

**Brain Injury  
MedTech Co-operative**



**National Institute for  
Health Research**

# **Regenerative Neuroscience**

## **MIC Theme 8**

***Dr Mark Kotter***

# *Background*

## Regenerative Neuroscience



National Institute for  
Health Research

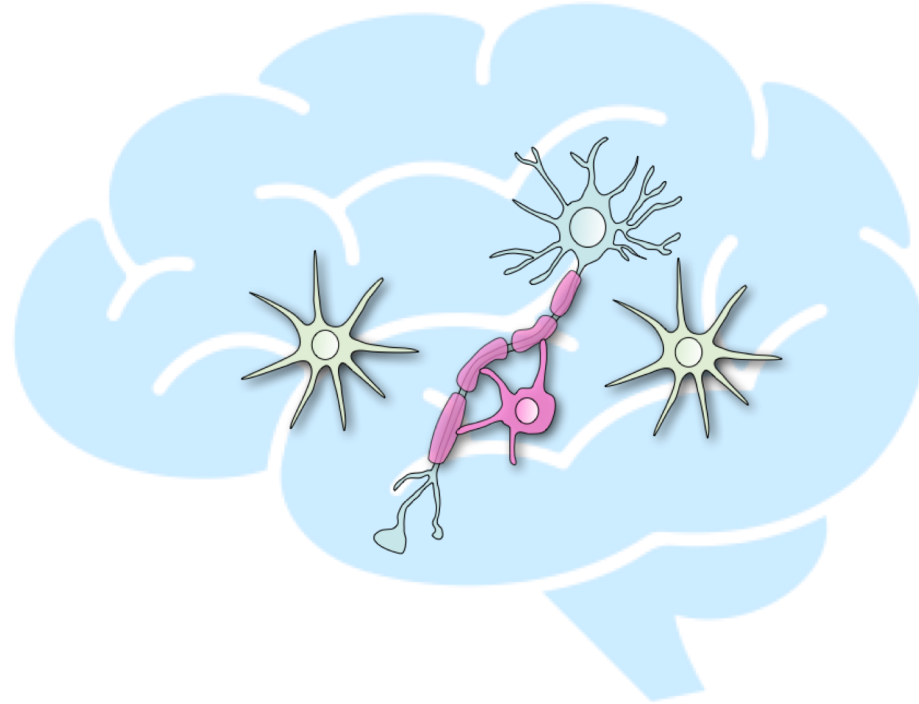


# *Background*

## Regenerative Neuroscience



National Institute for  
Health Research

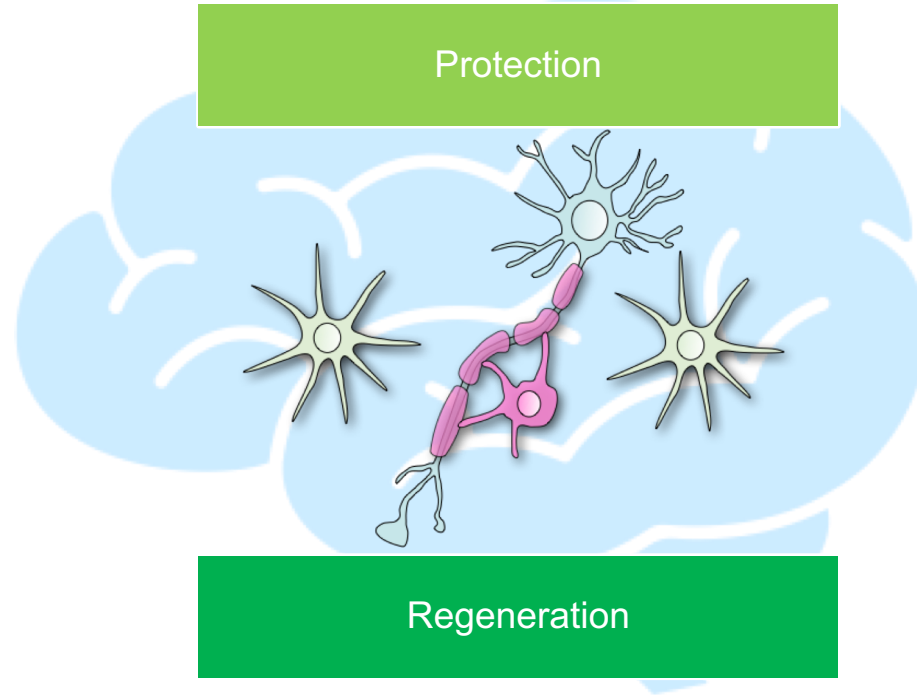


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## Regenerative Neuroscience



National Institute for  
Health Research

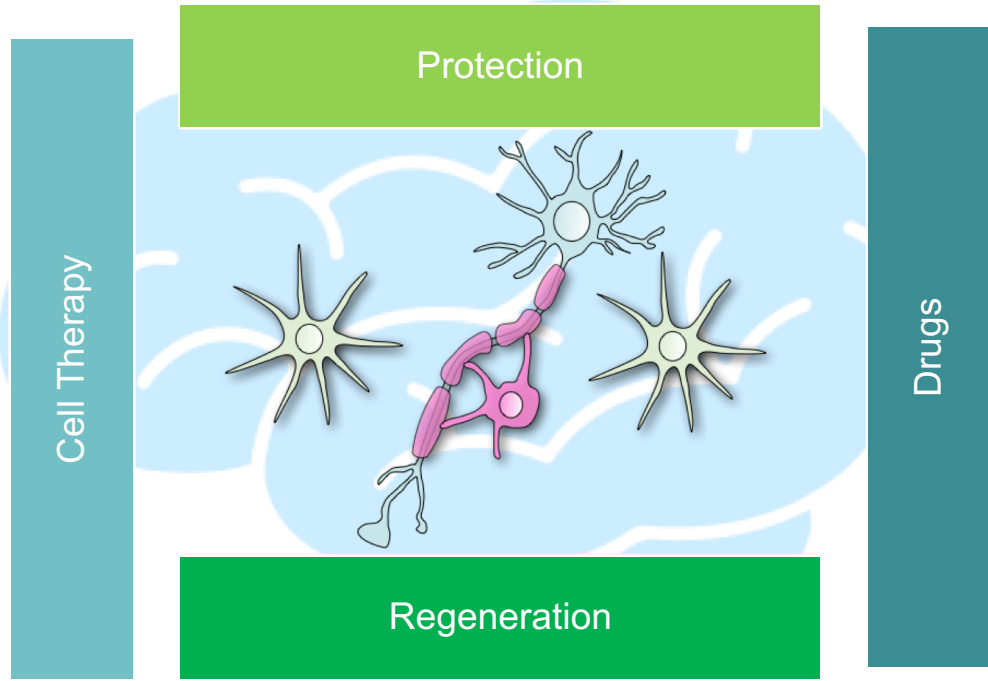


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## Regenerative Neuroscience



National Institute for Health Research

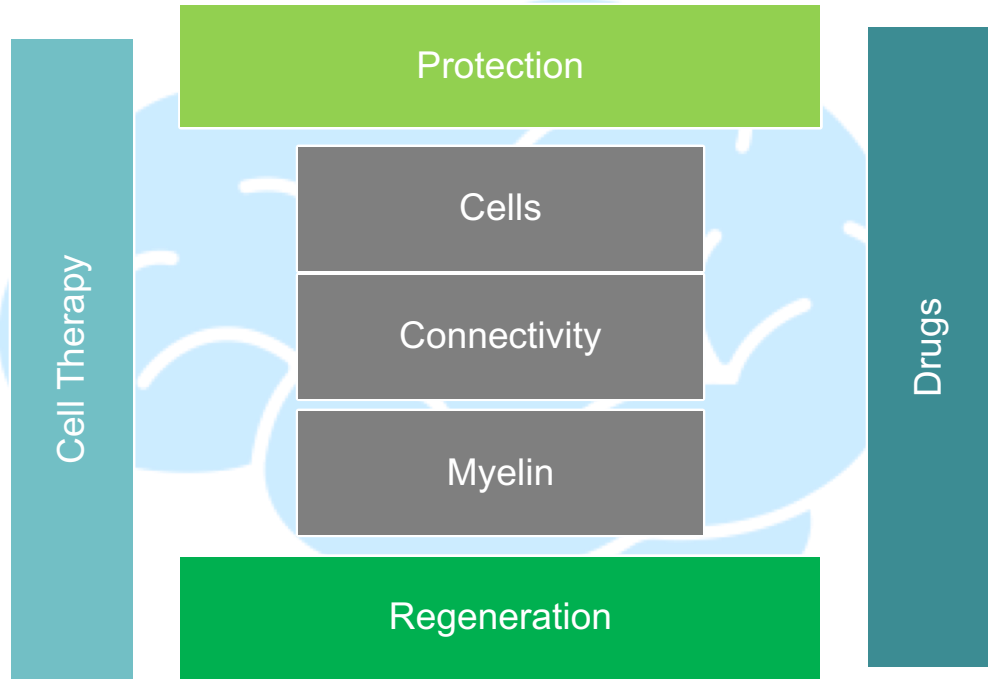


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## Regenerative Neuroscience



National Institute for Health Research

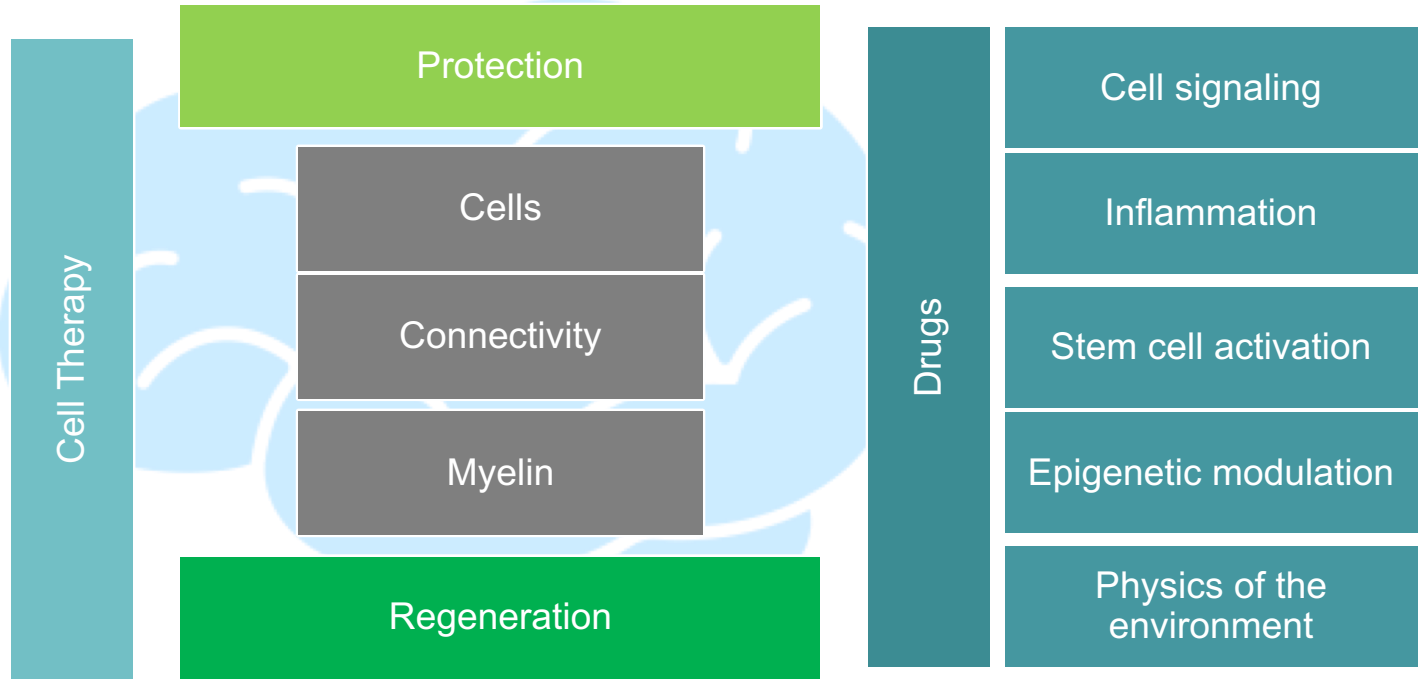


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National Institute for Health Research

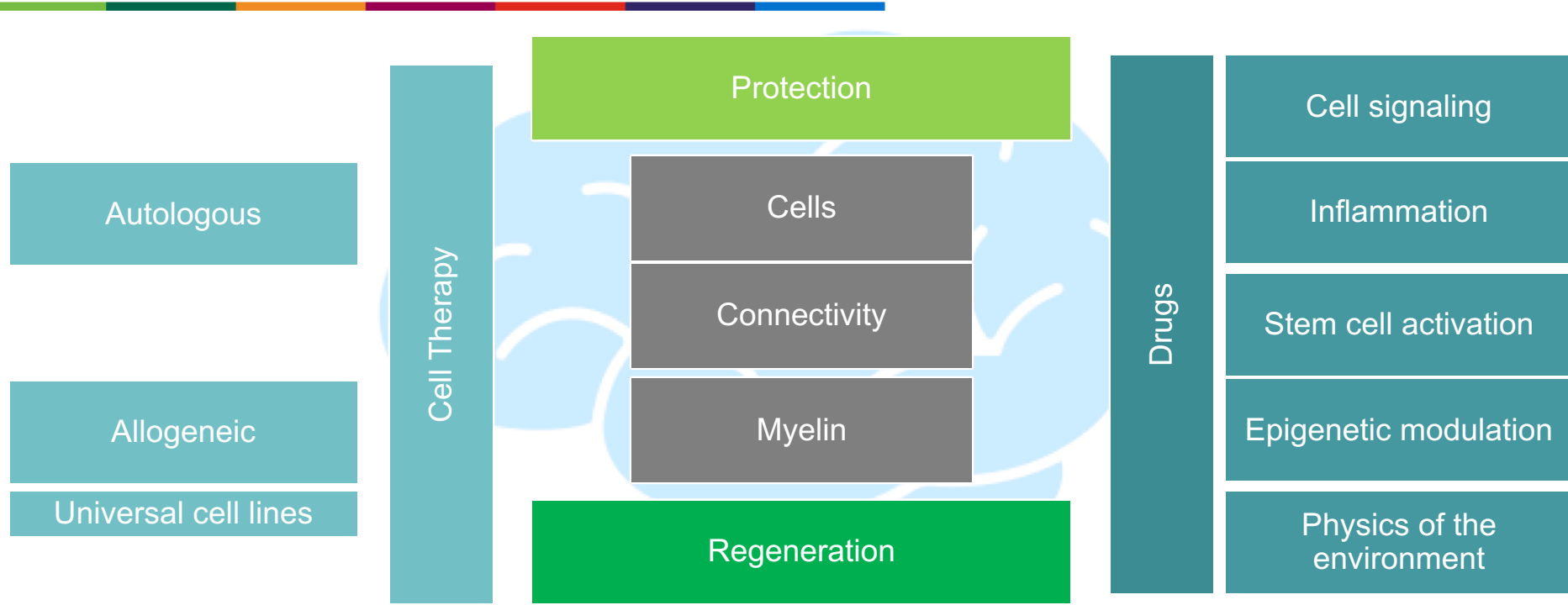


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## Regenerative Neuroscience



National Institute for Health Research



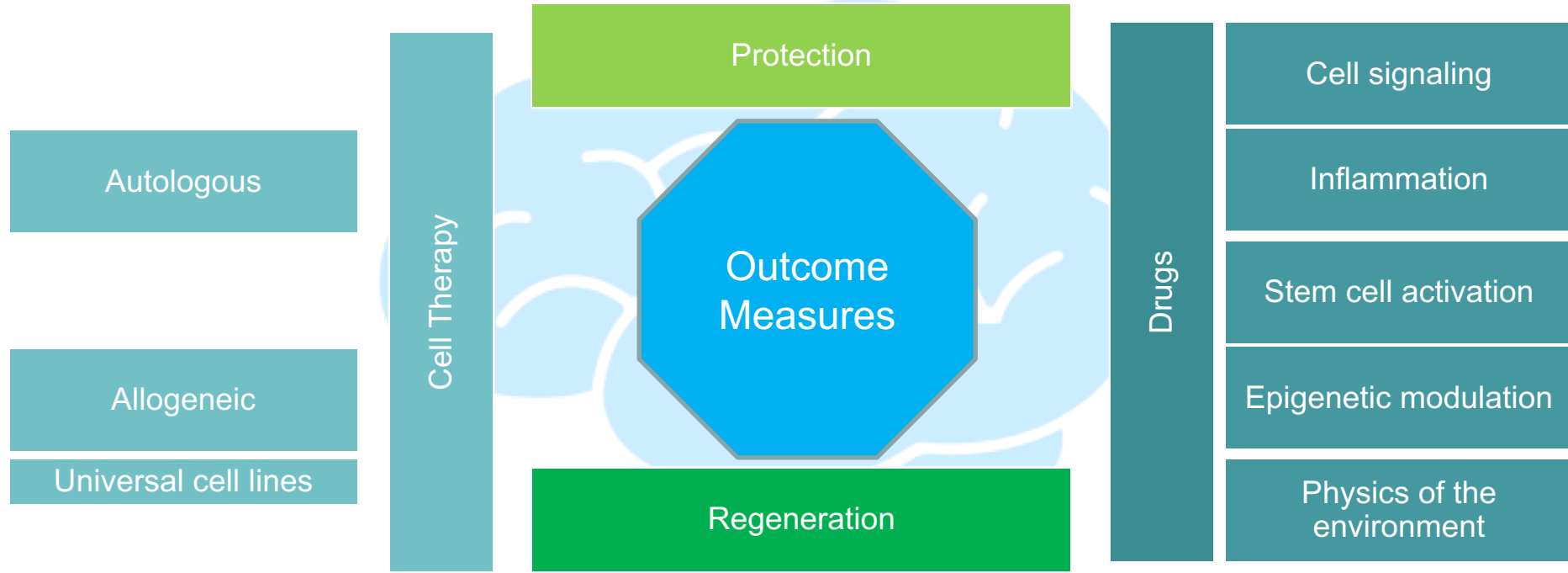


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## Regenerative Neuroscience



National Institute for Health Research

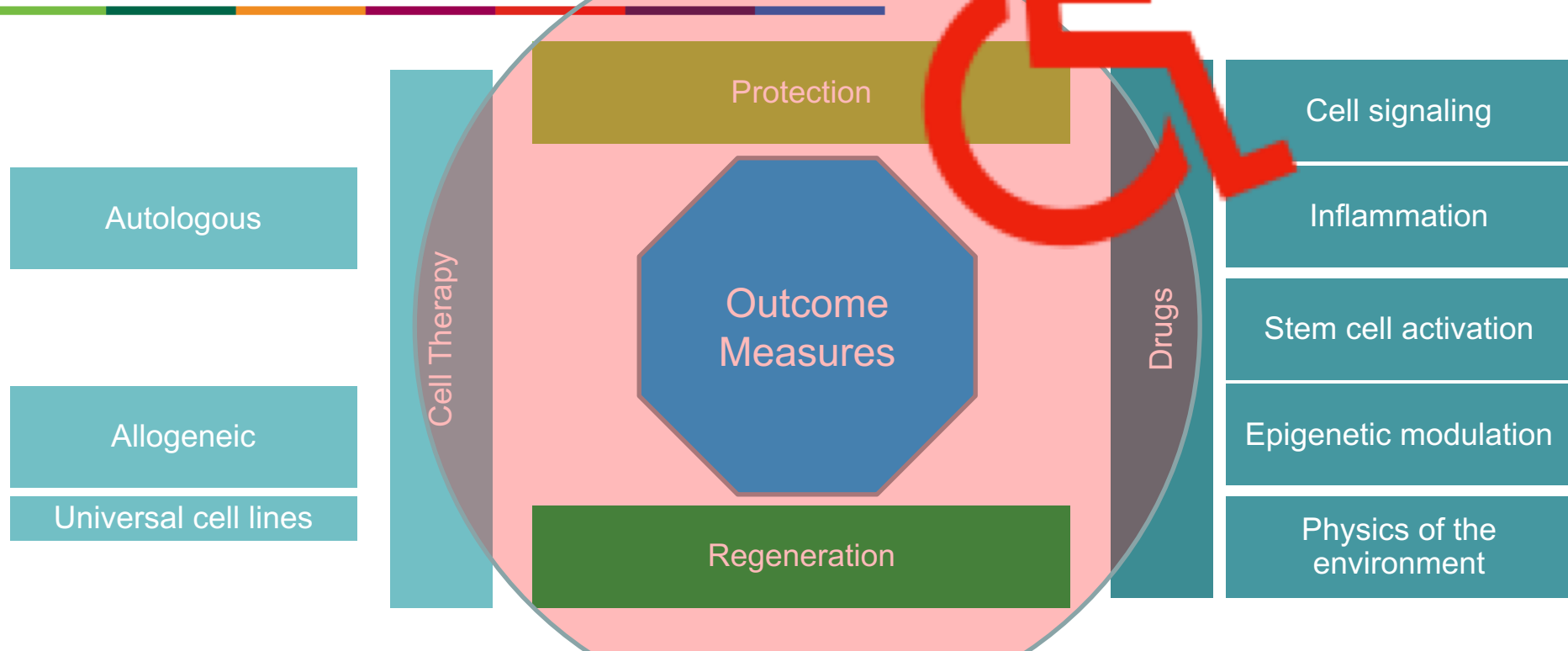


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## Regenerative Neuroscience



National Institute for Health Research

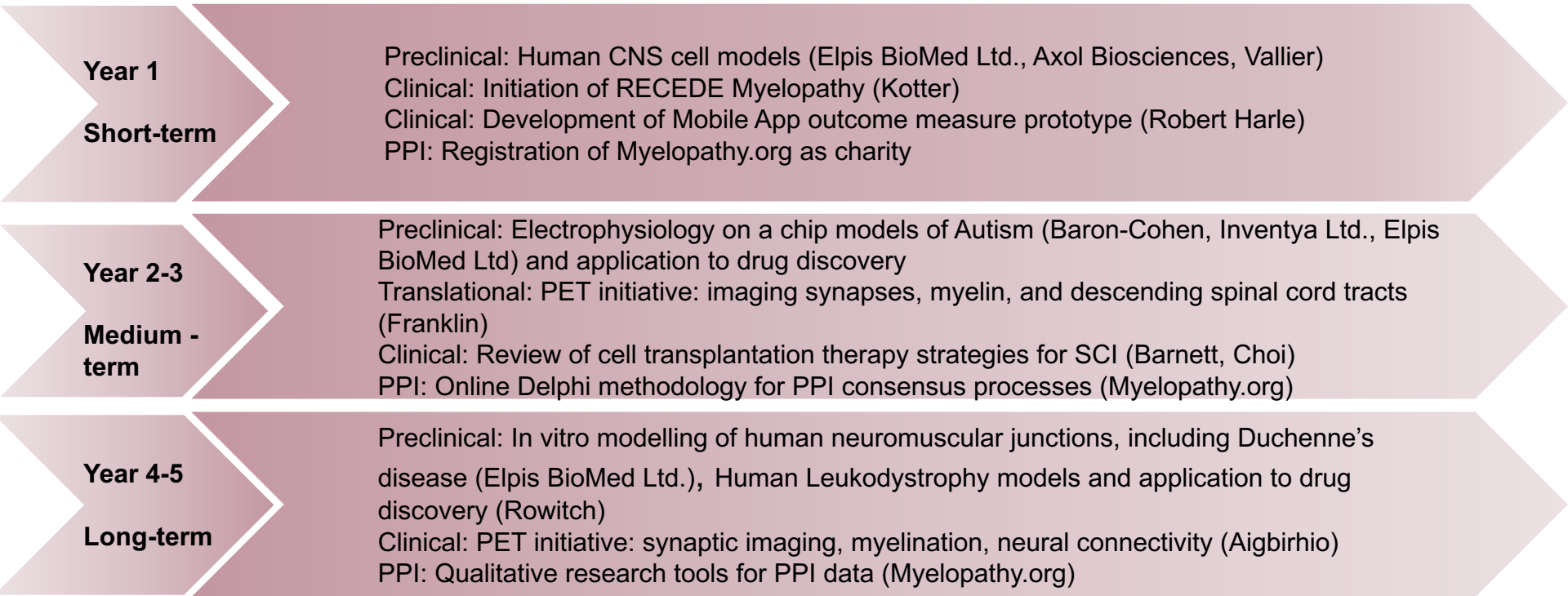


# Strategy

## Regenerative Neuroscience



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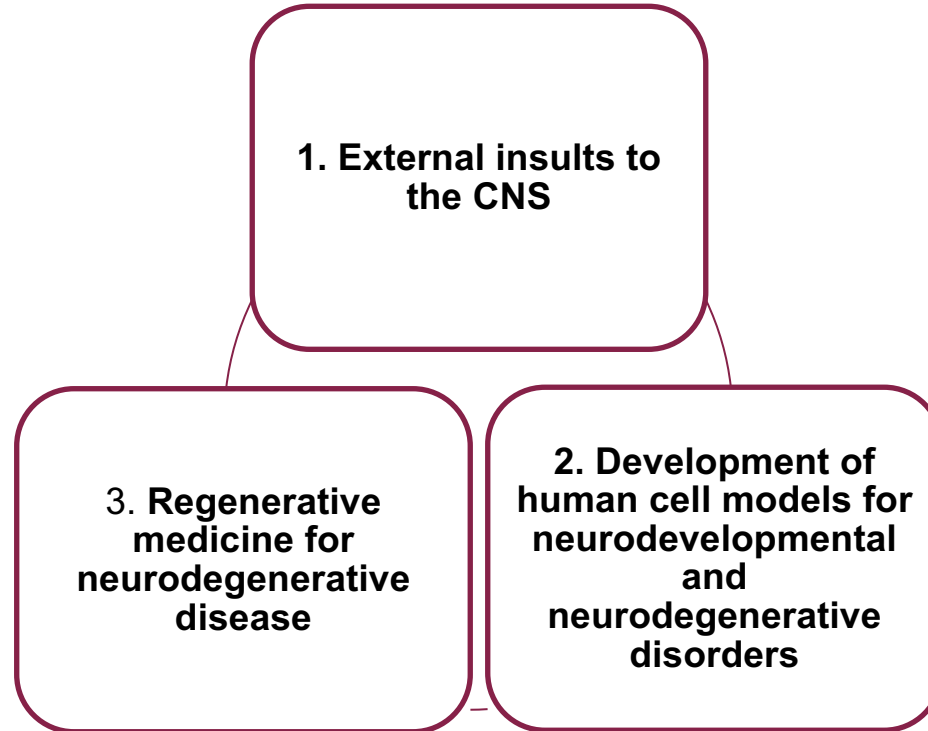


# *Sub-themes*

## Regenerative Neuroscience



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## FIND

Identify areas of unmet need throughout the brain injury pathway that might be amenable to a technology-based innovation.

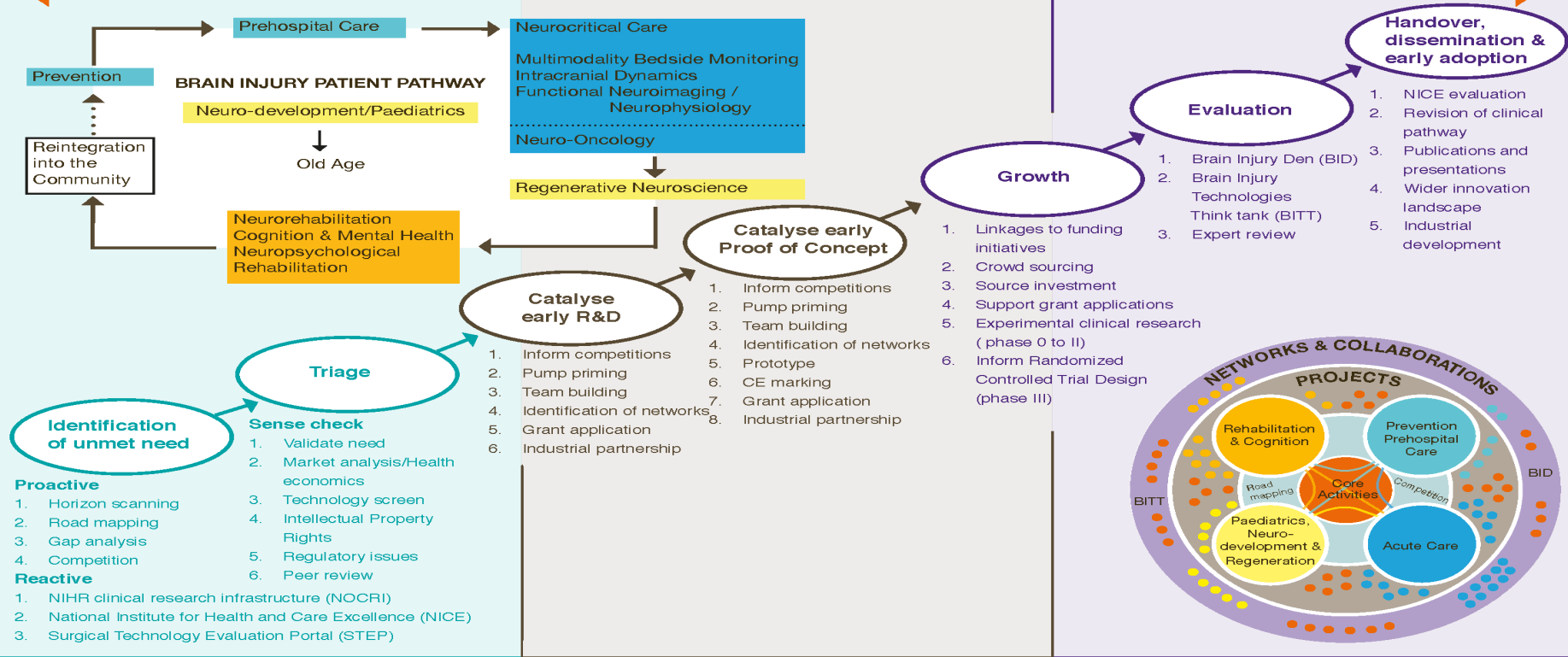
## FACILITATE

Promote the generation of innovative solutions through the facilitation of interdisciplinary communication and collaboration between the NHS, academia, industry and public organisations.

## FOSTER

Support the translational pathway of viable solutions from initial concept to successful market adoption and sustainable clinical impact.

**CORE ACTIVITIES:** Patient & Public Involvement, MedTech Regulation & Developmental Support, Clinical Informatics, Health Economics



# Pathway Mapping

## Regenerative Medicine & Stem Cells



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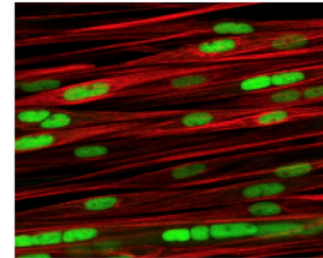
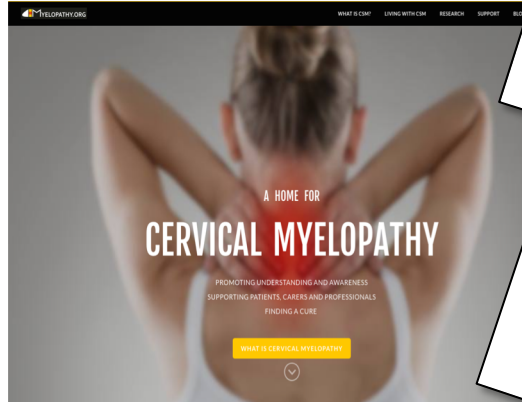
### Cervical Spondylotic Myelopathy (CSM)

**Dr Mark Kotter**

*Consultant Neurosurgeon*

*NIHR Clinical Scientist - University of Cambridge*

*Scientific Founder Elpis - University of Cambridge spin-out*

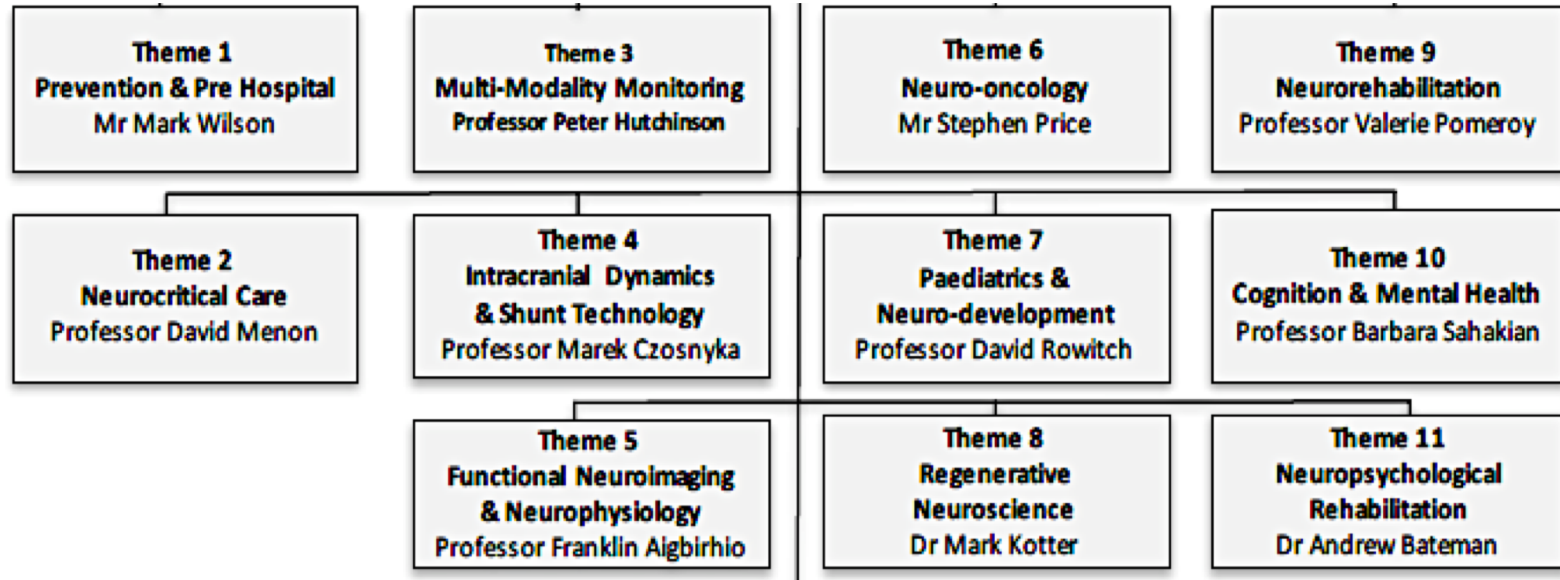


Human myocytes stained for MYOG and troponin T



<http://www.myelopathy.org/>

# Clinical Themes



# Healthcare Technology Co-operative (2013-2017)



National Institute for Health Research

## The NIHR Brain Injury Healthcare Technology Co-operative (HTC) in numbers

UNMET NEEDS

Since 2014, the NIHR Brain Injury HTC ran **8 strategic roadmapping workshops** and **10 patient and carer workshops**

**70 unmet needs** have been prioritised through the various structured initiatives facilitated by the HTC to create an 'Unmet Needs Directory'

PATIENT CENTRED



**7031**

participants recruited to NIHR HTC studies



The Register for Healthcare Involvement and Technology Evaluation (RHITE) has transitioned to an online platform, and has noted a

**100%**

increase since its launch



## FUNDING COMPETITIONS 2013-2017

The NIHR Brain Injury HTC 'Innovations Small Funding Competition 2014-15' and the 'Seedcorn Funding Competition 2016-17' have seed funded 38 national projects that address the unmet needs that have been identified.



**200** expressions of interest

**75** applications

**38** projects have been awarded for a total of **£330,335**



with a return of **£7,890,803**



External Funding Leveraged with partners

**£59,562,367**

FOSTER

## SUPPORTED PROJECTS & BRAIN INJURY DEN

Over 5 years,

**101** peer reviews have been conducted

**30** projects have received feedback from experts and leaders in healthcare innovation as part of the Brain Injury Den



Supported-projects generated **272** publications



## BRAIN INJURY TECHNOLOGIES THINK (BITT) TANK

Over 4 years, the HTC ran 5 BITT tanks, which have been attended by **103** companies

**54** SMEs, start-ups and project teams showcased technological innovations to a panel of patients, carers, clinical and academic experts

**49** new collaborations formed following the BITT tanks



Since 2013, the HTC has worked with **182** SMEs

NIHR Brain Injury MedTech Co-operative



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# **The Next Generation**

## *Launch Event*

**Wednesday 25 April 2018: Homerton College, CB2**