



# The Australian company testing a breakthrough treatment for Ross River

*Existing drug could be repurposed to treat alphavirus patients around the world*

**7 MARCH 2017:** A Melbourne biotech company is getting ready to test a breakthrough treatment that could be the first to combat the debilitating Ross River virus currently plaguing Australia.

Paradigm Biopharmaceuticals Ltd (ASX:PAR) is preparing to launch a Phase 2 clinical trial of the drug Pentosan Polysulfate Sodium (PPS) for the treatment of Ross River virus and the related alphavirus chikungunya, which affects hundreds of thousands of people in South Asia each year. There is currently no effective treatment for either disease.

PPS has both anti-coagulative and anti-inflammatory effects and has been in use since the 1940s to prevent the formation of platelets during pre-operative procedures as well as to treat bladder pain.

The potential for PPS to be used as an effective treatment for Ross River virus was discovered by Griffith University scientist Dr Lara Herrero, who herself suffered from the disease.

“For decades patients have suffered from the debilitating arthritic pain caused by RRV infection, only to be told by their treating doctors that there is nothing that can be done. We are hoping that Pentosan Polysulfate may change that and be the first licensed alphaviral-specific treatment,” said Dr Herrero.

Dr Herrero’s pre-clinical research conducted at Griffith University’s Institute for Glycomics showed promising results that PPS can halt the progression of Ross River virus-induced disease, reducing the duration and severity of clinical signs and symptoms. In the pre-clinical model of Ross River virus, the drug PPS was shown to significantly decrease joint and muscle pathology and importantly reduce the ongoing complications of viral arthritis such as chronic joint signs and cartilage breakdown.

Ross River virus and chikungunya are alphavirus infections transmitted by mosquitoes that lead to a range of debilitating symptoms and signs such as joint swelling, fatigue, fever and severe joint pain that can progress into chronic arthritis.

At the moment, patients are commonly administered anti-inflammatories and corticosteroids to provide pain relief for symptoms of the virus, which is reversed when the medication is stopped. However the hope is that PPS will be proven an effective way to stop the disease in its tracks and prevent its progress.

Paradigm Biopharma is about to submit for ethics approval to commence Phase 2 of a clinical trial of PPS to treat Ross River virus. The plan is to conduct the trial on a small number of human patients with the disease in Queensland and Victoria beginning in June 2017.

Paradigm Biopharma CEO Paul Rennie said that by repurposing and testing an existing drug, the company hoped to make an effective treatment for Ross River virus available much sooner than expected.

“With traditional pharmaceutical development pathways, the time it takes to get from a new drug to Phase 2 trials can take more than a decade, and costs can climb into the hundreds of millions of dollars,” Mr Rennie said.

“We have an advantage in this scenario in that Pentosan Polysulfate Sodium has been used successfully and safely to treat other conditions for many decades, and so if we can prove its effectiveness for treating Ross River virus we may be able to get it to patients more quickly than usual.”

The results of Dr Herrero’s pre-clinical trial of PPS were published in a paper titled *Pentosan Polysulfate: a Novel Glycosaminoglycan-Like Molecule for Effective Treatment of Alphavirus-Induced Cartilage Destruction and Inflammatory Disease* in the Journal of Virology in 2015.

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