

① WOMEN IN SCIENCE

**“Science and everyday life cannot and should not be separated”
- Rosalind Franklin**

1. WHAT'S GOING ON IN SCIENCE?

2. A FAMOUS WOMAN IN SCIENCE

3. UPCOMING OPPORTUNITIES!

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A SECOND CHANCE @ RECOVERY

Published
Feb 11

1. Replicating Spinal Cord Injuries

Researchers developed a **lab-grown human spinal cord** that closely mimics **real traumatic injuries**.

As human organoids closely resemble real tissue in structure, cellular diversity, and function, they are useful for studying disease mechanisms, testing regenerative therapies and exploring how organs develop, at a faster rate and lower cost.

2. “Dancing Molecules” Therapy

The injuries were treated with **supramolecular therapeutic peptides (STPs)**, which use 100,000+ molecules to activate cell receptors and simulate the body’s natural repair signals. The liquid injection forms a web of nanofibres which mimics the spinal cord’s extracellular matrix.

3. Results & Conclusions

In mice, a single injection restored walking within 4 weeks.

In the human organoid, researchers observed a **reduction in glial scarring and inflammation** as well as a **regeneration of neurites and axons**.

This study showed that STPs may help reverse paralysis after traumatic injuries in human organoids and animal models.

Learn more:



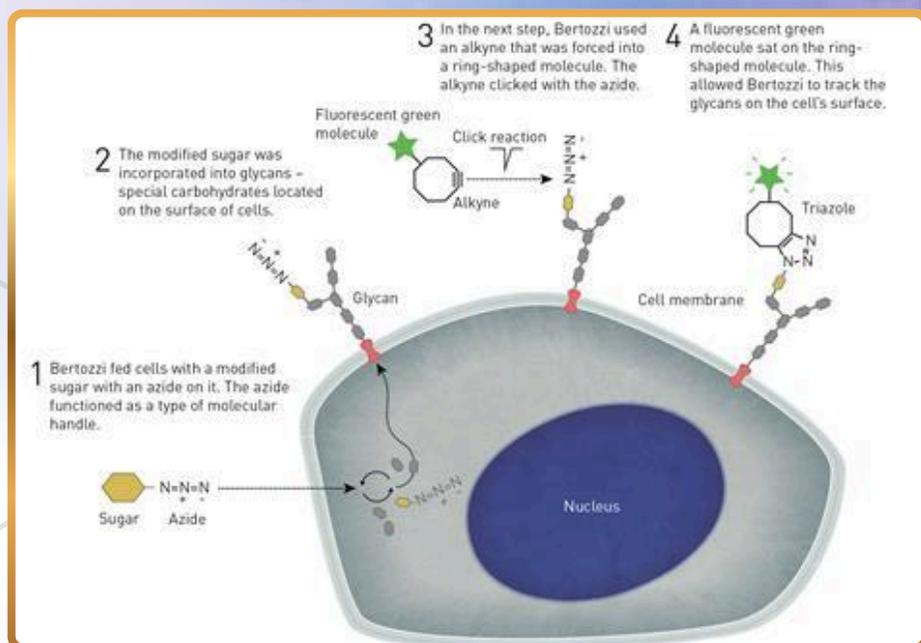
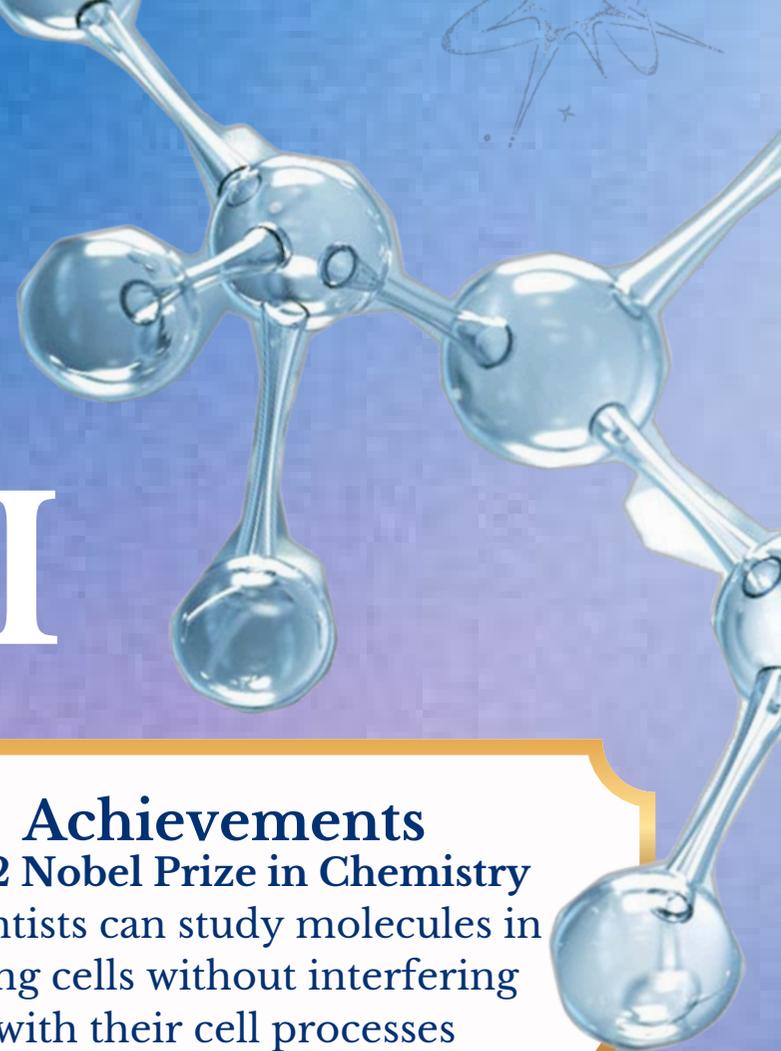
Increased neurite growth using STPs





CAROLYN BERTOZZI

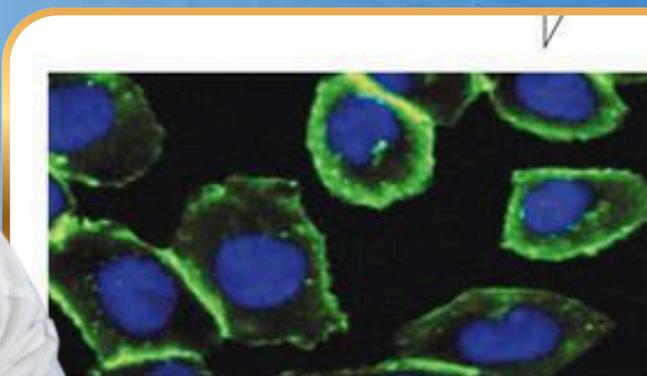
| American Chemist |



Achievements
2022 Nobel Prize in Chemistry
 Scientists can study molecules in living cells without interfering with their cell processes

Field of Work
Bioorthogonal Chemistry
 Research on glycans and their role in cancer, infections and immune disorders to help develop therapeutic tools

Impact
Drug Development & Biomedical Research
 Her research has enabled **targeted drug delivery** and improved understanding of **disease mechanisms**



Bertozzi used the strain-promoted click reaction to track glycans. They have a green glow in the picture. The cell nucleus is coloured blue. Thanks to the glycans' green glow, Bertozzi was able to follow them in the cell.

Image from Proc Natl Acad Sci USA (2007) 104:16793-16797



STEM Women Graduate Careers Event

ICC SYDNEY | MAR 13TH | 1 - 4 PM

A **FREE** careers event for students and recent graduates to discover internships, career opportunities and ask questions to employers about your dream STEM career. Some employers include:

- NSW Premier's Department
- Optiver
- Dulux Group



UPCOMING OPPORTUNITIES



CORTX - NEUROSOC

G07 Biosci UNSW | MAR 2ND | 5:30 - 7:30 PM

An **interactive panel** with academics, researchers and senior neuroscience students who can provide insights into research pathways, honours degrees and fun questions



STEM CAREER: LAUNCHPAD - UNSW

ONLINE | SELF-PACED

A co-curricular program with **professional tools and skills** that helps to guide your career and academic journey. Additionally, it provides you with AHEGS Accreditation



SEE YOU
NEXT
WEEK :)

