MS Society Tissue Bank
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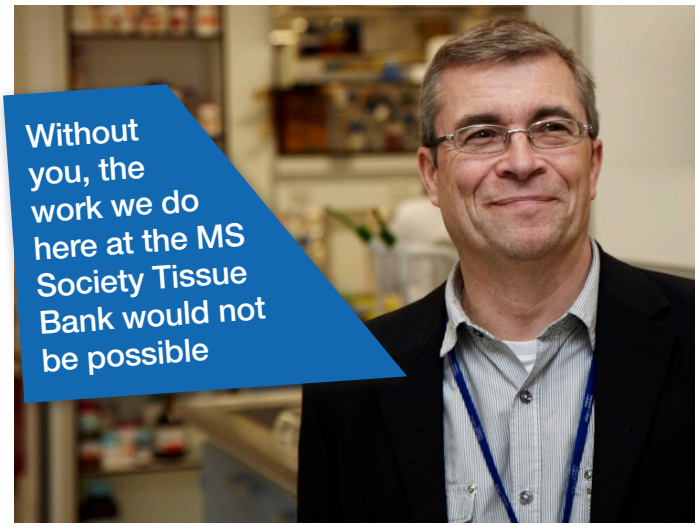
The Bank Statement



A letter from Richard Reynolds

Thank you for supporting the MS Society Tissue Bank.

As a supporter you will be well aware of the unique and valuable contribution that you are making to our work and to MS research in general.

Here at the MS Society Tissue Bank we believe that human tissue is vital if we are to make progress in MS research. We are committed to supporting the best research that will help us work towards our ultimate goal of beating MS – and we are incredibly grateful for your support.

You may have noticed a few changes since the last Bank Statement. Our name has changed from the UK MS Tissue Bank to the MS Society Tissue Bank.

This is to celebrate the fact that the MS Society, together with Imperial College, has now been supporting us for over a decade.

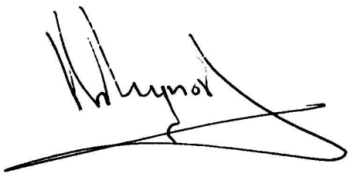
To mark this change, we've updated the Bank Statement. We want our supporters to be aware of the difference the Tissue Bank is making in MS research – so we interviewed George Gveric, manager of the Tissue Bank. You'll also see some exciting research that used tissue from our Tissue Bank.

Without you, the work we do here at the MS Society Tissue Bank would not be possible. This is work we should all be proud of.

I hope you enjoy reading this edition of the Bank Statement. Please do not hesitate to contact us if you have any questions or comments.

Thank you for your vital gift.

Richard



Richard Reynolds is Professor of Cellular Neurobiology at Imperial College London and Director of the MS Society Tissue Bank

in association with

Multiple Sclerosis Society

Imperial College London

Inside the Tissue Bank

In this issue of the Bank Statement, we took the opportunity to interview George Gveric, the MS Society Tissue Bank Manager about how the Tissue Bank operates.

What is a typical day at the MS Society Tissue Bank like?

It depends whether there is a tissue retrieval to be done on the day. This is my priority as we have a strict time limit of 24 to 48 hours for tissue donation and everything has to be put in place for it to happen. Organising a donation can be as simple as making several phone calls or can be more complex where I try to persuade different professionals to help us complete the procedure.

The rest of the day is usually spent between the lab and the office working with the technical team on tissue requests and talking to researchers about what types of tissue they'll need for their projects.

What are some of the challenges you face on a day-to-day basis?

Organizing tissue donations represents one of the biggest challenges as it requires a lot of coordination within usually a very short span of time. We have somebody on call 24 hours a day **(076 5913 2045)** to ensure that tissue is collected within a reasonable time frame.

Research projects have also become more sophisticated and as a result tissue requests are much more complex. Researchers these days require not only more tissue but also very specific samples prepared in a special way suitable for their particular experiments.

I believe we have been successful on both fronts. We collect most of our tissue donations quickly and, together with the team, we aim to fulfill all tissue requests from researchers as quickly as possible.

The single most important thing you can do is let your GP and family members know about your wish

What can people who have pledged to support the Tissue Bank do to make it easier to collect tissue in the future?

The single most important thing you can do is let your GP and family members know about your wish to donate tissue – and stress the importance of prompt action.

It's also really important to notify the Tissue Bank of any changes to details including changes to your address. These things make the whole procedure of retrieving tissue much easier.

What is the one thing you'd like people to understand about the Tissue Bank?

We facilitate worldwide MS research using human tissue. In a complex condition such as MS, looking for clues is often likened to looking for a needle in a haystack.

We provide tools for finding that needle by making brain samples available to researchers who are investigating a wide variety of problems associated with MS. Involving more people and team work means that our likelihood of finding the cause of MS is greatly increased.

It is important to say that all this was made possible due to the foresight of those people who pledged tissue for research and the MS Society who have funded this facility for over 10 years. I would like to use this opportunity to acknowledge all those individuals who so generously donated their tissue for research and their family members who assisted us in this process.

How important is the Tissue Bank to researchers and to MS research?

The MS Society Tissue Bank is one of the largest resources of high quality human tissue in the world dedicated solely to research into causes and treatments of MS. The Tissue Bank is a part of research infrastructure and, just like we all depend on having electricity and water, MS researchers depend on a supply of tissue for their research projects. We can all be proud of being a part of such an important operation.

2,413
people with MS have pledged their tissues to the Tissue Bank

1,818
people without MS have pledged their tissues to the Tissue Bank

238
have registered with the MS Society Tissue Bank in the last year

We need more donors with MS to register with the tissue bank!

Bank Statement highlights

Highlights of recent peer-reviewed research that's involved samples from the MS Society Tissue Bank

HDAC1 nuclear export induced by pathological conditions is essential for the onset of axonal damage

Lead Author: Patrizia Cassacia
Location: New York, USA

What was the study about?
Researchers are interested in finding out more about how damage to nerve fibres (also known as axons) occurs in people with MS. The researchers looked at brain tissue from people with MS and found that, in areas of damage, a molecule called HDAC1 was located in a specific part of brain cells where it is not normally found. They also found that treating brain cells with drugs that prevent movement of HDAC1 within nerve fibres helped to prevent this damage from occurring in laboratory models of MS.

How will it help people with MS?
This study has added to our understanding of how and why nerve fibre damage occurs. Finding out more about why damage occurs in the brains of people with MS is crucial if researchers are to develop and test treatments that prevent this damage. ➔

A role for galanin in human and experimental inflammatory demyelination

Lead Authors:
Neil Scolding and David Wynick
Location: Bristol, UK

What was the study about?
Galanin is a protein that's present in different types of cells within the brain and spinal cord. Using human brain tissue from the MS Society Tissue Bank, researchers were able to demonstrate, for the first time, that galanin is present in high levels in lesions (areas of damage) compared with tissue that does not contain lesions. The researchers went on to observe that excessive levels of galanin led to a more severe form of MS and MS-like condition in laboratory models.

How will it help people with MS?
In this study, researchers identified galanin as molecule that potentially causes damage in the brains of people with MS. This early-stage research suggests that drugs that target galanin may prevent damage in people with MS.

Retinoid X receptor gamma signaling accelerates CNS remyelination

Lead Authors: Charles ffrench-Constant and Robin Franklin
Location: Cambridge, UK

What was the study about?
Researchers based at two of the MS Society's major investment centres, the Cambridge Centre for Myelin Repair and the Edinburgh Centre for Translational Research, have identified a molecule responsible for repair of damaged myelin.

Using samples from the Tissue Bank and laboratory models of MS, they identified a specific type of molecule called RXR-gamma, which appears to be important in promoting myelin repair. They found that targeting RXR-gamma in laboratory models of MS encouraged the brain's own stem cells to regenerate myelin.

This work is a great example of scientists from three of the MS Society's major investment centres working together to beat MS.

How will it help people with MS?
The MS Society is now funding the second stage of this work, which will work towards testing a drug that targets RXR-gamma in people with MS. It is hoped that this work will lead to the first therapy that promotes myelin repair in people with MS.

How to get in touch

What to do if your details change: If any details, such as your name, address, telephone number or your GP change please ring our office number on **020 7594 9734** to let us know. Also, please update any change of details for your next-of-kin.

Emergencies: If you need an immediate response from the Tissue Bank or need to report the death of a donor please call our 24-hour emergency number on **07 659 132 045**

Donor registration: If you would like to register onto our donor scheme please call **020 7594 9734** or email **ukmstissuebank@imperial.ac.uk** for a free registration pack.