Anders Björklund completes impressive trifecta

After being elected into the NAS and receiving the Pritzker Prize earlier this year, Anders Björklund recently completed an extraordinary triple as he was awarded the Fernström Foundation Nordic Prize.

- It's a great honour of course, it's the biggest individual award in the Nordic countries. I'm not sure why I've received so many accolades this year, I suppose it's some kind of ketchup-effect, explains a humbled Anders Björklund.

This year's prize recognises Anders Björklund's "development of innovative forms of treatment for Parkinson's disease". The work began in the 1970s, when his research group were pioneers in transplanting new nerve cells into the brain. At the time, most researchers did not consider this either possible or meaningful.

- The prevailing view was that the brain was a sort of switchboard, a closed control room that couldn't be changed. Now, on the other hand, we know that the brain is plastic – it changes all the time depending on the individual’s development and possible diseases, says Anders Björklund.

The transplantation of brain cells has since grown into a major international research field. In Lund, a number of patients with Parkinson's disease have received nerve cell transplants. However, the results have been mixed: some patients have seen a marked improvement, while others have not been affected at all.

- We believe that only a subgroup of Parkinson’s patients can benefit from receiving new dopamine-producing cells. We need to understand what characterises this group so that we don't subject any patients to an unnecessary procedure.

On the question of what he will do with the one million SEK prize money he isn't quite sure yet.

- I don't know really, it's a lot of money. Perhaps I would be best advised to put the the money in my wife's bank account, as some of my colleagues already have suggested, he says jokingly.

The Eric K. Fernström Nordic Prize will be presented at the popular science event Forskningens dag on November 2nd in Lund.

News in brief

BAGADILICO’S INTRANET LAUNCHES OCTOBER 4TH

At long last the Bagadilico intranet is finally ready to be introduced. Through the Bagadilico SharePoint solution we now present a common platform for Bagadilicans to easily access information relevant to all within our research environment.

Keep track of what happens in board- and general meetings. Get information on grants, open positions and educational opportunities. Follow the progress of other research groups through the milestone updates shared on the site.

With the help of the always up-to-date Bagadilico Calendar you can keep an eye on upcoming lectures, social meet-ups and other events that may be of interest to members of Bagadilico. If you want to get your event into the Bagadilico Calendar, send me an e-mail and I will post it for you.

Our goal is not only to make the SharePoint site your one-stop-shop for the latest internal information. The Bagadilico intranet could and should be used as a versatile communication tool. The long-term aspiration is that it will be a place where scientific discussion is sparked, a natural platform for sharing documents and ideas, within and between research groups.

On October 3rd you will receive an email on how to log in and activate your own personal account.

POSITIONS VACATED ON THE BAGADILICO BOARD & THE EXECUTIVE GROUP

At the Bagadilico board meeting on September 20th it was announced that Peter Hagell will step down as Bagadilico board member, effective from the next board meeting on November 22nd. With the departure of ViceCoordinator Patrik Brundin a position on the executive board has also opened up, effective from January 1st 2012. If you are a project leader and would be interested in becoming a member of the board and/or the executive group contact Martha Escobar (Martha.Escobar@med.lu.se) no later than November 1st. You are also welcome to nominate other project leaders.

500 000 SEK SCHOLARSHIP TO ÅSA PETERSÉN’S GROUP

On Neuro Day, September 28th, the Swedish Association of Persons with Neurological Disabilities issued a research scholarship of 500 000 SEK to Åsa Peterson and her research team, the Translational Neuroendocrine Unit. She received the scholarship for her research on Huntington’s disease and the pathological changes in the brain’s hormonal center, the hypothalamus.

- The continued research is aiming towards identifying, in detail, the molecular mechanisms and signaling pathways that are affected in the hypothalamus in Huntington's disease and also to identify how they contribute to cause early signs of the illness such as depression, anxiety and weight problems, says Åsa Petersen.

The scholarship was accepted by Sophia Hult who was also given the opportunity to talk to the audience about the current research taking place in in the TNU laboratories. Click here to watch Sophia’s presentation.
Some people switch offices to shake up their everyday job situation. Others take more extreme measures. Neurologist Christer Nilsson chose to travel around the world in search of a new challenge. From his home in Hamilton, New Zealand, he talks about his recently released book ‘Cognitive Medicine’ and the cultural influences offered by the remote wind-swept island nation.

Much of New Zealand’s climate is reminiscent of the harsh weather that Scandinavians often find themselves complaining about. Christer Nilsson and his family, however, have settled on the lush northern island where summer is waiting just around the corner. The garden orchard trees are already heavily laden with ripe lemons and oranges and the contrast to an approaching Swedish winter couldn’t be much starker. When asked about similarities with Skåne he offers a half-hearted suggestion; an abundance of grazing cows that dress the rural landscapes around Hamilton.

What then drove him to try his luck in the sparsely populated island country, sitting across the Tasman Sea from Australia’s east coast? It is clear that the choice of uprooting his family and travel 30 000 kilometers was not made on the basis of climbing the career ladder. He rather views it as an opportunity for him and his family to gain valuable life experience in a new environment. Spoken like a true neurologist he cites his reasons for taking a leap into unknown territory.

- It’s an opportunity to stimulate the growth of synapses in my brain. Quite simply, it’s time to dust them off. When you test your boundaries your neuronal outgrowths develop faster. Actually, it’s a mix of things. On the one hand it’s a possibility for personal development, an adventure and a chance for my family to have a new experience. On the other hand it’s a great opportunity for me to work as a neurologist on a broader scale again. Something that was hard to do in Lund after many years of specializing in a certain direction.

In his role as a reinvented general neurologist Christer Nilsson comes full circle, finding himself yet again in the position he held starting out as a young physician. What colleagues may interpret as a step backwards career-wise is in fact a concerted effort to keep himself on his toes, making sure that his basic skills as a neurologist stay sharp.

Educating a new generation

In his book, Christer Nilsson challenges conventional wisdom on how cognitive disorders are viewed and treated in hospitals today. In an effort to break negative traditions on the way cognitive deficiencies are diagnosed, he has been instrumental in putting together a collection of essays that include all diseases where cognition is impaired. The
The overriding incentive for writing ‘Cognitive Medicine’ is to influence a systemic shift in how the treatment of cognitive disorders is approached in medical institutions. The book aims to bring attention to cognitive symptoms in many diseases where they have been previously deemed less important or even ignored.

- I think that with many diseases where cognitive impairment is involved the focus has been on the more visible symptoms. For example, palsy in stroke or tremor in Parkinson’s disease. However, it is common that the patient experiences the cognitive problems as a bigger hindrance in their everyday lives, Christer Nilsson explains.

Another key issue for Christer Nilsson is the rigid compartmentalizing of cognitive symptoms practiced in many hospitals. He believes that it is impossible to separate a person’s cognitive abilities into neat boxes, such as: language, emotion, attention, motivation and memory. Taking a more holistic view, a position argued strongly in the book, will help doctors towards making more accurate diagnoses.

- It’s all connected. Cognitive functions are affected in most diseases and different medical disciplines can learn a lot from each other here. Cognitive scientists and psychologists have now begun to realize that this is all interlinked. It reminds me of the concept of the body and the soul, they’re really just different sides of the same coin. One cannot be separated from the other. The brain simply doesn’t work that way.

Cognition on the rise in PD
In Parkinson’s there has been an increasing interest in the cognitive aspects of the disease over the past couple of years. In previous decades focus was heavily weighted towards the characteristic motor symptoms. Today scientists and clinicians alike are beginning to understand that patients, quite early in the progression of the disease, are affected with symptoms relating to the brain’s cognition. General cognitive functions, such as attention and mental speed, are often impaired in Parkinson’s disease. In the later stages, when neurodegeneration involves also the cerebral cortex, cognition is affected more severely, including the ability to manage many everyday life situations.

- Until five years ago the focus was almost entirely directed towards the motor problems in Parkinson’s. Today when you go to a Parkinson’s congress there is a major change in what is being talked about. Cognitive impairments and other non-motor symptoms have now risen to the top of the agenda. In my opinion it’s simply because research on these issues is now starting to catch up. The next step has to be to incorporate this knowledge into the routine treatment of patients. It is my personal belief that this could significantly improve the quality of life for patients.

Although attitudes are changing in how cognitive aspects are viewed in many fields of medical research a major challenge remains in how to raise the general knowledge among clinicians. In the medical undergraduate program in Malmö and Lund, which lasts for five and a half years, the total education on cognitive impairments amounts to a day and a half.

- I see this as a big problem. The basic knowledge on the impairment of cognitive functions in diseases has to improve. We’re talking about a very common disease here, at least 30 percent of everybody in Sweden over the age of 85 suffers from some kind of dementia. We may be on the right path but clearly there is a lot of work still to be done. Hopefully our book can be part of the solution.

Challenging the status quo. The book ‘Cognitive Medicine’ was released in an effort to bring cognitive impairments to the fore in hospitals and universities.
Without the proper tools to measure the effects of scientific research, science itself has little purpose. No one knows this better than Peter Hagell. In a recently released study he and his colleagues developed an across-the-board study where they identified key targets for measuring the value of new therapies in Parkinson’s disease. Quite surprisingly, no such wide-ranging study had been previously conducted.

Why is it important to perform outcome measurement studies in general?

PH: Without outcome measurement there would be no results from clinical studies. Outcomes are the efficacy and effectiveness variables that are evaluated and reported from clinical trials - whether these are clinician-derived, meaning scores on an assessment based clinical rating scales, or patient-reported, meaning perceived health, fatigue or time spent in “off”.

Do you believe that studies like these have enough of a say in the way research in PD is directed?

PH: Only time will tell, but I certainly hope so and current trends appear to support this, since there is an increasing emphasis on prioritizing the patients’ perspectives in clinical studies. This is not least illustrated by the recent publication of FDA guidelines for the use of patient-reported rating scales to substantiate claims from clinical trials.

What was the main reason for performing this particular study?

PH: Severalfold. First, as I mentioned, there is an increasing emphasis on the patient perspective when judging effects of therapies. Second, there has been critique against the way new therapies are evaluated in clinical trials in neurodegenerative disorders. Specifically, the practical meaningfulness of results and outcome measures used to the primary stakeholders, that is patients and their clinicians, has been questioned. Third, surprisingly we have been unable to identify any studies that have focused on what areas of the disease that patient and clinicians find most important to consider when judging the values of new therapies.

Could you explain the benefits of the method used in this study?

PH: It simultaneously provides several important pieces of information. It conceptually maps out the interrelationships between outcome variables, as perceived by, in this case, patients and clinicians, which is important in order to understand what larger underpinning areas they represent. Secondly, it provides direct information on the relative importance of each outcome variable and conceptual area, which is of utmost value for setting further priorities.

In your opinion, what were the most important results gathered from this study?

PH: Difficult to say but perhaps that it reinforces two things; First, the need for a decent quality of life measure for PD, which does not exist, and secondly that mobility is among the most important aspects to assess, despite the
recent “popularity” on non-motor symptoms, which reminds us that we should not forget about the basics and that mobility/walking appears to be considered more important than parkinsonian symptoms per se.

You’ve tried to single out the most important focus areas for clinical PD trials, as identified by patients, clinicians and researchers. What where they?

PH: It was actually identified by patients and clinicians, researchers were only involved in identifying outcome variables. However, aspects relating to participation, mobility and motor functioning were considered most important, and when considering individual aspects, the highest importance ratings were found for quality of life, walking ability and sleeping problems. But areas such as motor complications and fatigue were also highly rated.

Did any of the results surprise you?

PH: Not really. Perhaps that the results actually make as much sense as they do…

How did patients and medical professionals differ in the areas they prioritized?

PH: That is a very relevant and interesting question but one that we have not answered yet. We are, however, conducting further analyses and hope to be able to answer this question later this fall.

Where do you go from here? How do you work towards getting these results to guide future clinical trials in PD?

PH: We are yet to set the final priorities but basically results will direct what areas we will focus on in terms of developing and establishing high quality outcome measures. In some instances, for example mobility/walking, there is a good case to reach relatively fast results since several promising tools already are available within this area. In other instances, such as quality of life, good candidate outcome measures are lacking, which means that a lot of fundamental conceptual work need to be done before a high quality measure can be presented.

What drives you personally to carry out this research?

PH: A firm belief in that if we take our patients and our studies seriously, we also need to be serious about our outcome measures. Unless tools such as rating scales are treated with full scientific rigor, advances in the clinical sciences will be hampered and opportunities to improve patient care may be lost.

Click Here to read more about the publication; “Measuring outcomes in Parkinson’s disease: a multi-perspective concept mapping study”