



# OPDC NEWSLETTER!

Issue 13, February 2023

## Happy 2023!

As another year passes by, we can be confident in saying there have been some pretty big changes and breakthroughs in the world. Obviously, this can be seen globally, however in the world of Parkinson's Disease, the amount of research is escalating at such a fast rate that sometimes it is difficult to even keep up ourselves!

Within the Oxford Parkinson's Disease Centre (OPDC), there have also been some changes... From the variations and additions in the OPDC clinic, through to the publications, all whilst the world seems to be **finally** getting back to normal post Covid-19...

Over the last year there have been many advances in PD research, which consequently has opened more avenues that need exploring, and we are grateful to be at the forefront of this. With all this in mind, we thought it was about time that we give a little bit of an update of just some of things that have been happening over the last year, and give a little bit of an insight into what is on the cards for 2023...

And as ever, we are beyond grateful for **everyone** that has an involvement in the OPDC team. From the OPDC employees, to stakeholders, to our wonderful participants and everyone in between, we want to say a massive **THANK YOU**. This work would not be possible without you!

## Let's introduce ourselves....

### What do we do?

For anyone new around here, let's give a brief explanation of who we are and what our aims are...

- We are multidisciplinary research program at the university of oxford, established in 2010.
- World class research centre, working to understand the earliest events in the development of Parkinson's disease, with a view to target neuroprotective therapies to prevent onset and delay progression
- The OPDC centre is focused on the molecular pathways, with primary aims being:
  1. Understand Parkinson's progression
  2. Predict Parkinson's disease onset
  3. Identify potential drug targets
  4. Develop new treatments to prevent Parkinson's development in at risk individuals

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### For participants- our clinics

As many of you may or may not be aware, due to the Covid pandemic, most of our research visits and follow-ups had to be done remotely. It was a massive change for everyone, however it enabled us to continue our research as best as possible, and it also meant our participants were kept involved.

Like the rest of the world, utilising the remote working and visits is something we are continuing to do in the future, however we are very happy to say that we are now back doing some face to face visits, and so when you are called to book in your follow-up, you may get offered a face to face option again!



**Professor Michel Hu**  
Cohort Lead



**Jamil Razzaque**  
Research Practitioner



**Jessica Welch**  
Clinical Project Manager



**Maccel Obejero**  
Clinical Research Nurse



**Tyciane Benetton**  
Research Administrator



**Katarina Gunter**  
Research Assistant



**David Gordon**  
Post-Doctoral Scientist

## New Staff introductions!



**Maccel Obejero**  
Clinical Research Nurse

*'I have come from the Philippines to work as a Research Nurse for the Oxford Parkinson's Disease Centre (OPDC). With years of experience in research in the Philippines, I am happy to join OPDC to contribute to Parkinson's Disease research as well as learn from the expertise of the OPDC clinical research team led by Prof. Hu. Personally, I hope to support research in neurodegenerative diseases as both sides of my family tree have been affected by it (Alzheimer's and dementia).'*



**David Gordon**  
Post-Doctoral Scientist

*'I am a senior scientist with a strong background in neuronal cell biology, particularly the molecular mechanisms causing neurodegeneration. In my role as a core scientist in the IMCM, I am excited to be involved in research that aims to improve outcomes for people living with Parkinson's disease and working with multidisciplinary teams of talented and committed researchers.'*



JOURNAL ARTICLE ACCEPTED MANUSCRIPT  
**Reward insensitivity is associated with dopaminergic deficit in rapid eye movement sleep behaviour disorder**

Thomas R Barber , Kinan Muhammed, Daniel Drew, Kevin M Bradley, Daniel R McGowan, Johannes C Klein, Sanjay G Manohar, Michele T M Hu, Masud Husain  Author Notes

Brain, awac430, <https://doi.org/10.1093/brain/awac430>  
Published: 17 November 2022  Article history 

**Aim:** Whether reward sensitivity may be a marker of dopaminergic status in prodromal Parkinson's.

**Methods:** Compare SPECT/CT measurement of dopaminergic loss in the basal ganglia and using eye tracking task to quantify reward sensitivity.

**Participants:** 41 idiopathic RBD patients, 40 PD patients & 41 healthy controls.

**Findings:** Across all idiopathic RBD cases, a positive association between dopaminergic SPECT/CT signal in the putamen and reward sensitivity was observed.

**Conclusion:** findings show a direct relationship between reward sensitivity and dopaminergic deficits in idiopathic RBD, suggesting pupillary response measurement could be valuable in risk stratification and disease progression in at risk individuals.

**Article link:** <https://doi.org/10.1093/brain/awac430>

**Aim:** Determine if a composite clinical score (combing MDS-UPDRS III, Purdue pegboard test, and timed up and go) provides a greater sensitivity in detecting motor change in early disease compared to using the MDS-UPDRS III alone.

**Methods:** Using longitudinal data from the Oxford Discovery cohort where motor and non-motor assessments were performed at each in-person visit.

**Participants:** 272 idiopathic RBD patients, 909 PD patients & 316 controls.

**Findings:** The clinical composite motor scores was more accurate in predicting clinical outcomes, compared to using the MDS-UPDRS III alone.

**Conclusion:** Using the clinical composite motor score could offer greater sensitivity and consistency in detecting change, compared to using the MDS-UPDRS III.

**Article link:** <http://doi.org/10.1136/jnnp-2021-327880>



Movement disorders  
Original research  
**A composite clinical motor score as a comprehensive and sensitive outcome measure for Parkinson's disease**   
Christine Lo <sup>1, 2</sup>, Siddharth Arora <sup>3, 4</sup>, Michael Lawton <sup>5</sup>, Thomas Barber <sup>1</sup>, Timothy Quinnell <sup>6</sup>, Gary J Dennis <sup>7</sup>, Yoav Ben-Shlomo <sup>5</sup>, Michele Tao-Ming Hu <sup>8</sup>  
Correspondence to Dr Christine Lo, Department of Clinical Neurosciences, University of Oxford Nuffield, Oxford OX1 1NF, Oxfordshire, UK;  
[christine.lo@rhn.ox.ac.uk](mailto:christine.lo@rhn.ox.ac.uk)



**Aim:** Assess if socioeconomic differences of patients affect prioritisation of pre-existing research questions, and compare these priorities between healthcare professionals and patients in a priority setting partnership.

**Methods:** A survey on a Likert scale, rating the importance of research questions.

**Participants:** 879 participants (58% people with Parkinson's, 22% family/friends, 13% healthcare professionals & 4% carers).

**Findings:** Finding the best form of physiotherapy for people with Parkinson's was the top priority across most analyses. Educational level, presence of carer and disease duration were most likely to affect prioritisation in people with Parkinson's, with little difference found between other socioeconomic categories.

**Conclusion:** socioeconomic factors did not significantly affect the top priority in most comparisons.

**Article link:** <http://dx.doi.org/10.1136/bmjopen-2021-049530>

Neurology  
Original research

**Exploration of whether socioeconomic factors affect the results of priority setting partnerships: updating the top 10 research priorities for the management of Parkinson's in an international setting**   
Francesca Bowring <sup>1, 2</sup>, Jessica Welch <sup>1</sup>, Charlotte Woodward <sup>3</sup>, Christine Lo <sup>1</sup>, Michael Lawton <sup>4</sup>, Patricia Sulzer <sup>5</sup>, Anne-Marie Haniff <sup>6, 7, 8</sup>, Rejko Kruger <sup>4, 9, 10</sup> NCER-PD, Inga Liepelt-Scarfone <sup>5</sup>, Michele T Hu <sup>11</sup>  
Correspondence to Francesca Bowring; [francescabowring@aol.co.uk](mailto:francescabowring@aol.co.uk)



To view more of our publications & stay up to date on them, visit:  
<https://www.dpag.ox.ac.uk/odc/publications>



## OPDC TAKES NYC!



Jamil & Jess had the absolute privilege and honour to fly to New York in April 2022 for the PPMI Annual meeting with the Michael J Fox Foundation. PPMI is the landmark Parkinson's Progression Markers Initiative study running worldwide, and this 2-day conference enabled people to come together from all over the globe to discuss all things PPMI, such as recent findings, what the future looks like for PPMI, but it also enabled the opportunity to discuss things that have worked well, and maybe not so well. Being able to attend a conference of this scale was a great learning opportunity, as it was a way of being able to discuss the research but involved many different stakeholders and some participants; something important for going forward to learn from.

If anyone wants any more information about PPMI, then please don't hesitate to contact Jamil ([jamil.razaque@ouh.nhs.uk](mailto:jamil.razaque@ouh.nhs.uk)) or visit [www.ppmi-info.org](http://www.ppmi-info.org).

*'The PPMI investigator meeting was a very informative few days, filled with talks from the leaders in Parkinson's research and workshops with PPMI coordinators from around the world.'*

*Jamil Razzaque, Research Practitioner  
& PPMI Coordinator*





## Oxford Parkinson's Research Day

On 29<sup>th</sup> November 2022, Professor Richard Wade-Martins and Professor Michele Hu hosted the Oxford Parkinson's Research Day at the Kavli Institute for Nanoscience Discovery, Oxford.

The days' proceedings were opened by a welcome from Professor Irene Tracey, the newly appointed Vice-Chancellor of the University of Oxford. The day welcomed over 140 Oxford Parkinson's researchers and collaborators, with the day filled with talks from scientists and clinicians to showcase the range of Parkinson's research happening across the University of Oxford.



**Professor Irene Tracey. Vice-Chancellor of the University of Oxford, and Professor of Anaesthetic Neuroscience.**

*'This was our sixth and best research day since we launched the Oxford Parkinson's Disease Centre in 2010. Today, we had clinical and scientific speakers representing work across ten different departments from Oxford, Cardiff and Bristol plus keynote talks from internationally renowned experts. This resulted in an exciting day and truly exemplified the collaborative, multidisciplinary and translational nature of our work.'*

Professor Wade-Martins, Head of the OPDC

The day was split into four sessions: Clinical Research into Parkinson's, Translational models of Parkinson's, Molecular mechanisms and related biomarkers & Cellular models and target discovery. This was accompanied three keynote speakers:

- **Professor Masud Husain**, who presented on 'When the spark goes out: the neurology of motivation and apathy'.
- **Professor Miratul Muqit**, who presented on 'Decoding Mitochondrial Damage Response Pathways linked to Parkinson's disease'.
- **Professor Sonia Gandhi**, who presented on 'Thinking big to see small: from nanoscale to mesoscale resolution in Parkinson's'.

A long side the talks, there were 37 poster presentations on display, with the event being closed by Dr Kevin McFarthing (Research Advisor, Parkinson's UK Oxford Branch) presenting the poster award to DPhil student Victor (Shijun) Yan.



**Dr Kevin McFarthing & DPhil student Victor (Shijun) Yan.**



## Parkinson's UK fellowship Award

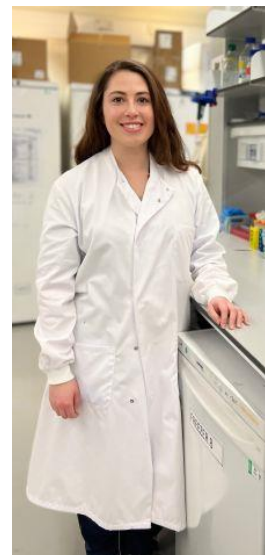
**Massive congratulations to Departmental Research Lecturer Dr Charmaine Lang, who has been awarded the first jointly funded Senior Research Fellowship from Parkinson's UK & Rosetree Trust.**

Parkinson's research lacks adequate methods to study the disease in human models, and this is mainly due to the inaccessibility of live dopamine neurons from vulnerable areas of the brain. This award will enable Dr Lang to develop complex new induced pluripotent stem cell models to target the interaction between astrocytes and dopamine neurons in the brain and how these fail in the context of Parkinson's.

The models will be used to screen repurposed compounds and identify which drugs reverse identified defects in Parkinson's patients' dopamine neurons. Dr Lang will also use advanced microfluidic devices to grow induced pluripotent stem cell astrocytes and dopamine neurons in specialised chambers, this will provide greater understanding on the communication and support between astrocyte and dopamine neuron in Parkinson's.

The fellowship will create and screen drug libraries, which will be composed of thoroughly characterised compounds, making them highly appealing candidates for future clinical trials. Furthermore, the data and information will be shared throughout the scientific community, and with people with Parkinson's Disease.

The award also allows Dr Lang to commence her first independent post within the Department of Physiology & Genetics and the Kavli Institute for Nanoscience Discovery. Due to being a Kavli team leader, Dr Lang will also be able to form her own research group within the Wade-Martins laboratory.



Dr Charmaine Lang

*'The formation of more sophisticated iPSC models, where multiple brain cell types interact, just as they would in the human brain, is necessary for the drug discovery process.'*

*'I hope this work will hold significant long-term value for the wider research community and will generate much needed data surrounding the mechanistic understanding of dopamine neuron and astrocyte communication and support in Parkinson's.'*

*'I am so grateful to both Parkinson's UK and Rosetree Trust for supporting early career researchers and for selecting me to be the recipient to this Fellowship.'*

Dr Charmaine Lang

## Big Cream Tea

The Big Cream Tea marks the end of Parkinson's Awareness week- **Saturday April 15<sup>th</sup> 3-5pm.**

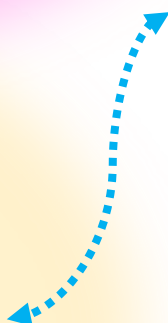
For the first time, it has been encouraged other branches to take part, and do the tea on the same date and time. This will allow the other groups connect via zoom-think Eurovision Song Contest style, but it will be the *Neurovision Scone Contest...!*

Please keep the date free and we hope to see as many of you there as possible, perhaps you could make a scone or two or brandish a tea towel?!



**Able to volunteer at the Cream Tea?**

If anyone is also able to volunteer at the event it would be hugely appreciated! Please use the details on the flyer, or you can contact the OPDC team who can pass your details on.



In aid of

**PARKINSON'S<sup>UK</sup>**  
CHANGE ATTITUDES.  
FIND A CURE.  
JOIN US.

artwork © Korcky Paul 2023

## THE BIG CREAM TEA

Seacourt Hall, Botley, Oxford OX2 9TH  
Saturday 15 April 2023, 3pm-5pm

Join us for delicious tea, fresh scones and cakes as we link up with groups across the country for a UK-wide cream tea event!

[bigcreamtea@oxfordparkinsons.org.uk](mailto:bigcreamtea@oxfordparkinsons.org.uk)  
0300 772 7003

Registered with FUNDRAISING REGULATOR

Parkinson's UK is the operating name of the Parkinson's Disease Society of the United Kingdom. A charity registered in England and Wales (256197) and in Scotland (SC037554). © Parkinson's UK. Created in RegentMarket - 25/02/2023 - 13:31:30

Parkinson's UK Oxford Branch

## Additional...

- Parkinson's UK Oxford Branch meetings: first Wednesday of each month at 7pm. Please view their website for details
  - If you are not local to Oxford, then there is a high chance you have a local one to your area!
- London Marathon: Sunday 23<sup>rd</sup> April! Please keep an eye out for any charities or people running in aid of Parkinson's Disease research. If you are looking for a page to donate to, then please head to:  
<https://events.parkinsons.org.uk/fundraisers/kevinhicks>





# OPDC Open Day

## Save the Date

Since the pandemic, we have been unable to host our OPDC Open Day, and so it is with great excitement that we ask you to save **Monday 5<sup>th</sup> June 2023** free!

We can't wait to showcase our research and what we have been up to over the last few years....

And to give an insight into what the future holds for OPDC....



There will be more details (where& when), and an invite to follow....

We are **SO** excited and hope you are too!

And we hope we can show our appreciation to our participants!

'If you think you have RBD, this is the place to come!'

'We are very excited and enthusiastic about the programme. I don't see how somebody who has got something like this could not do this, it is like part of the treatment to me.'

'I am aware that anything you discover here is going to be of help to other people too, not just me.'

**Don't know whether to take part in research? Here are a few things our participants had to say about taking part in research....**

'I will keep coming to you as long as you keep sending me invites!'

'You give something back. I have spent a lot of time over the last few years in hospital for treatment, and this is something that I can do towards it'

'It tells me how I am doing in other ways because I worry about my movement and things and so this satisfies me.'

'I have been doing various cognitive tests and physical tests to see if my RBD is leading towards PD. Results seem to be no at this time!'

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*'I have to admit, I was apprehensive about the procedure, however, this was completely painless, and I found that actually the few seconds of the injection from the anaesthetic was the only uncomfortable part. I am looking forward to assisting in any and all opportunities in Parkinson's research, and I am happy to have the Lumbar Puncture and Skin Biopsy procedures every year for the PPMI study. So many people in my family have been affected by Parkinson's Disease, and so any opportunity or any way for me to help in finding new treatments through research is my main driving factor for taking part.'*

***PD research participant on having a Lumbar Puncture & Skin Biopsy***

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### **Neuropathology (i.e., Brain) Donation**

May not be the first organ to come to mind when you think of donating body parts, however how better to study brain diseases than from the brain itself...

Signing up to donate your brain after death, is one of the greatest gifts you could give. It will enable vital research to help future generations.


This is a big decision to make, and it is an important decision to make, and would greatly advise you speak to your loved ones about.

If it is something you would like to sign up to, or would like to know a little bit more information, then please get in touch via [parkinsons.discovery@nhs.net](mailto:parkinsons.discovery@nhs.net).



'In the future, it gives someone the chance and opportunity to hopefully not have to worry about getting diagnosed with Parkinson's Disease'.

**PD patient who has signed up**



'I want to help people later and in the future. If there is a potential genetic risk, I have children and so I want to also help them.'

**RBD patient who has signed up**



Oxford Biomedical Research Centre  
Enabling translational research through partnership



## Contact us

Discovery Clinical Administration team

Tel: +441865 223166  
Email: parkinsons.discovery@nhs.net

OPDC Administrator (Lorraine Dyson)

Tel: +44 1865 282358  
Email: opdc.administrator@dpag.ox.ac.uk

## Want to be involved?

Are you interested in taking part in research? Do you want to be part of changing the future and helping future generations?

Whether you are someone with Parkinson's Disease, a healthy control, relative of someone with Parkinson's Disease, or just interested to know if you can be involved, please don't hesitate to contact us on [parkinsons.discovery@nhs.net](mailto:parkinsons.discovery@nhs.net).

We are also specifically interested in Rem Sleep Behaviour Disorder (RBD), and if this is something you have and would like to take part in research, please get in touch!

## Giving to OPDC

Within the OPDC, we are constantly working hard to further understand Parkinson's Disease. We have current aims to meet, and have future projections for our research, and so we want to ensure that our work is sustainable and able to continue for years and years to come.

### Support patient-facing cohort work

To donate, please contact Tyci Benetton Justi:

Tel: 01865 223166  
Email: [parkinsons.discovery@nhs.net](mailto:parkinsons.discovery@nhs.net)  
Address: OPDC, West Wing, Level 6, John Radcliffe Hospital, Oxford, OX3 9DU

A legacy gift will help OPDC to continue vital research to help support and improve the lives of everyone affected by Parkinson's Disease. Any donation, large or small, will really make a huge difference to our work. Please use the contact details above to know more about leaving a gift to OPDC Cohort in your will.

### Discovery science laboratory research projects

To make a one-off donation or set up a regular payment, please contact Lorraine Dyson or visit our website:

Website: <https://www.dpag.ox.ac.uk/opdc/donate>  
Email: [opdc.administrator@dpag.ox.ac.uk](mailto:opdc.administrator@dpag.ox.ac.uk)  
Address: OPDC, Department of Physiology, Anatomy and Genetics, Kavli Institute for NanoScience Discovery, South Parks Road, Oxford OX1 3QU

### Parkinson's UK

If you would like to support the work done nationally by Parkinson's UK, then please visit [www.parkinsons.org.uk/donate](http://www.parkinsons.org.uk/donate).