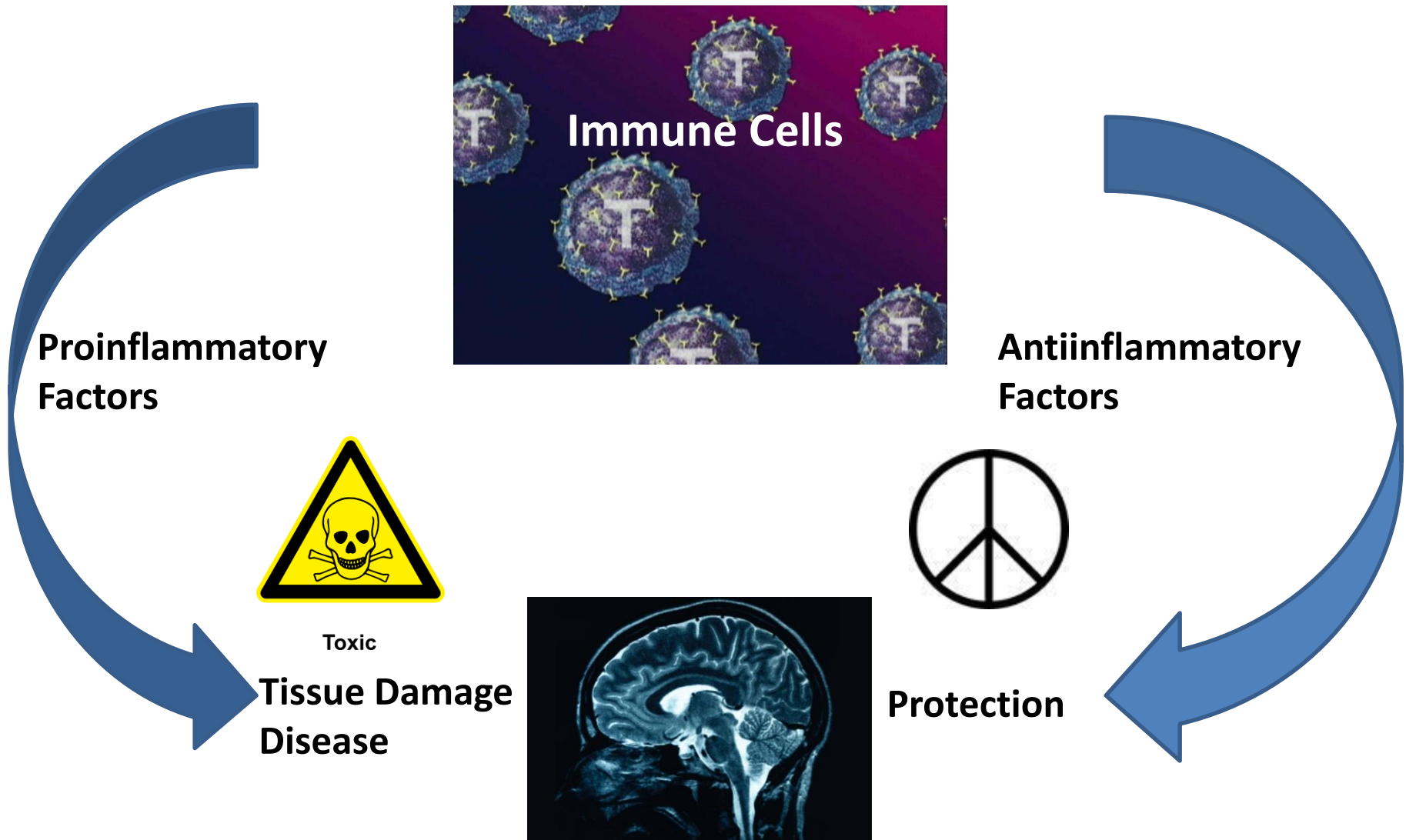
A 3D illustration of several neurons and their axons. The neurons are depicted with yellow cell bodies and branching dendrites. The axons are shown as blue, segmented structures extending downwards. The background is dark with a subtle glow around the neurons.

Testing therapeutics for neuroimmune diseases using animal models and laser capture

Amanda Vang, Ph.D.

What is neuroimmunology?

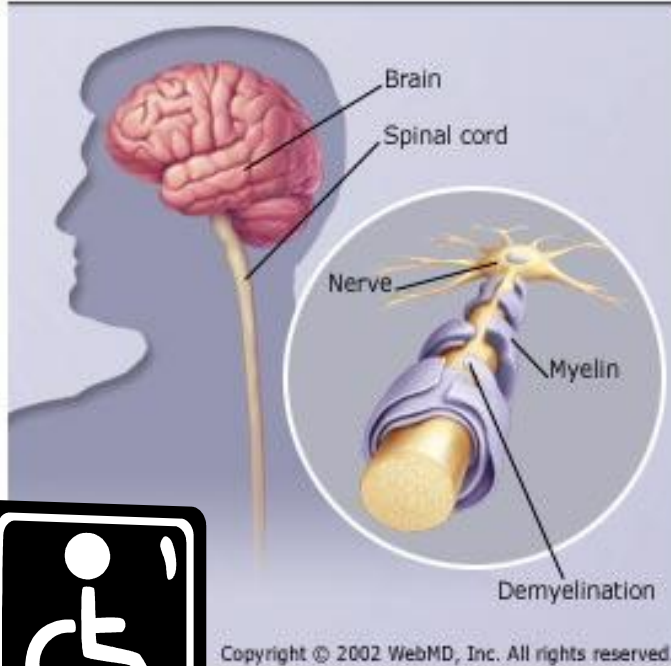


What is my research goal?

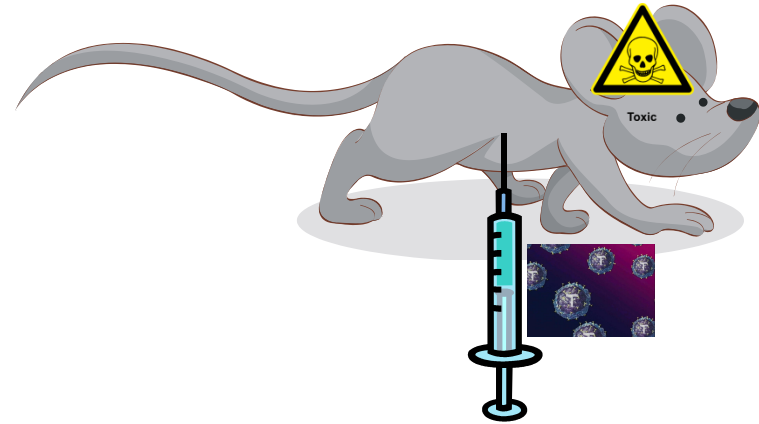


Experimental Autoimmune Encephalomyelitis “Mouse Multiple Sclerosis”

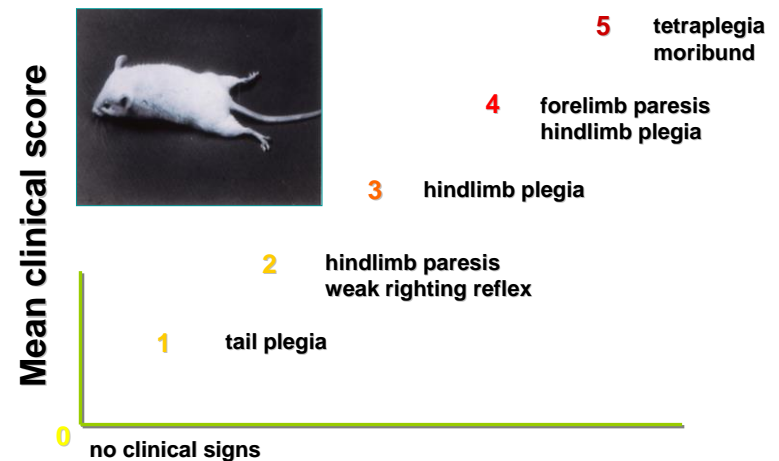
Multiple Sclerosis



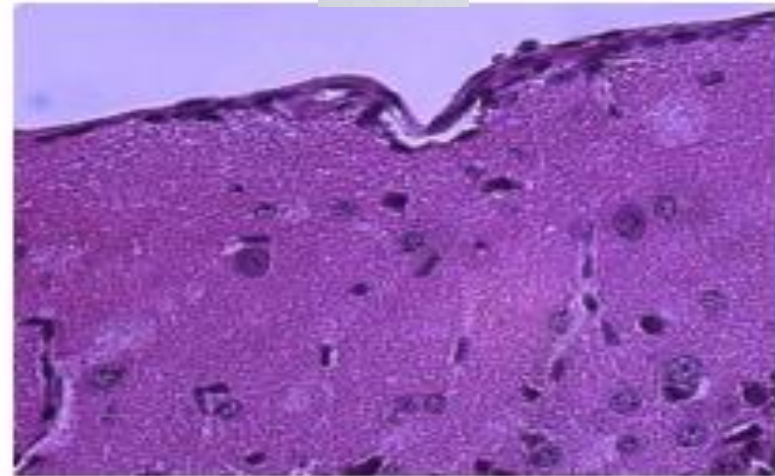
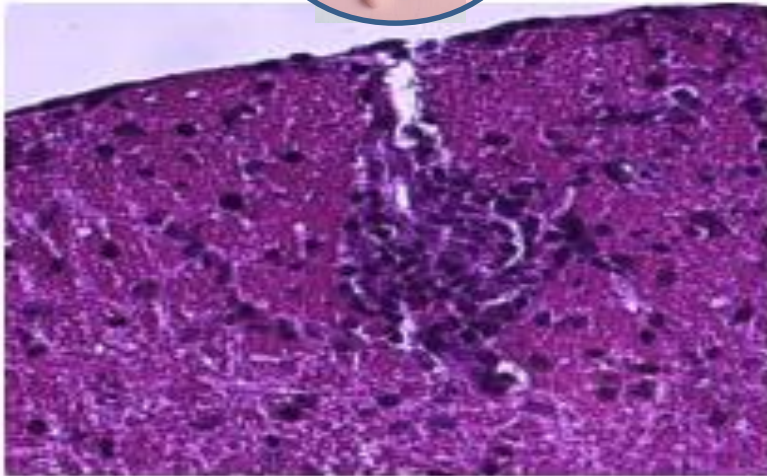
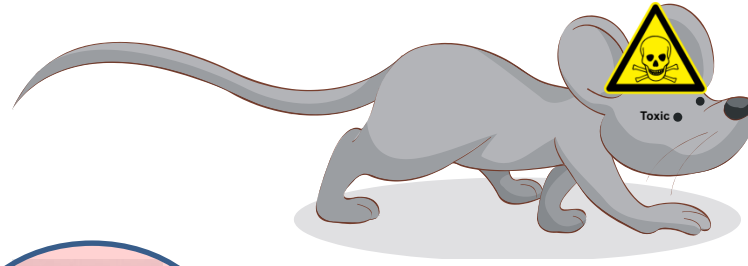
- Inflammation damages nerves
- Damaged nerves can't transmit signals
- leads to weakness, paralysis, disability



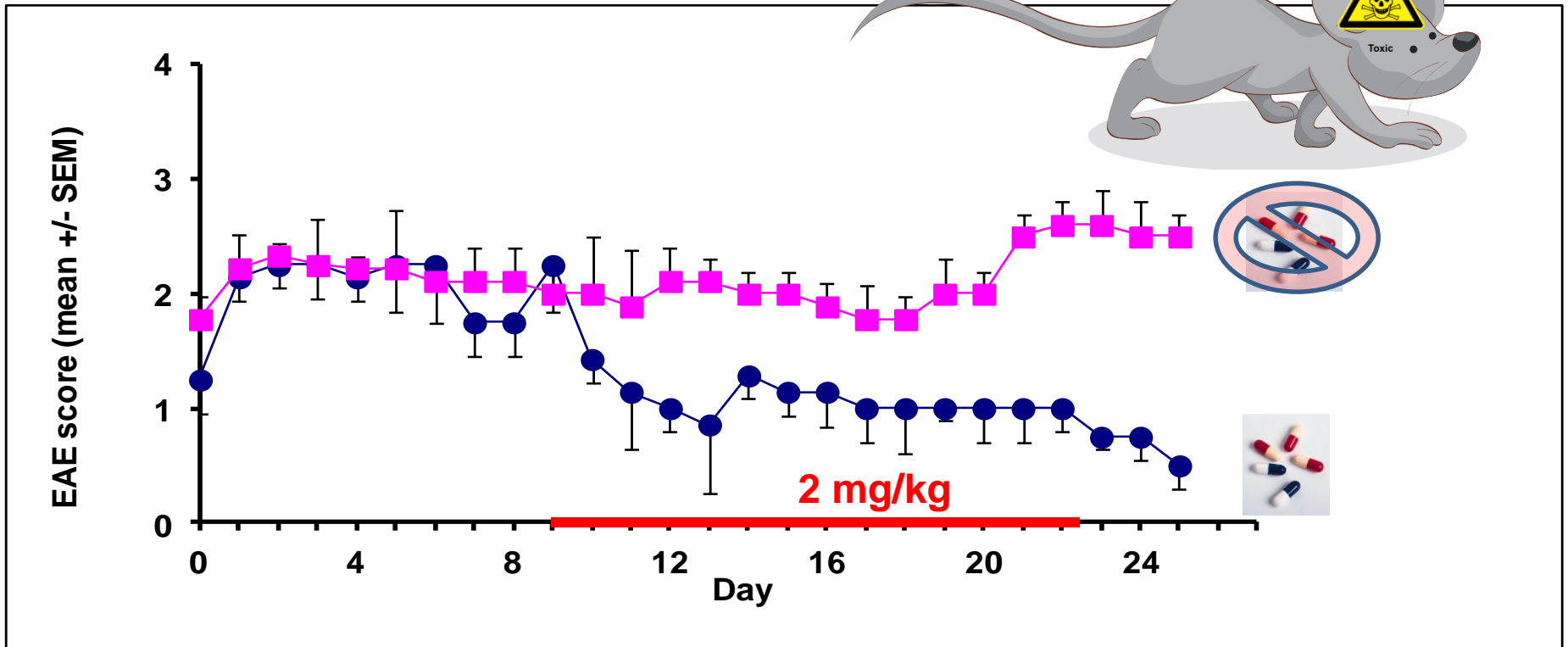
EAE: clinical signs and scoring



Mice that receive drug treatment develop less spinal cord inflammation



Mice that receive drug regain function

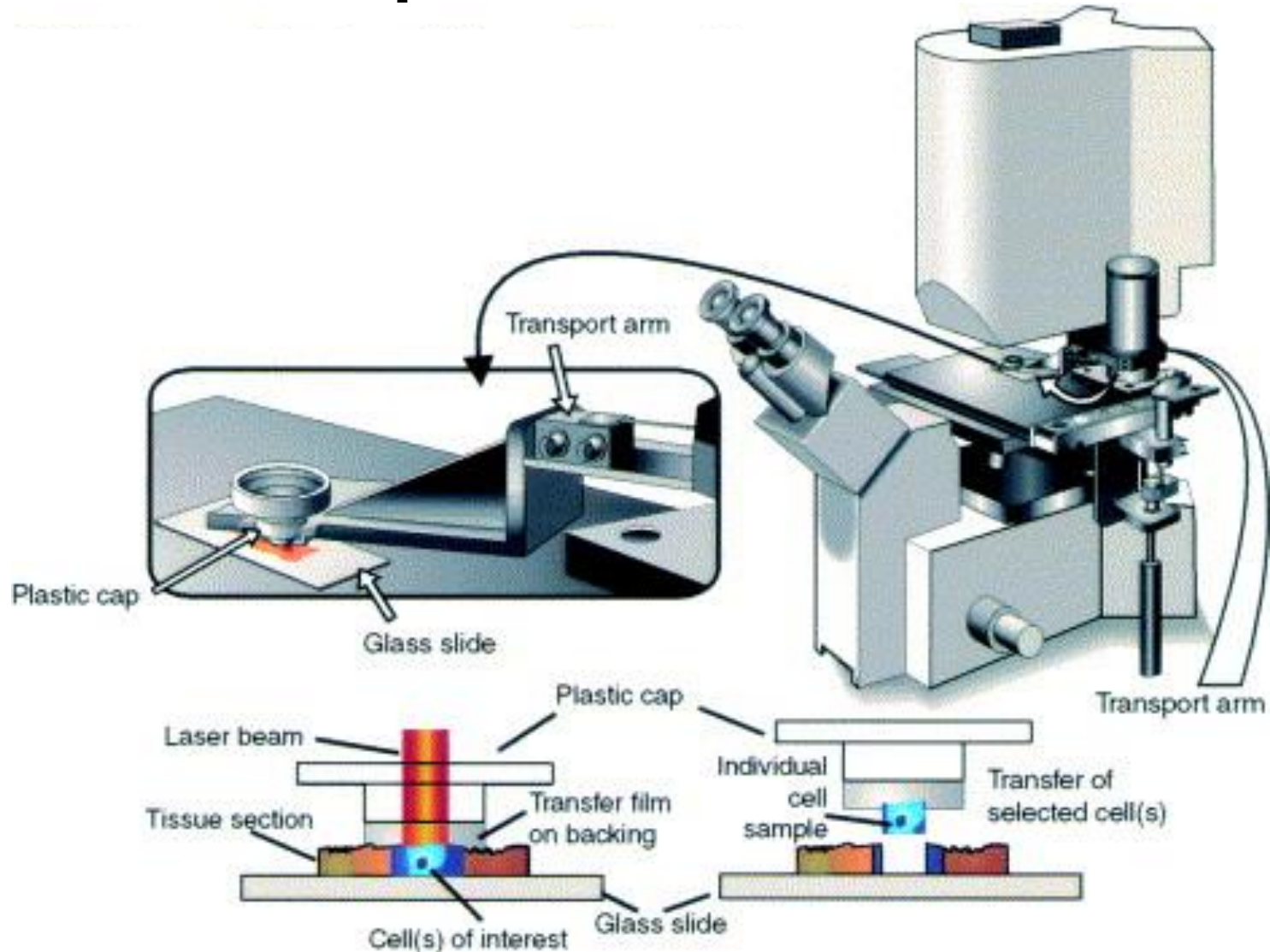


$p < 0.01$, day 9-25

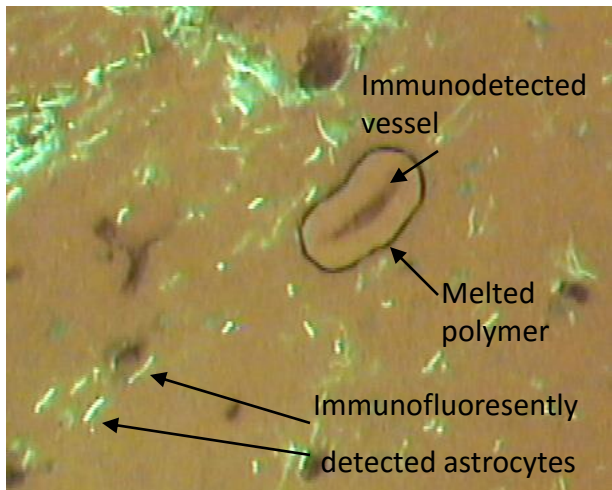
How does the drug work?



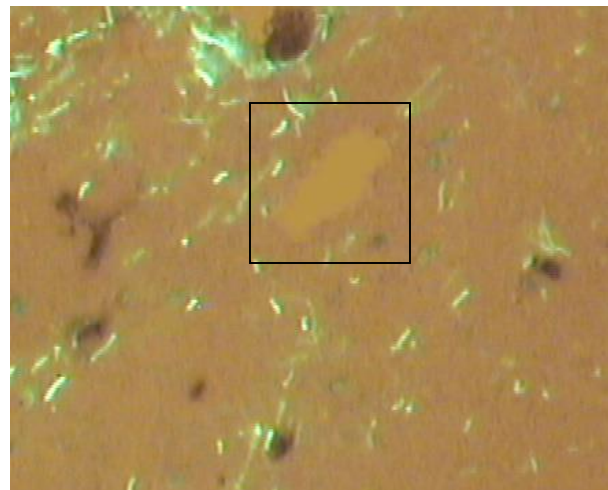
Dissect individual cells from slides of spinal cord tissue



Before Laser



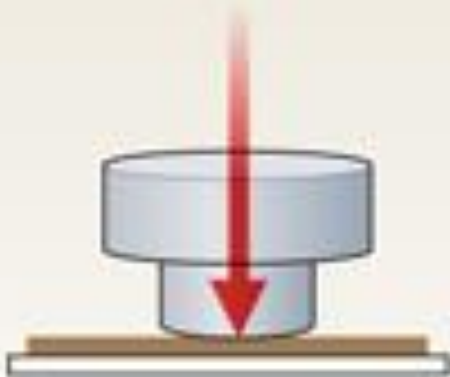
After Laser



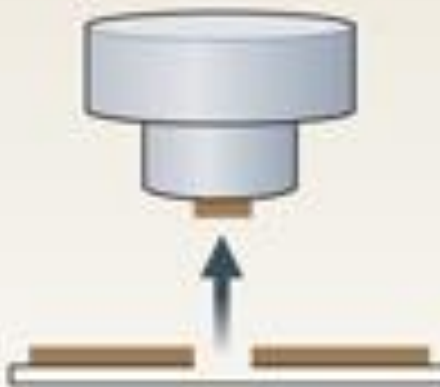
Dissected blood vessel



Infrared laser capture



Lift cap from slide



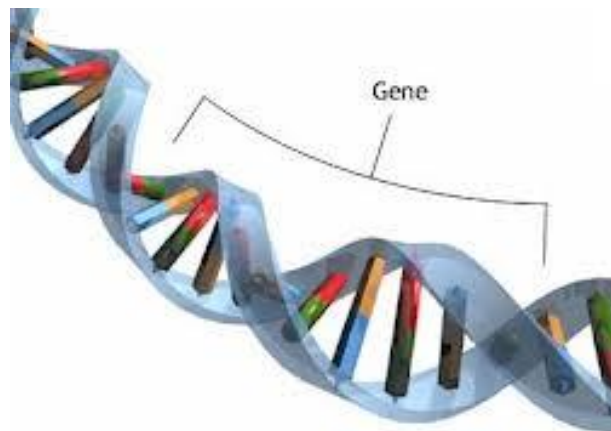
Cap with captured cells



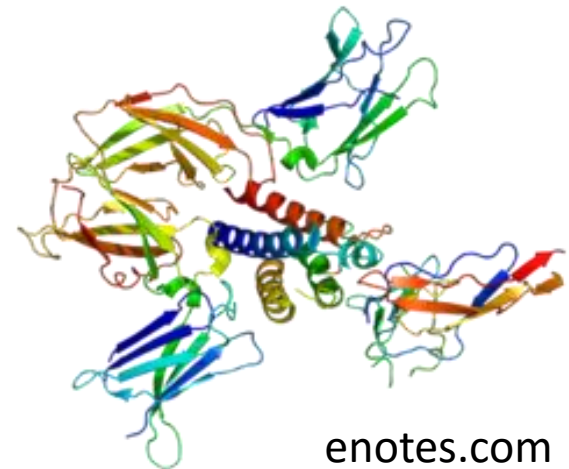
What changed in the cells because of drug treatment?



Toxic



#ADAM



enotes.com

Takk

