

My prog-MS ezine

For people with progressive MS and those interested in it

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Welcome to issue 14 of my free ezine about progressive MS and MS progression. My name is Ian Cook. I'm a secondary progressive MSer from Birmingham, UK.

In this issue are five pages of news plus a feature looking at issues that matter to prog-MSers. In the news there's a story about an amazing new remyelination drug, a major trial into statins and MS which you may be able to join, and surprising story suggesting that stem cell chemotherapy may worsen SPMS. In the features there's what is I think the ultimate MS diet. It's not the Swank diet, Greer diet or Best Bet diet See page 3 and I think you'll be surprised,

If there is any story you would like me to follow then I'm at iancookjournalist@yahoo.co.uk

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Re-myelination drug's "fairly strong" improvements

A clinical trial of the re-myelination drug opicinumab (also known as anti-LINGO-1) saw patients showing " fairly strong" improvements. Despite this the drug failed to meet its primary goal of improving disability in secondary progressive MS,

The Phase 2b trial of opicinumab studied four doses of the drug treatment. Analyses indicated the two intermediate doses made patients better, while the highest and the lowest doses had no detectable effects.

Opicinumab is believed to trigger remyelination by preventing the actions of LINGO-1 — a factor that suppresses myelination and axonal regeneration. In the trial those taking the highest-dose and lowest-dose of opicinumab saw improvements of 51.1 and 41.2 per cent, while patients receiving the intermediate doses seemed to benefit most from the treatment

Effects of biotin seen in the long term, not immediately

"Biotin doesn't seem to work in the short term," says. Dr. Frédéric Sedel — co-founder and CEO of MedDay Pharmaceuticals, which is enrolling hundreds of progressive MS patients to test biotin as a disease modifying treatment. "However, when we start the drug, we start to see an effect after at least nine months of treatment," he added.

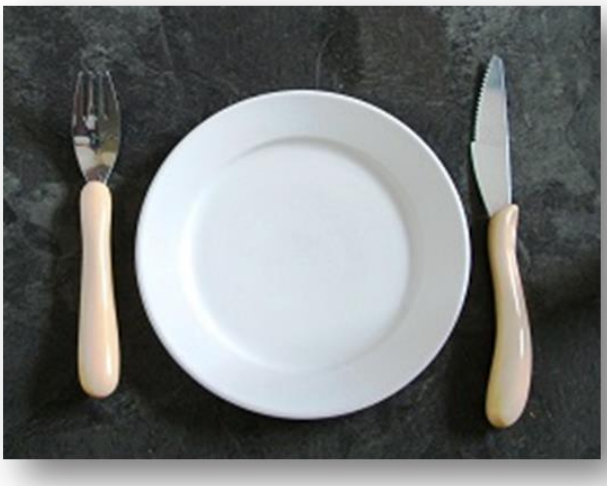
Dr Sedel made his comments to the online magazine Multiple Sclerosis News Today at the launch of a global Phase 3 clinical trial assessing high-dose biotin for progressive MS.

The biotin trial aims to prove that high-doses of the drug can reverse disability in non-active progressive MS. While this has been seen in an earlier trial, the new trial is much larger — ensuring a much greater volume of data will be collected — and, equally important, it may bring the U.S. Food and Drug Administration (FDA) to initiate a review of the treatment's effectiveness as a first step toward possible approval. The trial, called SPI2 (NCT02936037), is in its early stages of enrolment — and recruiting across the U.S., Canada and several European countries.

In an interview with Multiple Sclerosis News Dr. Sedel — co-founder and CEO of MedDay Pharmaceuticals, which is developing the treatment expressed a clear hope, even a guarded expectation, that outcomes will be good. His optimism is partly based on data from earlier clinical trials, showing that high-dose biotin could reverse disability progression in some patients.

Dr. Sedel's optimism is also based on the fact that thousands of MS patients are already under biotin treatment in France — where the drug was granted early access rights under a special program — in advance of potential European and U.S. regulatory approvals.

For more details of news stories go to p 10



Is this the ultimate in MS diets?

Anyone who's had MS for any time will have come across an MS diet or two. There's the Best Bet diet, the Greer diet, the Swank diet, yes plenty of dietary advice for MSers.

If you've tried any of these diets you'll know most of them are exclusion diets, ie: you exclude certain foodstuffs. This is what makes the latest MS diet strange yet fascinating. It is perhaps the ultimate exclusion diet. It tells you to exclude all food but, I hasten to add, only for short periods of time. It is what is called an "intermittent fasting" diet. The idea is that you fast for short periods. During these fasting periods cortisone is produced and this is said to start a process of killing unhealthy autoimmune cells leading to the production of new healthy cells. The diet is the brainchild of Professor Valter Longo, who directs the USC (University of Southern California) Longevity Institute at the Davis School of Gerontology in the US. The research started, perhaps rather predictably, with mice.

For the first part of his study, Dr Longo put a group of mice with autoimmune disease on a fasting-mimicking diet for three days, every seven days for three weeks with a control group of mice on a standard diet for comparison. Results showed that the fasting-mimicking diet reduced disease symptoms in all the mice, and "caused complete recovery for 20 percent of the animals".

Testing the mice, researchers found reductions in symptoms which they say explained health improvements. The researchers saw a reduction in cytokines - chemicals which cause inflammation in MS. They also saw improvements in white blood "T cells," – cells responsible for immunity and auto-immunity. Finally, and perhaps best of all, the researchers found that the fasting-mimicking diet promoted regeneration of myelin in the mice. **Continued on page 4**



Continued from page 3 "On the one hand, this fasting-mimicking diet kills bad immune cells," Longo said. "Then, after the mice return to the normal diet, good immune cells and myelin-producing cells are generated, allowing a percentage of mice to reach a disease-free state."

That was part one of the research. The researchers then checked the safety and potential efficacy of the intermittent fasting diet on people with MS through a pilot trial with 60 participants with the disease, led by Markus Bock at Charité University Hospital in Berlin.

Eighteen patients were placed on the fasting-mimicking diet for a seven day cycle and then placed on a Mediterranean diet for 6 months. Also for six months, 12 participants were on a controlled diet, and 18 others were on a ketogenic diet (a high-fat low carb diet).Those who received a fasting mimicking diet cycle followed by the Mediterranean diet and those on a ketogenic diet reported improvements in their quality of life, improvements in health, including physical and mental health.

The researchers noted that the study is limited because it did not test whether the Mediterranean diet alone would cause improvements, nor did it involve a functional MRI or immune function analysis. Longo said the findings warrant further investigation. Indeed there are many things to look at from an MS perspective. Could intermittent fasting kill off rogue memory B cells which may carry the memory of infection with the Epstein Barr virus perhaps? And do these cells that are killed off during fasting get replaced by new white blood cells that don't carry this memory of infection. Is this what causes the improvement? Sadly no-one really knows the answer, although those are the questions I would be asking from an MS perspective.

One thing that Longo was certain about was that he believes patients with autoimmune disorders who are out of viable options should consult their doctors about the possibility of trying the diet or enrolling in a clinical trial that tests the diet's effect on autoimmune disorders. "We are optimistic," Longo said, but he added a note of caution. "What we don't want is patients trying to do this at home without involvement of their specialist or without understanding that larger trials are necessary to confirm that the diet, as a treatment effective against multiple sclerosis or other auto-immunities." In other words don't try this at home. **For more information on diets and MS go to page 10**

News



Stem cell chemotherapy may worsen SPMS says top neurologist

People with secondary progressive MS (SPMS) who have stem cell treatments requiring chemotherapy experience an increased loss of neurons, which may lead to greater brain shrinkage, and worsen their level of disability, a leading neurologist has warned.

It has been known for some time that HSCT (haematopoeic stem cell transplantation) or BMT (bone marrow transplantation) requires chemotherapy to wipe-out the immune system allowing stem cell transplantation. The chemotherapy drugs that are used are neurotoxic, i.e. they damage the brain.

In a recent post on his website http://multiple-sclerosis-research.blogspot.com Prof. Gavin Giovannoni (pictured above) referred to a research paper published seven years ago which presented data giving some detail on this neurotoxicity and brain damage. Referring to the paper Prof. Giovannoni said:

"Brain atrophy rates in people with MS were in the order of 2.1% per year in those who had HSCT compared to only 1.2% per year in people with SPMS who did not have HSCT; the upper limit of normal for brain atrophy in healthy adults is generally accepted to be 0.4% per year. The bottom line is that if you have SPMS then HSCT (haematopoeic stem cell therapy) is likely to accelerate your disease worsening."

The research paper Prof Giovannoni was referring to was published in the journal Annals of Neurology in 2010 and included 14 people with secondary progressive MS, 17 people with "haematological malignancies" and 14 healthy controls. In SPMS patients receiving chemotherapy brain atrophy rates were said to have "increased acutely"

"PwMS who already have pre-existing damage to their brain and spinal cords are particularly susceptible to the neurotoxic effects of chemotherapy. This is also driven by age; the older you are the worse you handle chemotherapy. The oncologists refer to this observation as 'chemobrain', which is particularly prevalent in the elderly." He said.

Prog Giovannoni added: "As a result of these and similar observations most units have stopped doing HSCT in people with more advanced MS**.**

More details of all news stories on page 10



Could hand grip strength be used to measure MS progression?

Hand grip strength decreases as MS advances and could be used as a way of measuring disease progression, researchers say.

Among 24 patients with secondary progressive MS it was found both weaker and dominate hand grip strength was significantly linked to a slower timed 25-foot walk time, a more common way of measuring disease progression.

Following adjustment for age, disease subtype, symptom duration and sex, the scientists observed an annual decline of 0.68 pounds in weaker hand grip function and of 0.78 pounds in dominant hand function among MSers The finding, by a team led by Dr Meghan Romba, of Washington University in the US means grip strength could be useful in measuring disease progression in MS patients particularly among those unable to walk 25 feet.

New SPMS drug siponimod reduces disability progression

Scientists who conducted a randomised, double-blind, placebo-controlled, phase III study, evaluating siponimod versus a placebo in patients with secondary progressive MS (SPMS) managed to reduce the risk of disability progression by 21 per cent over a three month period.

Of the 1,651 patients involved in the study siponimod reduced the risk of confirmed disability progression by 21 per cent, versus the placebo. This was assessed using the Expanded Disability Status Scale (EDSS). However the risk reduction observed in a timed 25-Foot walk test was only 6.2 per cent and not statistically significant.

Siponimod belongs to the same class of drugs as Gilenya (Fingolimod) . It acts on certain types of white blood cells (lymphocytes) which are involved in the autoimmune attack on myelin seen in MS. It binds to special locations (or receptors) on the surface of the lymphocytes, called sphingosine-1-phosphate receptors (S1P-R). This causes a larger proportion of lymphocytes to be retained in the lymph glands. The number of activated lymphocytes reaching the brain is decreased, resulting in reduced immune attack on nerve cells in the brain and spinal cord. Siponimod is taken once daily as a tablet. It is yet to be approved the European Medicines Agency and NICE in the UK

For further details of all news stories go to page 10



Ability to cut toe nails linked to MS severity

The ability of people with progressive MS to cut their own toe nails is linked to their level of disability, says one of the UK's top neurologists.

Prof. Gavin Giovannoni of Barts Hospital in London says that he has started inspecting the state of his patients' toenails in clinic and noticed that poor "toenail maintenance" is clearly linked to disability (EDSS) and deprivation or social isolation. In other words if you can't cut your own toenails and you don't have a partner or family member to cut them for you then your toenails get neglected. Professor Giovannoni last year launched a campaign called #ThinkHand which emphasises the importance of hand function in MS and also pressed for drugs companies to do trials in more advanced MS focusing on arm and hand function as the primary outcome rather than walking 25 yards as is the case in the standard drug trial tests.Recently Prof. Giovannoni did a survey on his patients' toenails and of 45 respondents with analysable results there was a clear correlation between EDSS (Expanded Disability Status Scale) and the ability to cut toenails, which he says was "highly significant."

Fampridine/Fampyra given green light in Europe

A drug, proven to improve walking in people with MS, has been approved and given standard marketing authorisation by the European Commission (EC).

Fampyra (prolonged release fampridine tablets) have gained approval based on the results of the phase III ENHANCE study which confirmed the clinical benefits and safety of the drug over the long term in people. "Approximately 80 per cent of people with MS experience walking impairment, one of the most common issues with the disease. We frequently hear from people living with MS that these walking challenges affect their independence, restrict their ability to work and negatively impact their overall quality of life," said Jeremy Hobart, Ph.D., Consultant Neurologist at Plymouth Hospitals NHS Trust and Professor of Clinical Neurology and Health Measurement at the Plymouth University Peninsula Schools of Medicine and Dentistry. **For more details of news stories go to page 10**.



UK Simvastatin trial in SPMS to start this year

Hundreds of British patients with secondary progressive multiple sclerosis (SPMS) are set to take part in a trial where they will be given simvastatin, a cheap anti-cholesterol drug that could delay progression.

In a trial conducted three years ago, scientists found the rate of brain shrinkage was halved among 140 MS patients who took statins. Now University College London is launching a six-year trial, phase III tiral which will involve 1,180 patients at 30 hospitals across the UK.

The research will be led by Dr Jeremy Chataway, UCL Institute of Neurology London, who led a phase II trial of simvastatin. In this research not only did those taking high doses of simvastatin have a significant reduction in the rate of brain atrophy (brain shrinkage) over two years, but they also had less disability and better quality of life scores at the end of the study.

"This drug holds incredible promise for the thousands of people living with secondary progressive MS in the UK, and around the world, who currently have few options for treatments that have an effect on disability," said Chataway. "This study will establish definitively whether simvastatin is able to slow the rate of disability progression over a three year period, and we are very hopeful it will." The trial will start in the summer of 2017. To register your interest, visit https://www.mssociety.org.uk/ms-stat2.

Editor's note: From a personal perspective I think this trial is really good news because I have been taking 80 mg Simvastatin daily by my enlightened neurologist for the past 18 months. My neurologist has also given it to at least two other of his SPMS patients I know. I would love to claim that it had led to a great improvement in my condition after taking it for 18 months but that would be an exaggeration. My walking, bladder, bowel and spasticity problems are about the same but the drug has had a big and positive effect on my leg spasms and tiredness. You could certainly say I am no worse than I was 18 months ago and in two out of my six problem areas I think I may actually be a bit better so if you get the chance to go on the trial my advice is go for it. **For details of all stories and features (including how to register for this trial) go to page 10**

IN THE NEXT EDITION **Could robotic legs like these be a better aid to mobility than a wheelchair?**	

DISCLAIMER:

This ezine is strictly a news and information ezine/website about MS . It does not provide medical advice, diagnosis or treatment. This content is not intended to be a substitute for professional medical advice, diagnosis, or treatment. Always seek the advice of your doctor or other qualified health provider with any questions you may have regarding MS or any a medical condition. Don't disregard professional medical advice or delay in seeking it because of something you have read in this ezine.

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References contact details etc

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Opicunumab story

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Page 2 Biotin story

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Pages 3-4 Fast Mimicking diets and MS

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page 5 Chemotherapy and stem cell therapy

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P 6 siponimod

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Page 7 Toe nails story

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Page 8 Simvastatin trial

Source: https://www.mstrust.org.uk/news/news-about-ms/simvastatin-trial-planned-secondary-progressive-multiple-sclerosis (contains details of how to get on the trial)