**Swedish Parkinson’s advocate becomes WPC ambassador**

One of Sweden’s leading advocates for Parkinson awareness now takes a bold step onto the world stage. Patient and lifelong enthusiast, Sara Riggare, was recently appointed ambassador for the third World Parkinson Congress in Canada 2013. The all-new initiative for patient ambassadors follows a more inclusive trend in the Parkinson research community where patients are brought closer to scientists and physicians.

**How would you describe your mission as an ambassador?**

- We are four ambassadors and our role will be that of promoting the event on the internet and find different ways to spread information, specifically in our own regions, countries and cities. We will also be acting as a sounding board for the coordinators of the event, coming up with fresh ideas on how to get the message across.

**What are your own personal goals as an ambassador?**

- What I would like to do is to bring with me to the congress actual scientific results that show the value of patients working with researchers. That would be really something. I would also like to highlight the Swedish Parkinson registry, the first of its kind in the world, and try to show the important benefits that come with such a system. Of course I will be working as a promoter of the event in the traditional sense of the word but I also want to make a change!

**How important is it to bring in the patient perspective?**

- This is an area that’s constantly getting better. I think that the organizers are starting to see the benefits of bringing in the patients’ views and experiences. There has also been a shift in how the disease is being talked about. Today it’s seen as not only a motor-disease but also a more complex disease with many non-motor systems. This broader view automatically puts the patient in focus.

**NEWS IN BRIEF**

**STOCKHOLM HEARING ON THE STATE OF SWEDISH PARKINSON CARE**

On World Parkinson Day, 11th of April, a hearing will take place in Stockholm on the care and treatment of Parkinson's patients in Sweden. The day is an opportunity to discuss the varying quality of Parkinson's care in the country and to reach decision-makers with information on the needs of the neuro-medical care in Sweden. Bagadilico’s Per Odin is one of the invited speakers.

For more information on the hearing - [Click here](#)

**NEXT PARKINSON CAFÉ ON THE 27th OF APRIL**

The upcoming Parkinson Café will see Angela Cenci Nilsson and Merle Horne take center stage in an effort to engage the audience in a lively discussion. The Café will take place at BMC in Belfragesalen on the 27th of April.

Professor Cenci Nilsson will talk about how the the side effects of the standard Parkinson medication L-dopa can be be mediated in combination with medicines focused on non-dopaminergic systems in the brain. The side effects, called dyskinesias, are one of the main areas for Parkinson research today.

Professor Merle Horne will discuss an unusual topic in Parkinson research, namely the relation between the disease and speech impediments. Research has shown that patients’ motor function in speech organs are affected, resulting in certain speech difficulties, for example connected to language melody and higher tones.

**PATRIK BRUNDIN ONE OF THE FOUNDERS OF RESEARCH! SWEDEN**

Sweden has recently seen the birth of its own lobby organization for medical research, dubbed ‘Forska!Sverige’. The foundation is inspired by its American counterpart, Research!America, known for doubling the budget of the National Institutes of Health during the past decade. The aim of the Swedish foundation is to raise awareness among decision-makers and the general public about the benefits of medical research. Bagadilico’s Patrik Brundin is one of the founders behind the organization that is trying to put Sweden back among the top nations in medical science and innovation.

To see an informational video about Forska!Sverige - [click here](#)

**BAGADILICO SCIENTISTS UNVEIL BIOMARKER FOR HD**

Bagadilico scientists Maria Björkqvist, Philip Michael Gaughwin, Patrik Brundin and close collaborator Sarah Tabrizi have discovered a robust microRNA biomarker that have functions for neuronal as well as non-neuronal tissues. The group found that a certain miRNA, miR-34b, is significantly elevated in plasma from HD gene-carriers prior to symptom onset. The study is the first of its kind suggesting that plasma miRs might be used as biomarkers for HD.

To read the article published in Human Molecular Genetics - [Click here](#)
A long wait is finally over. After countless hours hunched over microscopes in Lund, Stockholm and Seville, Miguel Burguillos got his paper on caspases accepted in Nature this month. The road towards publication in the holy grail of scientific journals has been a bumpy one, with the last few months devoted to tiresome rewrites. The gruelling preparations required to get an article published in Nature begs the question; is it worth it?

- It has been a long, hard struggle but now that we’ve reached the finish line I can safely say that it has been worth it. It has surely been an uphill struggle for over three years but the joy and relief I’m feeling now makes it all worthwhile, says Miguel Burguillos, who started the first experiments in the summer of 2007.

The desire to publish in high-level journals such as Nature is understandable. The paper usually gets a large number of citations and the attention generated instantly makes your future research projects more attractive to funders. Simply put, it gives you a nudge upwards on the shaky career ladder that is the world of science.

So does a journal like Nature hold too much sway over the way science is driven forward today? It’s without question the number one publication when it comes to keeping scientists sleepless over revision after revision. One could also argue that it gets a disproportionate amount of media attention, where the name of the journal sometimes perhaps speaks louder than the actual scientific merit of the paper published.

Miguel Burguillos is a first-hand witness to the global media impact that follows a publication in Nature.

- A few hours after publication our paper was mentioned in several countries; for example Spain, Portugal, Brazil, Mexico, France, Finland and USA. And this was not only at the level of press, radio or TV but also specialized web pages that count with experts in the field. We can already see how our paper has sparked a discussion on the internet.

The long journey has undoubtedly been marked by ups and downs. When working on a completely novel idea there are always more pitfalls to steer clear of. Virtues like patience and diligence have been tested throughout the project and the worries of getting pipped to the post by other scientists has kept the team of researchers working late nights to bring the project to completion.

- The obvious ups have been the thrill of working on something entirely new. We started from scratch and from that day we were fighting inch by inch every single step of the paper. The downs have been the worries of being scooped by other scientists and the temptation of sending the paper to publish in a different journal with maybe not so tough referees.
The discovery made by Miguel Burguillos and his colleagues is in fact quite revolutionary. It turns on its head a long-standing dogma in neuroscience on the role of caspases. This family of enzymes has been mostly known for their role in programmed cell death, a finding rewarded with the Nobel Prize in 2002. The additional role of the caspases discovered here is one of triggering harmful inflammatory responses, consequently resulting in neuronal cell death.

This now suggests that microglial cells - the nerve system’s primary immune cells – play a significant part in neurodegenerative diseases. Certain caspases (3,7 and 8) over-activate these helper cells leading to unwanted inflammatory responses.

- What we have proven here is that the activation of some caspases is no longer irreversibly connected just to cell death, but also to an inflammatory response. If we can control the over-activation of this response in Parkinson’s and Alzheimer’s we could possibly decrease the level of inflammation and so help neurons survive, explains Miguel Burguillos.

The theory of this new role for caspases was proven in the study through a number of experiments in cell cultures and mice. Towards the end of the project the researchers also looked at samples from deceased Parkinson’s and Alzheimer’s patients and found higher levels of activated caspases in microglial cells, further underlining their original hypothesis.

The challenge now is to try to effectively block the caspases and to hinder inflammation. The first step towards this was taken in experiments with mice where the targeted caspases were inhibited. Shortly after, the brains of the mice showed less inflammation and cell death in the surrounding neurons. Repeating this effect in the human brain is, of course, far more complicated. The timeline for clinical trials remains unclear.

- One of the problems now is that the inhibitors cannot pass the blood-brain barrier. So what we are doing right now, in Spain and in Stockholm, is to develop new strategies to overcome this problem. Hopefully we’ve opened up a new field of research. We hope that after this study many other scientists can develop new strategies and find solutions to stop the progression of these diseases. The best-case scenario is that our discovery leads to new therapies for neuroprotection in a number of brain diseases, says Miguel Burguillos, eager to continue the search for new therapies in brain diseases.

“Best-case scenario - our discovery leads to new therapies in a number of brain diseases”