

Parkinson's UK Edinburgh Branch Research Interest Group

PARKINSON'S^{UK}
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Newsletter March 2013 Issue No. 5

View from the Chair

Our focus is on the forthcoming public lecture by Professor Chaudhuri which promises to be as big an event as last year's lecture by Roger Barker. Tickets are going fast, so make sure you book now!

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The Edinburgh Parkinson's Lecture 2013

The lecture will be given by Professor K Ray Chaudhuri of King's College Hospital, London, at 7.15pm on Thursday, 25th April 2013, at the Royal College of Physicians, Edinburgh;

Non-motor symptoms of Parkinson's: Important yet often neglected. Why?

Professor Chaudhuri is Clinical Director of the National Parkinson Foundation International Centre of Excellence, Kings College London, Director of Kings Neuroscience Research and Development and Director of DeNDroN, London South and Kent.

Tickets are available on-line at www.edinburghparkinsons.org/application

Visit to Anne Rowling Clinic

A group of approximately 20 Branch members enjoyed a guided tour of the new Anne Rowling Regenerative Neurology Clinic, located at the Edinburgh Royal Infirmary, on 18th February. The Clinic was established in 2010 after a £10M donation from the Edinburgh-based author JK Rowling, famous for her Harry Potter novels.

You can read a fuller account of the visit on the web page

www.edinburghparkinsons.org/visit-to-the-anne-rowling-clinic/

Pain Workshop

A workshop on **Pain and its Management** was held in Edinburgh on 11th March 2013. Despite atrocious winter weather, 25 hardy souls took part in this member-led event. Pre-lunch discussions were followed by presentations from three healthcare professionals Dr Richard Davenport, Consultant Neurologist, Fiona MacPherson, Chronic Pain nurse, and Alison Stewart, Lead Parkinson's Nurse, all based at Edinburgh's Western General Hospital.

The event was conceived and managed by a team of Branch Members: Sheila Edward, Marian Macintyre, Pat Cox and Margaret Seager, supported by Werner Remmele from Fife. Sincere thanks to them for organising a very worthwhile day! The presentations may be downloaded as pdf files by going to www.edinburghparkinsons.org/pain-workshop/

Research News

LRRK2 role in familial Parkinson's identified

Researchers led by Professor Ana Maria Cuervo at Albert Einstein College of Medicine of Yeshiva University have discovered how the most common genetic mutations in familial Parkinson's disease damage brain cells. The study, published in the journal *Nature Neuroscience*, could also open up treatment possibilities for both familial Parkinson's and the more common form of Parkinson's that is not inherited. The paper is titled "Interplay of LRRK2 with chaperone-mediated autophagy." and may be found at www.nature.com/neuro/journal/vaop/ncurrent/full/nn.3350.html

The most common mutations responsible for the familial form of Parkinson's disease affect a gene called LRRK2. The mutations cause the LRRK2 gene to code for abnormal versions of the LRRK2 protein. But it hasn't been clear how LRRK2 mutations lead to the defining microscopic sign of Parkinson's: the formation of abnormal protein aggregates inside dopamine-producing nerve cells of the brain. This study found that abnormal forms of LRRK2 protein disrupt an important garbage-disposal process in cells that normally digests and recycles unwanted proteins including one called alpha-synuclein -- the main component of protein aggregates in Parkinson's patients.

Parkin Protects from Neuronal Cell Death

Researchers from Ludwig-Maximilians-Universitaet (LMU) in Munich have identified a novel signal transduction pathway, which activates the parkin gene and prevents stress-induced neuronal cell death.

Dr. Konstanze Winklhofer of the Adolf Butenandt Institute at the LMU Munich, is also affiliated with the German Center for Neurodegenerative Diseases (DZNE). In their latest publication, Winklhofer and coworkers uncovered the molecular mechanism that accounts for parkin's neuroprotective action. She reports that they have discovered a novel signaling pathway that is responsible for the neuroprotective activity of parkin. The central player of this pathway is a protein called NEMO, which is activated by the enzymatic attachment of a linear chain of ubiquitin molecules. This reaction is promoted by parkin, thereby enabling NEMO to activate a signal cascade, which ultimately leads to the expression of a specific set of genes. Winklhofer's team identified one essential gene targeted by this pathway, which turned out to code for the mitochondrial protein OPA1. OPA1 maintains the integrity of mitochondria and prevents stress-induced neuronal cell death.

www.en.uni-muenchen.de/news/newsarchiv/2013/f-m-17-13.html

Web site

The Edinburgh Branch web site is at www.edinburghparkinsons.org and the Research Interest Group page is www.edinburghparkinsons.org/research-interest-group/. Please note the new address.

Any queries should be directed to the Editor and Chair of the Research Interest Group, [Ken Bowler](mailto:ken@edinburghparkinsons.org) by email to ken@edinburghparkinsons.org

Parkinson's UK is the operating name of the Parkinson's Disease Society of the United Kingdom. A charity registered in England and Wales (258197) and in Scotland (SC037554).