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**Immune-evasive gene switch enables regulated delivery of chondroitinase after spinal cord injury**

Friday 10th November 2017 1pm  
June Lloyd room (PUW4), ICH

**Abstract**
Chondroitinase ABC (ChABC) promotes functional neuroplasticity after CNS injury by degrading extracellular matrix inhibitors. Although large scale ChABC delivery can be achieved via a gene therapy approach, it has not previously been possible to control gene expression, and prior experimental systems for gene regulation are likely to be incompatible with the non-resolving adaptive immune response known to occur following spinal cord injury. I will present data where we apply a novel immune-evasive dual vector system, in which the ChABC gene is also under a doxycycline inducible regulatory switch (dox-i-ChABC) and demonstrate control of ChABC gene expression in the adult rat injured spinal cord, revealing temporally-dependent therapeutic effects.

**Biosketch**
Emily Burnside is a post-doc in the laboratory of Professor Elizabeth Bradbury in the Neuroregeneration Group at the Wolfson Centre for Age-Related Diseases, King’s College London, working to promote repair and functional recovery in a clinically-relevant in-vivo rodent model of spinal cord injury. Emily particularly works on manipulating the extracellular matrix of the injured spinal cord, a project which she has continued following her PhD, also in the Bradbury Lab.