures were in 2007 when German biotech firm Paion AG and its US partner Forest Laborato-

ries' experimental stroke treatment failed in May while AstraZeneca's stroke drug NXY-059 flopped in 2006."

The pharmacological drugs which exist and are prescribed are meant to prevent risk of secondary stroke and to manage conditions such as high blood pressure, high cholesterol, diabetes and so on.

But NeuroAid, sold as an over-the-counter Chinese proprietary medicine here, is seen as supporting neuroplasticity mechanisms, so that patients regain independent speech and movement faster.

"What we know is that NeuroAid probably helps build new circuits of information that would substitute the ones damaged through stroke," Mr Picard says.

NeuroAid has 14 ingredients in it, the key ones being *danshen* (belonging to a specific species of sage) and *huangqi*, or *radix astragalii*, also a root.

Clinical trials in China have shown positive benefits in patients months after their stroke, says Mr Picard. However, in order for NeuroAid to be systematically prescribed to stroke patients early after a stroke in the hospital setting, Moleac is supporting a clinical trial which is recruiting 1,100 patients within 48 hours after a stroke.

"The trial is expected to end in 2009. It's an opportunity to look at the drug's impact at the early stages of stroke, and we also want to find out if it should be a systematic treatment in hospitals," says Mr Picard.



FILE PHOTO

**Herbal remedy:** NeuroAid contains 14 ingredients, the key ones being *danshen* (belonging to a specific species of sage) and *huangqi*, or *radix astragalii*, also a root

## CRYPTIC CROSSWORD

### ACROSS

- Camping out - or sailing? (5,6)
- Aware of son acting badly (9)
- Number receive poor return and become dejected (5)
- Is the first murder victim a girl? (6)
- Struggles to maintain faith in the past (8)
- Oriental vessel is a mile in length (6)
- Picture may take a goalkeeper by surprise (8)
- Proverbially, no longer a stud (8)
- Dangerous to fly, use horse and trap (6)
- He may give you an off-peak call (8)
- There's your hidden error (6)
- Sprays of flowers (5)
- A call for military revolution (5,4)
- Treat speech as showing bias in class (8,3)

### DOWN

- Old city features ragged children (7)
- Sort of lead mother will follow in principle (5)
- Kick up a fuss, as Adam and Eve had to do (5,4)
- A grate not fully closed (4)
- They're old soldiers entering wrong events (8)
- More than one team takes part (5)
- Security is lifted in the store (7)



8 Well done! A fine performance (4,4)

- Lunar settlement? (8)
- Outstanding piece of cinematic apparatus? (9)
- Widely shown film of American disaster (8)
- Excursion ending at nightfall (3,4)
- It's a fixed sort of charge (7)
- Famous composer? Hear, hear (5)
- Provide some point to a joke (5)
- He floated a company to avoid liquidation (4)

### YESTERDAY'S SOLUTION

**Across:** 1 Solitude, 6 Nick, 8 Next-door, 9 Cogent, 10 Workload, 11 Let rip, 12 Drop, 14 Hospice, 18 Nettled, 20 Adit, 23 Writer, 24 Penitent, 25 Tomato, 26 Defender, 27 Feud, 28 Figurehead.

**Down:** 1 Sandwich, 2 Luxury, 3 Coddle, 4 Two-handed, 5 Escalope, 6 Night out, 7 Canticle, 13 On the menu, 15 Overdose, 16 Portland, 17 Carry off, 19 Dog-tired, 21 Bireme, 22 Meddle.

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