

FSGA National Fabry Meeting & AGM 2011 Report
Saturday 22nd October 2011

Venue: Royal Children's Hospital (Flemington Rd Parkville Vic, Level 10 Murdoch Children's Research Unit)



Registration began at 10 am with over 40 members in attendance. Lea Chant; FSGA Vice President acted as MC for the day.

FSGA President; Megan Fookes gave a presentation on:

- FSGA background / How it all began
- Her personal involvement with FSGA through her late father's diagnosis at age 48
- FSGA –what we do, activities undertaken of past 2 years
- What is Fabry disease?
- FSGA 'An important Role'. FSGA does so much – it is very difficult to list all it does. But they have a very unique and important role to play ensuring Fabry patient's needs are met.



FSGA does the following:

- Contact with patients
- Many members find FSGA before a Fabry Clinic
- Newly diagnosed patients have a lot of unanswered questions and need a lot of support.
- FSGA telephone support
- link between patients and Fabry Clinics
- Coffee meetings via FSGA Regional Representative
- Life-long friends are made through FSGA
- Raise awareness with medical professions & general public
- FSGA is often asked to present at Fabry related events / conferences
- FSGA organises meetings, events, conferences giving opportunity for members to meet
- Industry organise international speakers to present to local Fabry doctors & FSGA membership
- FSGA is a source of information on all things FABRY which is on the FSGA website
- FSGA represents Fabry patients' needs with Australian Health Dept LSDP in relation to treatment access
- FSGA lobby on behalf of patients for long term Fabry medical needs
- Fabry research through Fabry Clinics
- FSGA has a unique opportunity to identify any 'gaps' and in collaboration with other Fabry stakeholders is able to address these through various projects and programs.
- FSGA communicates to its membership via its website and FSGA E News & general email/mail.

FSGA Membership

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NSW	41 adults, 6 children and 10 carers
VIC	39 adults, 8 children and 20 carers
QLD	23 adults, 5 children, 12 carers
SA	6 adults, 1 child, 4 carers
TAS	1 adult
WA	8 adults, no children and 2 carers
NT	None reported
ACT	1 adult
NZ	6 adults, 0 children and 3 carers
UK	3 adults (all moved to access ERT) & 1 child

FSGA doesn't limit its membership although we represent the needs first and foremost to this region being Australia and extend our support to others in New Zealand, Canada and UK and other regions. We have had enquiries from India, Middle East, Japan, Hong Kong and Singapore via the website from Fabry patients needing support. In this slide you can see is breakdown of Fabry adults, Fabry children and carers.

FSGA has a Medical Advisory Board (MAB) which has representation from all the Fabry Clinics across 5 States in Australia. There are Fabry Doctors who treat adults as well as Fabry pediatricians.

FSGA Highlights 2010

There are many highlights but some I will draw your attention to include:

- New FSGA Website is an important tool
- Where most of our new Fabry patient members find us
- They are looking for FSGA specific information
- Disease specific information, symptoms, testing, diagnosis
- Fabry Clinics
- FSGA events
- Fabry treatment information
- Fabrazyme shortage
- FSGA E NEWS
- Secure section (password access only for members only) – Personal Fabry stories/testimonials

Further Highlights 2010

- Membership growth. FSGA has around 200 members now
- Grown 75% in the past 2 years
- Regional Representatives are in place for assistance with Fabry patients in local regions for VIC, NSW and QLD
- There is a need to fulfil this job in WA, SA, NZ
- Regional Representatives are responsible for being grass roots support to Fabry patients
- Regional Representatives set up opportunities to socialise, fundraise and support FSGA with local members. This is something we want to encourage further in 2012 and beyond.

FSGA Highlights 2011

- Fabry Family Picnics
- Global Fabry Family / FIN (Fabry International Network)
- Global Patient Leaders' Summit – Boston (May)
- World Rare Disease Day Feb 28 2011
- International Rare Disease Symposium – Fremantle Perth (April) / FSGA Presentation on Patient Empowerment 'It all Started with Dad!'
- Dr Carla Hollak (The Netherlands) Presentation (July)



FSGA Challenges

- Volunteers - thankful for their time and energy
- Revising ways to further engage with members
- Looking at what talents of members explore to provide further assistance
- FSGA is growing rapidly
- Meeting demands of newly diagnosed is time consuming
- Grass roots support – 2012 extending Fabry Coffee mornings, B BQs, Picnic idea
- Regional Representatives; WA, SA & NZ
- FSGA is now on face book – great support!
- Patient advocacy – ensuring Fabry patients needs are met and able to access treatment
- Children and treatment access is also a new problem and unlike other countries whereby children who have Fabry receive ERT – this isn't the case in Australia. The biggest question for many is: When is the right time to commence treatment?
- Ongoing ERT Fabrazyme® shortages – has put a lot of pressure on ALL Fabry stakeholders (Doctors and patients especially not to mention of the different regularatories who handle ERT drugs in Australia).
- FSGA have been working very hard trying to ensure that the Australian Fabry patient community are kept well informed. The importance of transparency of such information in relation to all issues surrounding the ongoing ERT Fabrazyme shortage is crucial.

Summary

- Hanging in there
- Work together
- Collaborative effort
- All puzzle pieces important!
- Together we can make a difference



FSGA launched several projects including:

FSGA Emergency Card / what is a FSGA Emergency Card?

How many times have you been told by a Doctor 'I've never heard of Fabry disease. What is it?' What about in an emergency situation in a hospital? This card (launched last month at the FSGA Meeting) has details of the disease with clinical symptoms listed, organ involvement etc as well as the international Medical Emergency Symbol and OMIM code for Fabry disease.

What is an OMIM?

An OMIM is a comprehensive, authoritative compendium of human genes and genetic phenotypes that is freely available and updated daily. The full-text, referenced overviews in OMIM contain information on all known Mendelian disorders and over 12,000 genes. Check out the [OMIM for Fabry disease](#).

All patients will be issued with FSGA Emergency cards by mail with plenty of stickers for FREE! Put them in your wallet or purse. Don't forget to ask your partner/carer to put one in theirs too! The reverse of the card talks about FSGA and there is space for a sticker to be placed so you can write personal medical details; current medications taken, allergies, names of treating Doctors etc. We hope this Fabry Emergency Card makes a huge difference to Fabry patients. It is both practical support and helps raise further awareness of Fabry disease.



FSGA T Shirts and FSGA Merchandise

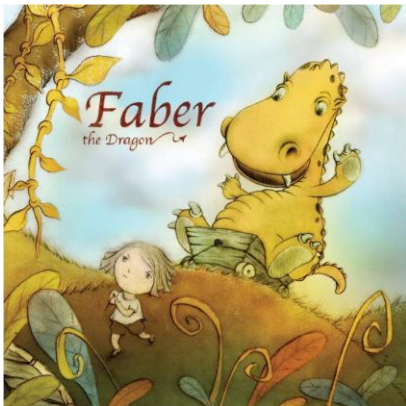


Raising awareness 'FUN'-draising!

FSGA has a 'shop'! Merchandise in the form of running T Shirts, caps, tote bags and wrist bands have been made with FSGA logo and website information. The running shirts have the slogan; 'Work up a sweat for those who can't' All merchandise is available to purchase from FSGA to help raise awareness of Fabry disease, FSGA and its services as well as some funds towards future Fabry research. All participants in events raising awareness and funds for FSGA will be asked to support via 'Everyday

Hero.' FSGA would like to assist you with promotional material. Please contact us for more details.

Faber the Dragon Children's Book



FSGA is very proud to announce the arrival of '**Faber the Dragon**' children's book launched at FSGA National Fabry Meeting last month. The inspiration behind 'Faber the Dragon' was a short story by FSGA Committee member; Julie Fitzgerald. The book was developed in conjunction with Shire Australia, Grey Healthcare Group, Julie Fitzgerald and the FSGA. FSGA has all copy right and distribution for the book and all proceeds go to the Fabry

Research Fund. What a fabulous way for children with Fabry disease to tell their story to loved ones and friends and raise awareness of Fabry. All pre-orders have now been sent. Order a book or 2 today.



One FSGA Honorary Life Member honours another!



Merle is a FSGA Honorary Life Member who over the years as done so much work in her fundraising efforts to raise awareness and funds for Fabry Research. Merle had the honour of presenting Lari who was awarded into the 'Hall of Fabry Fame' as FSGA Honorary Life Member. Lari has been a member of FSGA for 17 years and FSGA Treasurer 1994-1998. Thank you Lari for being such an inspiration to so many, no matter what Fabry 'throws at you' you keep moving forward and always thinking of your fellow Fabry friends.



embroidered on front and back
web address on the back
www.fabry.com.au

Carers Victoria Report written by FSGA Secretary Marie



Annalisa Cannizzaro of Carers Victoria gave a presentation on the Services for Fabry Patients & carers. Although she represented Carers Victoria, all States across Australia offer these / or similar services to Fabry patients' carers. This week is 'Carer's Week!' Acknowledging and celebrating carers and what they do. Carers Victoria is a not for profit organisation with over 5000 members in Victoria. They know what carers need and how to support them as outlined in their Vision and Mission. Some amazing facts and statistics included: there are 2.6-3 million Australians known carers more than 700, 000 in Victoria which translates to one in every 5 households being a carer. Young carers represent 6% of the youth population which is 2-3 young carers in every classroom. Average age 12 to 13 and as young as 5 years old. Carers have the lowest wellbeing of any large group measured by the Australian Unity Wellbeing Index (Deakin uni 2007). Family carers save the government approximately \$40.0 billion dollars a year.

Carers improve health resilience, well being, research, policy and systemic change, information advice, emotional support counselling and education.

What is available to Fabry Carers?

1. The Advisory Line is **1800 242 636**
2. Emotional Support and Counselling Program which is 6 free counselling sessions either face to face or by telephone
3. Library
4. Voting rights as a member of Carers Vic
5. Carers Magazine
6. Commonwealth respites and care link centres (CRCCs)
7. There are 9 CRCCs. One in each dept of health **1800 200 422**

Financial help through Centrelink

- Carer allowance -approximately \$55 a week
- Carer payment - means tested
- Carer card

You need to look after yourself as a carer. In the case of Fabry patients quite often a person who has Fabry disease is caring for a parent with Fabry disease, caring for a child with Fabry disease and caring for themselves with Fabry disease as well as having other children and a partner who is trying to care for them! One very important analogy was the airline/oxygen mask analogy.

'Put your mask on first before attending to others.'

You need to look after yourself first so you can keep caring for others!

Lunch - Sponsored by Amicus Therapeutics

Innovative Therapies for Fabry Disease

Dr Drago Bratkovic Clinical Biochemical Geneticist (HGSA); Head Metabolic Unit, SA Pathology (at Women's and Children's Hospital) Australia



Drago explained in simple terminology giving background to the basic anatomy of a cell;

- The cell is the functional unit of all living organisms
 - The human body is estimated to contain at least 100 trillion cells
 - Each type of cell has a specialised function
 - Cells differ in size, shape and function but they are typically made up of the same components and organised similarly.
 - The nucleus of the cell contains the cell's genetic material.
 - One vital function of cells is to make proteins.
 - Proteins are essential components of the human body.
 - Proteins perform specific biological functions within a cell and each type of protein has a unique function.
 - Enzymes are proteins that have a special job in the cell.
- Enzymes help biochemical reactions to occur within the body.
 - When enzymes are missing, the biochemical reactions that they help may not be able to be completed.
 - Enzymes that carry out biochemical reactions in the lysosome are called Lysosomal enzymes.
 - Lysosomal enzymes help the cell break down substrates in the lysosome.
 - If Lysosomal enzymes are missing from lysosomes, substrate will accumulate since there is no enzyme to break it down.

How are Lysosomal enzymes made?

- We all possess inherited information called DNA
- This genetic material contains the instructions for making all of the necessary components in the body, including Lysosomal enzymes.
- All proteins and Lysosomal enzymes are made up of biological chemicals called amino acids
- Amino acids are assembled into a long chain (string of beans)
- As the chain of amino acids assembles it folds around itself into a unique 3 dimensional shape.
- This process is enzyme folding
- In order for it to exit and move to other parts of the cell, the enzyme must be correctly folded and stable.
- Misfolded enzymes may be unstable and cannot travel to the lysosome
- As a result substrate may accumulate within the lysosome and cause a Lysosomal storage disorder.
- In the case of Fabry disease there is a build up of a protein A (GL3)
- Therefore it doesn't convert from A to B and substrate build up occurs
- The lysosome is unable to do its job properly

What is a mutation?

- Change in the genetic code
- Codes is read in groups of 3
- We all carry mistakes in our genes
- Some cause problems whereas some don't
- Estimated that we each carry 10 -15 mistakes in our genes

For example; the word 'RED'

- The car was RED (This makes sense!)
- The car was RDD (this does not make any sense!)
- One small change can alter the code and suddenly 'RED' does not make any sense

Missense mutations / How disruptive a mutation depends on:

- How far it is from the active letter
- Is it in a part that is important to shape of the enzyme?
- . A missense mutation is a "readable" genetic message although its "sense" (its meaning) is changed.
- A **nonsense** mutation has no meaning except to halt the reading of the genetic message.

What happens to the mutated enzyme?

- Enzyme created from a gene with a mutation that does not fold properly
- The misfolded enzyme is destroyed in the ER
- However some mutated enzymes still work although not as well
- Mutated enzyme is more likely to work if the mutation is not near the letter

How is Fabry disease treated?

Currently Fabry patients need to get a treatment or Enzyme Replacement Therapy (ERT) which is not a cure but is aimed to reduce the amount of substrate accumulation in the lysosome. ERT is used for several Lysosomal storage disorders.

ERT – Positive

- Stabilises renal disease
- QOL Quality of Life is improved

ERT – Negative

- Fortnightly infusion
- Expensive
- Infusion reaction
- Inability to cross the 'Brain barrier' so it has little effect on stroke

Supportive therapies

- Pain relief medications
- Cardiac symptoms - Implantable defibrillators and Anti arrhythmia
- Aspirin – minimise stroke
- Renal - Ace inhibitors
- Lifestyle changes
- Renal transplantation
- ERT

Pharmacological Chaperone Therapy

This is an investigational approach using oral medications that bind to misfolded enzyme.

Fabry patients can make Lysosomal enzymes, however, they make misfolded enzyme.

The binding of the pharmacological chaperone to the misfolded enzyme is thought to stabilise an individual's naturally occurring misfolded enzyme and 'chaperone' the enzyme to the lysosome where it can break down substrate.

MIGALASTAT AT1001 PHASE 3 STUDIES

- ONLY for patients with responsive mutations
- Still awaiting results of phase 3 trials before it can be registered for use

Summary

- No single cure for Fabry
- Each therapy has positives and negatives
- Combination therapy short term future
- Hopefully some therapies cheaper than ERT

The Victorian Fabry Clinic *Dr Kathy Nicholls Nephrologist Royal Melbourne Hospital*



Dr Kathy Nicholls gave an overview; what have we learnt in the last 17 years since the first meeting? What do we already know?

What else do we need to know?

- Early diagnosis
- ERT impact
- How to monitor
- Individual progress
- How to stop and treat it

What is the importance of Clinical Trials?

- The more varied the disease – the more people needed participating in a clinical trial
- There are many benefits including;
- You have an active role
- Access to expert Fabry medical care
- Access to new treatments before they become available
- Improved patient and family care

Risks

- Investigative
- Time commitment
- Possible side effects
- May not succeed
- Pregnancy delay
- For the drug company it is a 'big gamble'
- The smaller the market the bigger the costs

Clinical Trials

- There are many Fabry disease trials happening in Australia and across the globe.
- For more information on clinical trials for Fabry disease go to: www.ClinicalTrials.gov

Registries

There are 2 registries for Fabry disease; Fabry Registry (Genzyme) and Fabry Outcome Survey (FOS) (Shire).

ERT

- Clearance of GL3 from the kidneys
- Measure of all other trials has to meet the Gold standard of GL3 clearance from the kidney

Chaperone Therapy for Fabry Disease

- Phase 3 AT
- 60 patients
- Endpoint – reduced GL3 in urine and in kidney biopsy
- 37 sites globally - enrolments complete Oct 2011
- Results end of 2012

The FACETS study

- Progressive results –Skin and heart more responsive than the kidney

Combination Therapy

- Moving from single to combination therapy
- Some can just be treated with chaperone if responsive mutations

- Other non responsive mutations may be benefit from combination therapy
- Photos taken during the FSGA National Meeting**





