

LYSOSOMAL DISEASES NEW ZEALAND

July Newsletter 2006

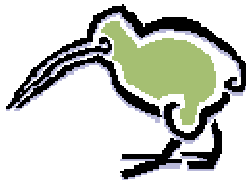
New Zealand Lysosomal Storage Diseases Support Group

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Lysosomal Diseases
New Zealand

OUR MISSION

To improve contacts, information sharing and support among affected people and their families, within New Zealand and Internationally.

To advocate for and support accelerated research into the causes and treatment of Lysosomal Storage Diseases.

To advocate for and support improvements to the clinical care of affected people.

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Hayden Noble — Mucopolipidosis

Tim Forman — Alpha Mannosidosis

Canidce Morris-Eyton —
Metachromatic Leukodystrophy

Sarah Noble — Mucopolipidosis

Kathleen Walters — Fabry (*standing*)



Editorial



We talked in our last newsletter about success in developing new enzyme replacement therapies for several of our diseases, yet there is continuing difficulty in getting access to those treatments for our NZ families. We do keep plugging away at officials and politicians, but it is clear the answers will not come quickly for us. We will have to engage in a continuing campaign to get fair access to the treatments our families need. Most of this work is done through the Access to Medicines Coalition where we have the benefit of 24 other patient/family advocacy groups to help amplify the message.

In August and September there will be meetings held with these groups to build support for the National Medicines strategy that is under review by Government. We think this is our best chance of making progress on these persistently difficult issues. A clear message is emerging from the groups involved in the ATM Coalition, that they are not happy with the state of the country's "medicines waiting list" and want some urgent action from Government to fix this.

This work adds to the very busy agenda for LDNZ this year. This year the largest number of LDNZ families for many years will be supported by us to attend meetings and conferences relevant to their disease. We've had great success with our family gatherings held in Tauranga and Palmerston North, and we hope to give notice soon of another gathering in the South Island later in the year. Special thanks are owing to Jenny Noble for the tremendous effort she put into organising both these events. It certainly makes the job of chairperson a lot easier when there is a very capable and energetic secretary/treasurer. Thank you Jenny.

John Forman
Chairperson

Australian MPS Meeting Brisbane

To all the families who are going to the Australian meeting, please don't forget that you need to get in touch with Jenny Noble as soon as possible please phone 07 544-8868.

LDNZ has received funding to support a good delegation of adults to this meeting. We need to hear from all those who indicated that they would be attending, so we can plan the allocation of funding.

This is the largest meeting for MPS/Lysosomal diseases in this part of the world for several years at least, so those who have been thinking about conference attendance should give this one serious consideration. Also bear in mind that this is a fantastic opportunity to talk with some of the worlds leading experts in the field of MPS/Lysosomal Diseases. These people can often give you more information than the Internet and LDNZ.

Don't forget the sports night where we plan to have a united front . This means dressing in our Kiwi Black/Silver Fern so we can show them that we are family.

What's happening in 2006 ?

- International MPS Meeting - Venice June/July
- Australian MPS Meeting - Brisbane Sept/Oct

All our dreams can come true - if we have the courage to pursue them.
Walt Disney

Family Gathering Palmerston North

We are the Morris-Eyton Family from Napier, on the 27th May we joined John, Jenny, Paul, Tim, Hayden and Sarah in Palmerston North for a Family Gathering. Our 2 daughters came with us, Candice 14 MLD (Metachromatic Leukodystrophy) and Kelly 10yrs, unfortunately our eldest Mikaela 17yrs could not make it.



We had a fantastic time and were just blown away by the connection we felt to everyone, yes, we are not alone. My husband Shaun enjoyed talking to other dads who have something in common with him, I just loved being with everyone, sharing our stories, sad, happy and funny.

Candice and Kelly thoroughly enjoyed themselves with Sarah and Philippa and are still talking about the fun they had and mischief they got up to.

Thank you everyone for a great weekend!!!



Philippa Candice

The highlight of the weekend has to be the mischief the girls got up to. Yes Sarah, Candice, Philippa and Kelly devised a plan to leave the men wondering what was happening to their precious rugby game. Unbeknown to the parents two of the girls snuck in to join Carol and Jenny (**culprits pictured in photo**) who were busy chatting only to hear a cry from the men.

Sky had gone down, or so they thought!! We very quickly discovered that the girls had snuck in with a set of remote controls and changed the channel. There was much laughter from the women but the men were less than pleased. These high jinks were the talk of the breakfast table on Sunday morning.

Well done to our young ladies who bonded so well and set out to get the Dads!.

Laurie Hill — It would appear that mischief was on the agenda for our LDNZ families who gathered in Palmerston. Laurie and his wife were to join us for the weekend but they never made it.

On checking our e-mails John and Jenny received a very apologetic post from Laurie informing us that as they were leaving home he fell down the stairs and broke his foot. **Way to go Laurie!!**

Best wishes for a speedy recovery, we look forward to seeing you next year when we repeat the meetings though out New Zealand

Palmerston North LDNZ Family Weekend

By Kirsty Peacock

Palmerston North really turned the weather on for the LDNZ family gathering. The rain poured down all weekend, but that didn't stop the fun, great company and good conversation. It was lovely to catch up with the families who travelled to Palmerston North for the gathering.

The short presentations at the beginning was a reminder of what is happening to our family members, as it can be easy to forget what is going on inside their bodies day to day. While this was a serious subject, there were moments of amusement. Imagine Alex, my then 2 month old deciding he was hungry. I removed ourselves from the group and sat at the back of the room to feed him. John Forman was at a critical point of his presentation when Alex let out the largest and loudest burp that almost shook the building. You couldn't help but have a giggle.

It was a good opportunity to get up to speed with what LDNZ is doing to help our families. Lobbying to the government for early diagnoses and treatments, fundraising for families to travel to Conferences and gatherings like this, and just generally being available for any of us if ever needed.



Jenny made a wonderful job of the food for everyone, with a BBQ dinner on the Saturday night, followed by a mouth watering desert. The TV was brought in for those who wished to stay, have a few drinks and watch the rugby (although it was hard to see anything through the fog). Resulting in being kicked out of the conference room by the owner later on that night. A grand BBQ breakfast feast was put on the next morning for everyone who could get out of bed in time.



Thank you Jenny and John for a wonderful weekend, I enjoyed every minute of it and have my fingers crossed with hope to look forward to the same again next year.

Gene Mutation Analysis for Mucopolipidosis II and III

Late last year The Greenwood Genetic Centre (GGC) in South Carolina, USA announced that it would begin diagnostic Gene Mutation testing for Mucopolipidosis type II and III. This testing was initiated as a result of recent publications that positively identified the ML II and ML III genes.

Terri Klein—ISMRD's Executive Director has been working very closely with the GGC in a combined effort to gather data and families to begin the first ever Natural History study of patients with ML II and III on an International basis.

The evolution of this much needed Natural History Study for Mucopolipidosis will help the GGC, families and future researchers to have a better understanding of the manifestations of ML. This collaboration is to be extended to include the other 7 Glycoprotein Storage Diseases that ISMRD supports.

This is an exciting step forward for super orphan diseases and one both LDNZ and ISMRD will be following with great interest.

NTSAD 28th Family Conference, April 6-9 2006, Alexandria Virginia USA

By Gina Murray

Gina Attended the National Tay Sachs Conference in April below are excerpts from her report. To see the full report please go to www.ldnz.org.nz and click on the Newsletter page to find her report.

Hello all,

My name is Gina Murray and with the generous support of LDNZ I was able to attend the NTSAD (National Tay-Sachs and Allied Diseases) Conference held recently in Alexandria USA. Before getting into the nitty, gritty of the report I'd like to tell you a bit about myself and my family.

I have three children , Adam 28, Meghan 23 and Ben 17. In June 2005 after 15 years of various tests and misdiagnosis Meghan was finally diagnosed with Late Onset Tay-Sachs Disease (LOTS). As far as I know she is the only one diagnosed with LOTS in New Zealand. (I'll be writing our story more in depth for the website shortly). With the help of Jenny at LDNZ I contacted NTSAD in the USA and became aware of the conference being held in April of this year. I was very keen to attend as we had had years with a sense of isolation and frustration of not knowing anyone else quite like Meghan . I wanted to meet others with LOTS and also other parents. I felt I had a million questions to ask and I also wanted the chance to observe and compare and was hungry for the latest in research. I also wanted to bring back all that I learned from the conference for others.

All of these "wants" came to fruition with attending the conference. There were over 250 parents, grandparents, healthy and affected children, affected adults and their families attending the conference. I met with other families (mainly from the USA) with children and spouses with Infantile and LO Tay-Sachs and other closely allied diseases. The informal information sharing answered many of my questions. One thing I learned was that even though the diagnosis may have been the same, the variety and degree of symptoms varied greatly. I also had the opportunity to speak with Edwin Kolodny, Professor of Neurology from the NY University School of Medicine who is well renowned in the field of Lysosomal Diseases. I was able to discuss Meghan's case and her enzyme test results (which I took along with me). This was wonderful as I hadn't had the results explained to me previously. I have since had contact via email with him as he had a few suggestions for me to follow up on.

I attended a mix of sessions aimed at both the Infantile and LO form of the disease.

Overall I found the conference very beneficial, it gave me what I wanted. I have made great connections and friendships .

One thing I wasn't prepared for was the huge rollercoaster of emotions that I went through both at the conference and particularly when I got home. I attended the conference alone(not to be recommended) so I think that had a big part to play in how I was feeling (no-one to debrief with at night). Also the enormity of my responsibility with Meghan and the unknown future seemed more of a reality when I was removed from the day to day dealings with all that having a family member with a Lysosomal disease brings . In saying that, don't be put off, I would certainly recommend attending an international conference if you are able .

Once again my heartfelt thanks goes to LDNZ and Lottery Ministers fund for the support of travel costs to attend this very important conference.



Gina

Meghan



New web-based LSD information from GOLD

GOLD, the Global Organisation for Lysosomal Diseases is an international collaboration of scientists, clinicians, patient organisations and commercial organisations dedicated to improving the lives of patients and families with Lysosomal storage diseases (LSD.)

GOLD has now developed 2 new areas on its website www.goldinfo.org where the organisations who are members of GOLD can view video presentations or get online access to Scriver's Online Metabolic and Molecular Basis of Inherited Disease. This textbook is the "bible" of inherited metabolic disease and we are extremely fortunate to be able to access it, free of charge, via GOLD. The online version of this prestigious publication was launched, by McGraw Hill Medical Publishing in November 2005. Contributing Authors are renowned experts in their fields, and the chapters are regularly updated, so that information is always current.

As **Lysosomal Diseases New Zealand** is a member of GOLD, our individual members are able to access these new areas of the GOLD website. We hope you will make use of them.

How to Access OMMBID for GOLD and GOLD's Video Presentations

Both these areas can be viewed from the GOLD website at www.goldinfo.org. In the menu, select "Education and Information" and then either "Video Presentations" or "Scriver's OMMBID".

You will need to register at the website, if you have not done so before – instructions are on the relevant entry pages. Registering only needs to be done once. You will be asked to give your email address as a username, chose a password and select the organisation of which you are a member, so please select **Lysosomal Diseases New Zealand**. GOLD will not give your information to third parties.

This is an exciting move into the future. If you do get a moment please have a look at the video links. John Hopwood presents the "Pipeline for Lysosomal Diseases".

INOTECH Delays Morquio Type A clinical program

Basel, Switzerland, May 2006 up date

In our April newsletter we said that Inotech were due to start clinical trials for Morquio Type A in 2007. We have received notification that due to the need for further research that must be undertaken prior to starting the Natural History data base and clinical studies, Inotech announce that there is a shift of the start of their first clinical trials by 1—2 years.

Inotech will be attending the International MPS Meeting in Venice and I am sure John will get the opportunity to talk to the representatives and have more information for us on returning home.

To stay up with what is happening please bookmark this website and check in regularly. www.inotech.ch

Stem Cells INC. Receives Approval to Begin Phase 1 Clinical Trial

BDSRA announce stem cell therapy trials are about to begin for two forms of Batten disease. Dr Jon Cooper of the Institute of Psychiatry in London knows a lot about this research, and so we asked him to give us his thoughts about it. Here is what he wrote:

The possibility of stem cell therapy for Batten disease is a hot topic at the moment. This year it was announced that *Stem Cells Inc*, a US based biotech firm, had been granted permission to begin a phase I clinical trial in children with infantile or late infantile Batten disease at Stanford University and Oregon Health Sciences University. Stem cell approaches have potential for many degenerative diseases of the brain, but this potential is yet to be realized and we are still some distance away from this being an effective therapy for Batten disease.

What are stem cells? When the body develops from a single fertilized egg, many new cells are made which then differentiate into the different cell types that make up the body; skin, bone, muscle, brain cells and so on. This differentiation into mature cell types is a one-way process and there is no going back. Stem cells are cells which have gone part of the way towards differentiating into what they will become, but still retain the potential to generate several different cell types. Given the right signals they will divide and produce more differentiated cells. Neural stem cells (such as those to be used by *Stem Cells Inc*), are cells that can produce either brain cells (neurons) or glial cells (astrocytes or microglia) that act to support neurons and maintain an optimum environment within the brain.

Where do these stem cells come from? Neural stem cells are usually isolated from embryos where many stem cells exist. Tricks have been developed to keep them in culture as cell lines that can be maintained permanently. It is one of these purified human stem cell lines that *Stem Cells Inc* will use in their trial. This cell line has been well studied and techniques have been developed, through the use of cell growth factors, which cause some of them to become brain cells in a culture dish in a controlled fashion. From these studies and unpublished results in Batten disease mice, the hope is that these cells can be used therapeutically to treat human Batten disease.

How might stem cells work therapeutically? The idea is that neural stem cells transplanted into a child with Batten disease could achieve two goals. The first would be that the stem cells will differentiate into neurons and replace the brain cells that are dying as part of the disease. Such *cell replacement* would be a great achievement, but it is not yet clear whether stem cells will be able to do this in the potentially hostile environment of a degenerating brain. They would need to turn into the right sorts of neurons, in exactly the right places, and then connect seamlessly into the brain's circuitry. It is not clear that this is possible. The second, and more likely goal, is for the stem cells to sit within the brain and act as mini biological factories pumping out the enzyme that is missing in either infantile (PPT/CLN1) or late infantile (TPP-I/CLN2) Batten disease. These enzymes are soluble and can move through the brain. There is an uptake system on all brain cells to import enzymes cells and correct (or cross correct) the enzyme defect. This *enzyme replacement* principle also underlies gene therapy approaches for infantile and late infantile Batten disease. However, it is not yet clear to what extent this will produce a clinical benefit in mice, and we are learning that it is not as straightforward as it sounds. Furthermore this enzyme replacement approach is only possible in forms of Batten disease where the defective Lysosomal protein is soluble. It would not work in juvenile Batten disease or most of the other variants where the defective protein cannot be replaced from outside the cell.

Are stem cells a viable therapy yet? It is very important to remember that stem cell transplants remain a highly experimental approach for any neurodegenerative disease. Although there is great potential for such transplants in certain forms of Batten disease, there are also very many questions that remain to be answered and work is ongoing to provide these answers. At this stage, neural stem cell approaches are still some way from being a viable therapy, but we hope that their potential will one day be fulfilled.

Dr Jon Cooper
Institute of Psychiatry
London
June 2006

<http://www.bdsra.org/index.htm>



ERT Progress for Alpha Mannosidosis

The European Union has approved a grant of about 2.4 million Euro to a team of scientists to carry out research on Alpha Mannosidosis.

The project, HUE-MAN (Human Enzyme Replacement Mannosidosis) will aim to develop a drug that will compensate the patients body for the genetic defect.

The collaborative research project EURAMAN successfully established an enzyme replacement therapy for a mouse model of Alpha-Mannosidosis.

A correction of storage in many tissues including brain was found after administration of Lysosomal acid α -Mannosidase (LAMAN) from bovine kidney, and human and mouse recombinant LAMAN.

The main objective of the HUE-MAN project is to transfer and expand the knowledge obtained from the EURAMAN project studies to investigate and establish clinical parameters in the mouse model and a natural history study of the human disease in order to define clinical endpoints for future clinical trials in α -Mannosidosis. This is an exciting step forward for Mannosidosis and one we will be following very closely.

LDNZ BOARD OF TRUSTEES

Chairperson
John Forman



Profile: John is a parent of adult twins who both have a rare Lysosomal disorder, Alpha-Mannosidosis.

He has a long history as a volunteer and as a paid worker in disability services and related advocacy agencies. He is enthusiastic about the use of communications technology to reduce isolation and improve the health of those affected by rare diseases by improving networks among families and professionals.

John works as Executive director of the NZ Organisation for Rare disorders and is on the Board of several local and international rare disease and advocacy organisations.

Secretary / Treasurer
Jenny Noble



Profile: Jenny is the parent of two young adults with Mucopolysaccharidosis Type III (Pseudo-Hurler Polydystrophy).

Jenny has spent many years attending International MPS / Lysosomal Conferences in her search for information and symptomatic treatment for ML III. This led to her becoming a member of the Board of Directors for the Australian MPS Society. She has worked closely with the society in strengthening links between New Zealand and Australia.

Jenny is also a Board member for ISMRD "*The International Advocate for Glycoprotein Storage Diseases*". Though not trained in health or science, she is one of the co authors for "*The Osteodystrophy of Mucopolysaccharidosis Type III and the Effects of Intravenous Pamidronate Treatment*" published in the Journal of Inherited Metabolic Diseases.

Dr. Dianne Webster



Profile: Dianne is a scientist with a lifetime working with metabolic diseases particularly in the laboratory diagnosis of people with likely symptoms, and newborn screening of healthy babies.

She is active regionally and internationally with the Australasian Association for Inborn Errors of Metabolism, the Human Genetics Society of Australasia and the International Society for Neonatal Screening, with particular interests in high-level policy and quality of service.

She has led the development of the clinical metabolic service in New Zealand and presently manages the service, as well as the newborn metabolic screening programme, the biochemical genetics laboratory at Auckland City Hospital and the antenatal serum screening programme.

Dr, David Palmer



Profile: Dr D N Palmer, Principal Research Officer | Lincoln University.

Since 1980 my research has concentrated on animal forms of Batten disease, particularly in sheep, studied to gain insights into the human diseases. The discovery that the different forms of Batten disease are protein storage diseases was made this way.

Recent studies by our group suggest a role for inflammation in the disease and we plan to test anti-inflammation therapy on the sheep. Major support for these studies has come from the US National Institutes of Health and other support from the Neurological Foundation.

During this work, and through networking and parent-scientist meetings, I have grown to appreciate the human dimension of Lysosomal diseases, and want to do what I can to share what I know.

Philip McKinstry

Profile: Philip is the parent of Christopher who has Hurler Syndrome. Christopher underwent a bone marrow transplant in December 1999 at the age of one.

Philips background is in Law and Insurance and has a particular interest in statutory compliance."

Thank you for your support

We wish to thank the following people and organisations that have supported LDNZ from 1st January 2006.

Paul and Gina Kumeroa, The Lion Foundation, The Todd Foundation, The New Zealand Lottery Grants Board, The Trust House Charitable Trust and The Rimutaka Trust.

Feedback / Donation

We plan to try and get a news letter out to you at least 3 times a year. We would value your comments and suggestions for future newsletters.

Please send us your feed back, your request for further information or make a donation to LDNZ .

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Donations over \$5.00 made to Lysosomal Diseases New Zealand are Tax deductible.

What happens to the funds we raise?

- Funding of all administration expenses for our group.
- Supporting families wishing to attend Conferences.
- Advocating for families for disability support, health services and access to therapies.
- Lobbying the Ministry for improvements to diagnosis, screening and care.
- Keeping in touch with researchers and biotech companies on research progress.
- Supporting some research efforts here in New Zealand.
- Keeping you informed of progress with our mission.

FAMILY GATHERING Palmerston North May 2006

