

# Lions Australia Spinal Cord Fellowship

## “Making a Brighter Future for Victims of Spinal Cord Injury”

### The challenge

- Up to **400 new cases** of spinal cord injury (SCI) in **Australia per year**, 180,000 worldwide.
- Leading causes of SCI are traffic accidents (47%) and falls in persons over 65 years old (27%).
- Despite advances in rehabilitative medicine, the quality of life for SCI patients is still poor.
- No approved drug therapies that can promote significant recovery of spinal function.
- Annual **cost of SCI for Australia is \$2 billion** in healthcare costs and lost productivity.

### Development of a new technology

- With LASCf support, the Spinal Cord Injury Research Program at the Department of Neuroscience, Monash University has developed a **new SCI repair technology**.
- Pre-clinical studies show infusion of a protein called Decorin can promote recovery after SCI.
- **Decorin** infusion can suppress scarring & inflammation to support nerve fibre regeneration.
- Decorin also stimulates the formation of new spinal circuits, “**neuroplasticity**”.
- Importantly, Decorin infusion **promotes recovery** of function in early stage and **chronic SCI**.

### Science focused on delivering a therapy

- Ongoing scientific studies are revealing how Decorin promotes SCI recovery – a new biology.
- Knowing how Decorin works greatly increases the chance of delivering an effective therapy.
- Decorin infusion method is clinically relevant. Provides opportunity for multiple treatments.
- Ability to suppress scarring and promote neuroplasticity indicates **potential treatment** of other neurological disorders such as **traumatic brain injury, cerebral palsy** and **stroke**.

### Moving from the lab to the clinic

- Working with biotech partners the SCIR Program has developed **pharmaceutical-grade Decorin**.
- With sufficient funding, **clinical trials with Decorin** can be conducted at the **Neurology Clinical Trials Facility** within the Alfred Monash Research and Education Precinct (**AMREP**) in Melbourne, the first clinical trial centre of its kind in Australia.