

Alström Syndrome UK Conference Report 2017



Health, Happiness and Wellbeing Conference
Strength for today, hope for the future

Day 1 Scientific Symposium 6th October 2017

Ann Chivers (*ASUK Chief Executive*) opened the Scientific Symposium with a warm welcome to everyone who had travelled far and wide to attend.

The conference brought together families and professionals to learn about AS and reflect on what we've learnt so far and explore future developments.



Dr Richard Paisey (*ASUK Trustee*) has been instrumental in leading the ASUK 'Let's Get Moving' project.

Richard previously led the AS Adult clinic at Torbay Hospital before the service moved to Birmingham in 2012. Since then he has been involved in leading research projects to discover more about this ultra rare condition.

Richard chaired the Symposium facilitating the smooth flow of presentations and lively discussions throughout the day.



Professor Tim Barrett (*Professor of Paediatric Endocrinology*) gave an insight into what we have learnt so far since the ALMS1 gene was first discovered and exploring future initiatives which could pave the way for new treatments. Tim presented 4 key pathways to treatment; improving patient care, slowing down the progression, protecting remaining tissues and replacing damaged tissues. Tim explored practical ways to measure outcomes and looked at ways of generating standardised bio-sample resources and identifying biomarkers to enable further clinical trials to take place.



Dr. Tarek Hiwot (*Consultant in Inherited Metabolic Disorders*) gave an insight into AS, as a metabolic syndrome and the affects this can have on the body. Tarek gave an overview of the current clinical trial and previous adipose tissue study and its affects on insulin sensitivity. Preliminary results show extreme insulin resistance disproportionate to patients BMI. Adipose dysfunction in AS can lead to fat overspill to the liver and skeletal muscle.



Dr. Rick Steeds (*Cardiac Consultant*) presented cardiac research and developments in AS. Rick acknowledged more research and evidence is needed into the current therapeutic options. Explaining one of the greatest challenges is around infantile cardiomyopathy. This led to an interesting debate around fibrosis and its contribution towards cardio-vascular disease linked to mortality rates. The evidence around this remains unclear and further research is still needed into this vitally important area.

Lindsey Foulkes, PhD (*Director, Marketing - Therapeutics*) from ProMetics gave an overview of the current clinical trial into AS in the UK. Lindsey's update talked about fibrosis and the interim results from the PBI-4050 study. The drug is designed to interrupt multiple pathways in fibrosis and inflammation. 12 patients have completed 24 weeks of the clinical trial, good safety and tolerability of the drug has been noted and the interim results show trends towards clinical benefit; including reduced liver fibrosis, normalisation of liver enzymes (*in those subjects whose levels were elevated at the start of the study*) and reduction in biomarkers of kidney injury. This study has been extended to 96 weeks to enable further data analysis, observing the long-term effects on the heart and liver fibrosis. Currently orphan drug designation has been granted in the US and EU.



The Q&A panel discussion with Dr Hiwot, Dr Baig and Lindsey Foulkes was a lively debate about future clinical trials, what happens when the trial ends and how drugs showing clinical benefits can become licensed for all those affected.



Professor Colin Johnson (*Professor of Medical and Molecular Genetics*) presented about the role of cilia and insights into why cilia are important. He talked about gene editing, genomic DNA and modelling specific mutations and ways of repairing/correcting these in the future. Colin explained that by developing our understanding of cilia, further insights including research tools and pre-clinical models for those affected may be developed.

Rebecca Perrin (*PhD student*) continued the presentations around cilia and new tools and techniques which are leading to high resolution data. Rebecca explained that previously the lack of techniques to provide high resolution with specific protein localisation data has limited the research into cilia. However, 3D imaging, dSTORM and CRISPR-cas9 is enabling a better understanding of the structure and function of cilia, which will hopefully lead to better understanding of what actually goes wrong at a molecular level for those affected by AS.



Pietro Maffei, MD PhD (*Consultant Endocrinologist*) focused on three specific symptoms of AS; metabolism, atherosclerosis and the affect on the brain. Pietro highlighted the progressive nature of the disease looking at fibrosis which affects the bodies organs. He talked about ways that dual sensory loss may affect the brain and explored studies relating to 'Theory of Mind' and investigations into the cognitive function of those patients affected by AS.

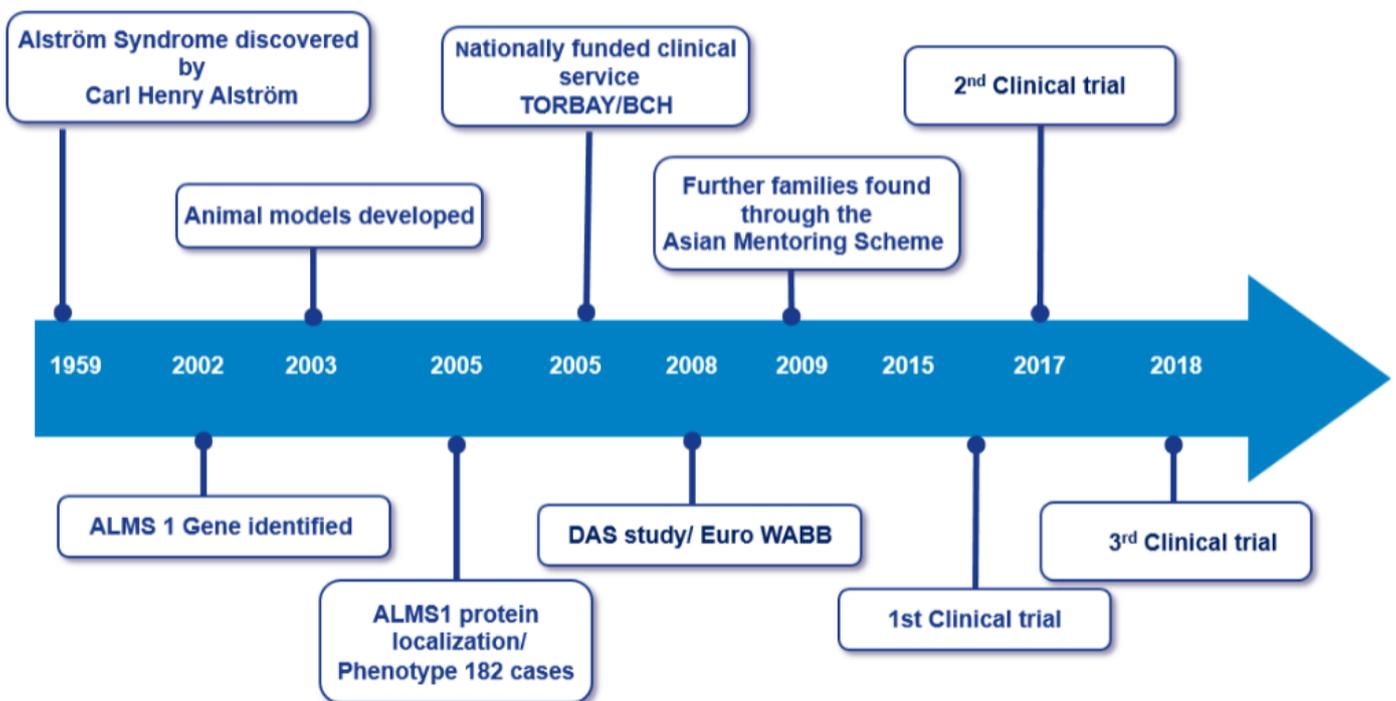
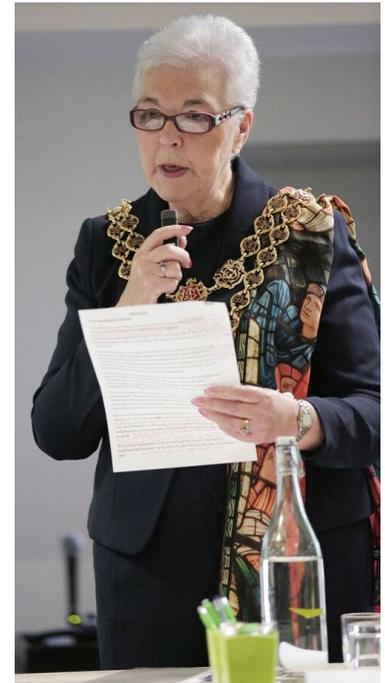
Pietro presented about the positive steps towards further research and improved knowledge since the ALMS1 gene was discovered and the mouse model relating to affects on obesity and insulin were first developed. These studies and further research may affect both treatment and future management of the condition.

Day 2



After waving the children off for a fun-filled day at Drayton Manor theme park, the delegates were honoured that the **Lord Mayor of Birmingham, Councillor Anne Underwood** warmly welcomed everyone to the conference.

Dr Tarek Hiwot discussed the continuing development of research initiatives into AS since the discovery of the ALMS1 gene in 1959 (see *timeline below*), through to the first AS clinical trial in the UK which has since initiated further studies. Tarek gave an overview of the drug development process and difficulties which rare conditions often face due to small numbers of patients. He explained in recent years there has been some flexibility around drug development and future aims are to accelerate approval. He spoke about the pressures that clinical trials can have on patients and families. However, trials can bring hope for the future with vital drug development. He acknowledged that by working together further treatments may be found. Tarek discussed recent clinical developments including evaluating the PBI-4050 clinical trial interim results. As well as future clinical trial drugs which are being developed to reduce weight gain and suppress hunger.



Alex Griffiths Rayson (ASUK Trustee) gave an inspirational presentation as she shared her experience of taking part in the PBI-4050 clinical trial. Alex interviewed **Dr Shanat Baig** (Clinical Research Fellow) giving delegates an insight into what it has been like taking part in a clinical trial. This was a good opportunity for delegates to ask questions.

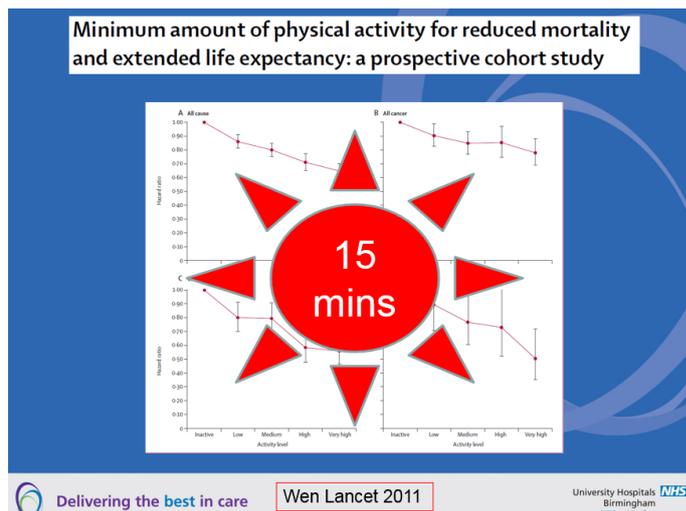


Health, Happiness and Wellbeing What can we really do to make a difference?

Dr Rick Steeds gave an interesting presentation 'Getting to the Heart of the Matter'. Focusing on exercise which could lead to a healthier heart.

Rick kept everyone engaged citing statistics and latest research such as:

'as little as 15 minutes exercise per day may reduce your risk of death by 14% and may add 3 years to your life!'



ASUK Trustee **Kez Hayat** and his son **Hassan** (pictured right) gave an energetic presentation. Hassan showed us all how it should be done, by getting all delegates up onto their feet for a 2 minute stretching exercise. Hassan then explained the changes he has made to his lifestyle by incorporating more exercise and the positive difference this has made to his overall health and wellbeing.

'Alex and Hassan's presentations were amazing'

Richard Paisey, Pietro Maffei, Andy Paisey and John Pemberton (Paediatric Diabetes Dietitian, pictured left) gave insights into the importance of exercise, emphasising that lifestyle changes may reduce weight and evidence has shown it may reverse diabetes in some patients.



At the ASUK **Annual General Meeting**, the Chair **Michelle Hough** gave an update about the achievements during the last 12 months. She talked about the recruitment of more family support workers and the development of the new charity logo; giving a strong positive message **'strength for today, hope for the future'**.

Michelle acknowledged the immense work and contribution of **Jan Marshall** who brought hope to families from around the world who are affected by AS. Jan sadly passed away in September 2016.

Michelle thanked families, professionals and the ASUK team for their work over the past year.

Workshops

Workshops covered a wide range of topics for families to choose from. The sessions were all very busy with lively discussions and interactive demonstrations taking place.

'Technology session was very useful, very friendly and gave useful tips I can easily use'

- **Assistive technology for visual impairment**, where Mrs Archana Kulkarni (*Consultant Paediatric Ophthalmologist*) from BCH and Mr Prasanna Pimpalnerk (*Independent IT Consultant*) from Sight and Beyond explored applications and resources that can be used on phones, tablets, I-pads and on the internet.



- **Puberty, growing up and healthy relationships**, Gill Leno (*Sex and Relationships Education Specialist*) from SENSRE led a female only and a male only workshop. Focusing on exploring topics about growing up, sex and relationships and puberty in an open and relaxed atmosphere.
- **Technology that can make a difference**, Sunny Baines (*Technology Advisor*) from RNIB showcased technology that can be practical and useful.
- **Know your rights when navigating the education system**, Eleanor Wright (*Solicitor and Consultant*) from SOS! SEN gave an overview of EHC plans, assessments, duties of schools and appeals procedures.
- **Research your way, your questions answered**, Kerry Leeson-Beevers (*ASUK, National Development Manager*) facilitated this interactive session where families could have their research questions answered and begin to explore research priorities.
- **Managing challenging behaviour**, Dr Jane Waite (*Research Fellow and Clinical Psychologist*) from Aston University explored practical tips and strategies to help families manage behaviours that may be challenging.

During the conference families were given the opportunity to visit the **'Kerbside Clinic'**, where families involved in the 'Let's Get Moving' project discussed their current exercise regimes, weight management and how they were using their FitBits. Richard Paisey, John Pemberton and Andy Paisey gave updates about how a healthy lifestyle can make a positive difference to AS.

‘Have your say’

Delegates came together to talk about their priorities and explored what is important to them. These round table discussions explored the top ten priorities for people and delegates ranked these in order:

1. Diagnosis—Improving earlier diagnosis
2. Improved awareness and information for clinical professionals
3. Clinical Research
4. Develop information about people with AS (international patient registry)
5. Fit and Active programme—healthy lifestyles
- 6 = Involvement at government level to ensure rare diseases are on the agenda
- 6 = Activities for children, adults and the whole family
- 6 = One to one family support
7. Increase awareness in schools/colleges/ universities
8. Workshops/seminars for families

Delegates also talked about these important topics:

- Priorities can change at different stages of your life
- More social time to meet families
- Local Politicians to aid awareness
- Ways to communicate with local consultants
- Enabling families to share their experiences
- Networking to promote research internationally
- Exploring a foreign exchange holiday programme

ASUK will be writing to all members to gain their views. This will enable everyone to have their say on the charities future direction and families will be updated at the end of this year.



Evening of Fun!

ASUK Chair, Michelle thanked twins Katie and Hannah for helping to promote the charity, presenting them both with a special gift.

A delicious dinner was followed by lively music and dancing long into the evening. Congratulations to Curtis who named the teddy, along with the raffle this raised **£287.06**

Thank you

A HUGE THANK YOU to families and professionals who travelled from around the UK and across Europe to attend the conference, sharing their own experiences and knowledge.

Thank you to our supporters and generous sponsors including **ProMetic Life Sciences Inc** and to the presenters and exhibitors for taking part and making this conference a truly memorable event.



Biographies

Dr Richard Paisey (*ASUK Trustee and Honorary Consultant from Torbay Hospital*) Richard is a leading expert in Alström Syndrome, his experience and knowledge of this ultra rare condition spans over 15 years; including provision of the clinical service prior to the move to Birmingham Hospital and leading research studies with particular focus on diabetes and endocrinology and how lifestyle changes can impact the condition.

Professor Tim Barrett (*Professor of Paediatric Endocrinology and AS Paediatric Clinical Lead at Birmingham Children's Hospital*) Tim has published over 100 research papers in scientific journals as well as reviews and book chapters in the fields of paediatrics, diabetes and genetics of childhood diabetes syndromes. Tim is the clinical lead for the AS children's multi-disciplinary clinics.

Dr. Tarek Hiwot (*Consultant in Inherited Metabolic Disorders and AS Clinical Lead at University Hospital, Birmingham*) Tarek's main focus centres around the deep phenotyping of rare inherited metabolic disorders. Tarek is the clinical lead for the AS adult multi-disciplinary clinics.

Dr. Rick Steeds (*Cardiac Consultant and AS Cardiologist at University Hospitals, Birmingham*) Rick specialises in cardiovascular imaging and in the management of cardiovascular complications of rare diseases, including AS. Rick has published more than 200 peer-reviewed research studies.

Professor Colin Johnson (*Professor of Medical and Molecular Genetics, University of Leeds*) Colin has a long track record in human recessive disease gene identification and this has led to current research interests in ciliopathy gene discovery ciliary signalling and understanding ciliary ultrastructure and organisation. Colin has published 132 peer-reviewed publications.

Rebecca Perrin (*PhD Student from University of Leeds*) Rebecca completed BSc in Human Biology, and an MSc in Molecular and Cell Biology in Sheffield before moving to the University of Leeds to complete a PhD under Professor Colin Johnson. Rebecca is interested in using super-resolution microscopy and CRIPSR mutants to look at structure-function relationships in the primary cilia.

Pietro Maffei, MD PhD (*Consultant Endocrinologist from Padua University, Italy*) Pietro's major research interest is clinical endocrinology and metabolism with particular dedication to pituitary disorders and acromegaly. Pietro is involved in AS clinics and research; since 2002 he has been a full member of ASI Medical and Scientific Advisory Board and ASI Board of Directors.

Dr Shanat Baig (*PhD student, Clinical Research Fellow from University of Birmingham*) Shanat has achieved his MRCP in 2012 and currently is a specialist registrar in west midlands cardiology training programme. His area of research involves metabolic problems in AS and the effects of a newer anti-fibrotic agent.

John Pemberton (*Paediatric Diabetes Dietitian from Birmingham Children's Hospital*) John works as the Paediatric Dietitian for the AS clinic, advising families on nutrition, exercise and most elements of lifestyle that impacts on overall health.