Parkinson's UK Edinburgh Branch

Research Interest Group

PARKINSON'S UK
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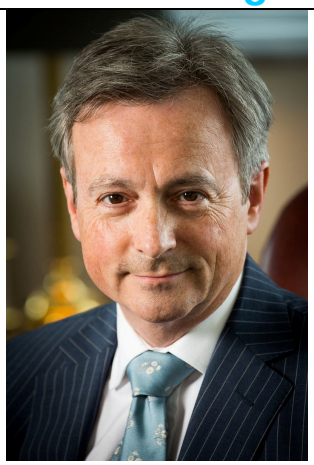
Newsletter March 2014 Issue No. 8

View from the Chair

Our focus is on the forthcoming public lecture by Professor Tony Schapira, which promises to be as big an event as last year's lecture by Ray Chaudhuri. Tickets are going fast, so make sure you book now! February saw two interesting events take place; a talk by Dr Carl Counsell from Aberdeen, and a seminar led by Patrick Mark, on ParkinsonNet.

In this issue:

The Edinburgh Parkinson's Lecture 2014



Tony Schapira**,** Professor of Clinical Neurosciences at UCL Institute of Neurology is to give the 2014 lecture, entitled

Recent Advances in the Cause and Treatment of Parkinson's

7.15 pm, Thursday 15th May 2014, Royal College of Physicians, 9 Queen Street, Edinburgh.

Admission to the lecture is free of charge but by ticket only. Further details of the lecture and of the application procedure may be found on our web pages at www.edinburghparkinsons.org

Talk by Carl Counsell

On Saturday 8th February, Carl Counsell, University of Aberdeen, gave a talk entitled: *What changes over time for Parkinson's patients and their carers.* The meeting was held at SCRM, Little France. We are grateful to Tilo Kunath for hosting the event.You can download a summary of the talk, written by Sheila Edward, and a Powerpoint file of Carl's presentation, from our web pages.

ParkinsonNet Seminar

ParkinsonNet is managed by Prof Bastiaan Bloem and his team at Radboud University Nijmegen Medical Centre. Over the past ten years it has demonstrated how better specialist training, team working, communications, service structures and patient involvement has resulted in better patient care and lower service costs.

Our seminar looked at how ParkinsonNet works,whether it might benefit Lothian and if the Branch should promote its concepts. Again, there is material available through our web pages for downloading, including Patrick Mark's slides. Anyone interested in Professor Bloem's presentation, shown at our seminar, is invited to contact Ken Bowler, the Chair of ERIG.

Research News:

A new way to make stem cells?

.....it could lead to cheap and simple procedures to make patient-matched stem cells.....

The 29th January edition of the Guardian reports that a radical and remarkably easy way to make cells that can grow into any tissue in the body has been developed by scientists in Japan. The feat has been hailed as a major discovery by researchers familiar with the work, and if it can be repeated in human tissue, could lead to cheap and simple procedures to make patient-matched stem cells that could repair damaged or diseased organs.

In a series of experiments, researchers showed that cells from animals could be turned into stem cells simply by immersing them in a mildly acidic solution for half an hour. To demonstrate the potential of the cells, the scientists injected them into mouse embryos and showed that they grew into tissues and organs throughout the animals' bodies. The new process has been called stimulus-triggered acquisition of pluripotency (STAP) and the resultant cells, STAP cells. The work is reported in two papers published in the journal Nature:

Bidirectional developmental potential in reprogrammed cells with acquired pluripotency (**Nature** 505, 676–680, 30 January 2014)
Stimulus-triggered fate conversion of somatic cells into pluripotency (**Nature** 505, 641–647, 30 January 2014)

Lack of energy underlies Parkinson's

.....a deficient energy production process in cells can result in Parkinson's disease.....

On 20 March, Science Daily reported that neuroscientists Vanessa Moraïs and Bart De Strooper from VIB and KU Leuven have demonstrated how a defect in the gene Pink1 results in Parkinson's disease. By mapping this process at a molecular level, they have provided the ultimate proof that a deficient energy production process in cells can result in Parkinson's disease. These revolutionary results have been published in the leading journal Science.

They studied the link between Pink1, mitochondria and Parkinson's disease in fruit-flies and mice with a defective Pink1 gene. These model organisms exhibited symptoms of Parkinson's disease. The defect in Pink1 resulted in the so-called 'Complex I' — a protein complex with a crucial role in the energy production of mitochondria — not being phosphorylated adequately, resulting in decreased energy production. When Moraïs and her colleagues ensured correct phosphorylation of Complex I, the Parkinson's symptoms decreased or disappeared in mice and in patient-derived stem cell lines. So it seems that the lack of phosphorylation causes Parkinson's disease in patients with a defective Pink1 gene.

Reference: VA Moraïs et al, Science**, 2014**; DOI: 10.1126/science.1249161

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/

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