

Parkinson Québec shares the knowledge and insights gained at the World Parkinson Congress, WPC2016. The subject of this month: Why does the discovery of new drugs take so long and how to speed up this process?

For nearly 200 years now, London physician James Parkinson has described for the first time the symptoms of motion disorder that are now associated with Parkinson's disease. One may wonder then how it is that there has not yet been the discovery of a cure or a treatment that would cure the disease. This question is relevant, especially since this discovery, many advances in research have led to a considerable improvement in treatments.

Les Dres Kalpana Merchant and Soania Mathur addressed this issue in a scientific presentation session entitled "Engaging in Clinical Research: What It Is and How You Can Get Involved". This question was very relevant in the context of this session of presentations because it is through the process of clinical research that new molecules or therapeutic strategies will have to pass before they are approved. The obstacles to the rapid progress of discoveries are numerous. First of all, the brain is an extremely complex organ. No one will be surprised by this statement. It contains more than 100 billion neurons that are responsible for our thoughts and actions.

In addition, Parkinson's disease is not simply a loss of the neurotransmitter called dopamine. Other chemical messengers and other symptoms (disturbed sleep, constipation, cognitive deficits, etc.) that are not associated with a dopaminergic system failure are affected. Également, tel que mentionné lors de la capsule santé du mois de décembre, il n'y aurait pas « une » maladie de Parkinson, mais bien « des » maladies d'origines diverses. Indeed, despite the fact that there are symptoms common to all people with this disease, each patient has a unique pathway and people respond differently to treatments.

Other barriers may be added to this list, but one of the most important is certainly the one encountered by coordinators and researchers associated with clinical research. As mentioned at the beginning of this section, there is no new drug without clinical research. Yet almost 85% of clinical research is subject to significant delays because of difficulties in recruiting volunteers. These recruitment difficulties increase the overall cost of studies. According to the latest figures disclosed at these WPC presentations, the average cost of a clinical study now stands at \$ 2.5 billion and the average time to develop a new drug is 13 years.

The involvement of patients and non-affected persons (required to form control groups!) In the clinical research process is more than ever required. This is one of the biggest factors behind the slow progress in research. In Quebec, there is an organization that allows researchers, clinicians and patients to come together. This is the Parkinson Quebec network. By becoming a member of the Parkinson Network Quebec Register, you will become an essential player in the fight against Parkinson's disease. To become a member, visit their website at the following address: [rpq-qpn.ca](http://rpq-qpn.ca).

Finally, we must not lose hope! Some avenues of research such as gene therapy or stem cells have a high potential for concrete results. The first is to introduce therapeutic genes into targeted cells to compensate for

dopamine deficiencies among others. As for stem cells, the ultimate objective is to replace the lost dopaminergic neurons with new cells. The scientific community is working hard. Come and help them!

Sources :

*An overview – The nuts and bolts of clinical trials* – Présentation de Dre Soania Mathur (USA) -4<sup>th</sup> World Parkinson Congress

*On the road to better treatments and a cure – Why is it taking so long?* – Présentation de Dre Kalpana Merchant (USA) - 4<sup>th</sup> World Parkinson Congress

The Micheal J. Fox Foundation - *Participate in Research*

<https://www.michaeljfox.org/page.html?Participate-in-Parkinsons-Research>

Le réseau parkinson

<http://rpq-qpn.ca/>

Huffpost Linving Canada - *Why Is It Taking So Long To Find A Cure For Parkinson's Disease?* – Billet de Dre Soania Mathur

Parkinson France – *Les pistes de recherche*

<http://www.franceparkinson.fr/la-recherche/pistes-de-recherche/>