THE 10th EUROPEAN CONFERENCE ON **RARE DISEASES & ORPHAN PRODUCTS** 



**ONLINE** on 14-15 May **2020** 

THE **JOURNEY** OF LIVING WITH a RARE DISEASE in









# ONLINE PROGRAMME

#### **Organised by**



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**#ECRD2020** 

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All times listed are Central European Summer Time (CEST)

# MOTTO OF THE EUROPEAN CONFERENCE ON RARE DISEASES & ORPHAN PRODUCTS (ECRD)

- ▶ The European Conference on Rare Diseases & Orphan Products is the unique forum across all rare diseases, across all European countries, bringing together all stakeholders patients' representatives, academics, health care professionals, researchers, healthcare industry, payers, regulators and policy makers.
- It is a biennial event, providing the state-of-the-art of the rare disease environment, monitoring and benchmarking initiatives. It covers research, development of new treatments, health care, social care, information, public health and support at European, national and regional levels.
- It is synergistic with national and regional conferences, enhancing efforts of all stakeholders. There is no competition with them, but efforts are complementary, fully respecting initiatives of all.



#### MESSAGE FROM THE CO-CHAIRS



**Prof. Milan Macek**Professor of Medical and Molecular
Genetics, Motol University Hospital
and Charles University Prague,
Czech Republic



**Maria Montefusco** President, Rare Diseases Sweden



Violeta Stoyanova-Beninska Chair, Committee of Orphan Medical Products, European Medicines Agency

Dear Participants,

We are delighted to welcome you on behalf of conference organisers EURORDIS-Rare Diseases Europe, co-organisers Orphanet, Rare2030 project partners, and all other conference partners to the 10th European Conference on Rare Diseases & Orphan Products 2020. Globally recognised as the largest, patient-led rare disease event, this is the first time the conference is **being held exclusively online!** 

In these unprecedented times, we need to **come together to shape a better future for people living with a rare disease**. Rare diseases should not be forgotten in the current pandemic, since they also represent a vulnerable group of citizens. The COVID-19 pandemic has exposed the cracks in healthcare systems worldwide and has demonstrated that a single country cannot manage such complex issues alone. The pandemic has further substantiated the importance of the EU wide cross-border collaboration on healthcare. This is the time to deepen our commitment, strengthen our ties and to learn from each other in the face of adversity.

As the EU shapes its future policy and spending frameworks for the coming decade, ECRD 2020 serves as an opportunity to already **codesign policy options today** that can lead to better conditions for people living with rare diseases for the years ahead. This is why we felt it vital to maintain the event online and **do our best, together with you, to turn this crisis into an opportunity to drive change.** 

We are therefore delighted that you are joining ECRD 2020 online to take part in discussions on how to build the future ecosystem of policies and services needed to drive this change. We very much value your contribution, your expertise and your opinions. You have a unique opportunity to "Be the future you want"!

The health of 30 million people living with a rare disease in Europe should not be left to chance. The ECRD 2020 theme "The journey of living with a rare disease in 2030" recognises that the next decade holds great potential for improvement and that while we cannot predict the future, we all have a key role in preparing for it. Now isn't the time to sit on the side-lines. Get involved and help ensure that people living with a rare disease have the right to reach their highest potential of well-being.

We hope you enjoy ECRD 2020 as **an unrivalled opportunity to network** and exchange invaluable knowledge with **all stakeholders in the rare disease community** from over 40 countries around the world - patient representatives, policy makers, researchers, clinicians, industry representatives, payers and regulators.

We invite you to take a glance at the full programme, view the high quality posters on display, take a virtual walk around the exhibit hall and compete with fellow participants to win a prize on our interactivity leader board!

We sincerely hope you enjoy ECRD 2020 online,

**ECRD 2020 Programme Committee Co-Chairs** 

## **PROGRAMME AT A GLANCE**

All times listed are Central European Summer Time (CEST)

Thursday '	14 May 2020						
10:30 - 11:30	Virtual Platform Navigation & Online Networking						
11:30 - 13:00	Opening & Plenary Session						
13:00 - 14:00	Lunch & Browsing Posters, Exhibit Hall and Networking						
13:00 - 14:00	COVID-19: a time for exchange						
14:00-14:45	Plenary Session: Rare2030 Foresight scenarios						
Themes	1/ The future of diagnosis: new hopes, promises and challenges	2/ Our values, our rights, our future: shifting paradigms towards inclusion	3/ Share, Care, Cure: Transforming care for rare diseases by 2030	4/ When therapies meet the needs: enabling a patient-centric approach to therapeutic development	5/ Achieving the triple As by 2030: Accessible, Available and Affordable Treatments for people living with a rare disease	6/ The digital health revolution: hype vs. reality	
14:45-16:15	Session 0101	Session 0201	Session 0301	Session 0401	Session 0501	Session 0601	
16:15 - 16:45	Comfort Break & Browsing Posters, Exhibit Hall and Networking						
16:45-18:15	Session 0102	Session 0202	Session 0302	Session 0402	Session 0502	Session 0602	
18:15 - 19:30	Global Commission to End the Diagnostic Odyssey for Children with a Rare Disease: Progress Update						
18.30 - 19.30	Meet the Speakers, Speed Networking, Browsing Posters & Exhibit Hall						
Friday 15 M	May 2020						
10:00-11:00	Plenary Session & Poster Winners Presentations						
11:00-11:30	Comfort Break & Browsing Posters, Exhibit Hall and Networking						
Themes	1/ The future of diagnosis: new hopes, promises and challenges	2/ Our values, our rights, our future: shifting paradigms towards inclusion	3/ Share, Care, Cure: Transforming care for rare diseases by 2030	4/ When therapies meet the needs: enabling a patient-centric approach to therapeutic development	5/ Achieving the triple As by 2030: Accessible, Available and Affordable Treatments for people living with a rare disease	6/ The digital health revolution: hype vs. reality	
11:30 - 13:00	Session 0103	Session 0203	Session 0303	Session 0403	Session 0503	Session 0603	
13:00 - 14:00	Lunch Break & Browsing Posters, Exhibit Hall and Networking						
13:00 - 14:00	COVID-19: a time for exchange						
14:00-15:30	Session 0104	Session 0204	Session 0304	Session 0404	Session 0504	Session 0604	
15:30 - 16:00	Comfort Break & Browsing Posters, Exhibit Hall and Networking						
16:00 - 18:00	Closing Plenary Session						

## **COMMITTEES**

### PROGRAMME COMMITTEE .....



Diego Ardigo Chiesi Farmaceutici



Jessica Imbert MedTech Europe



Anne Pariser National Institutes of Health



**Dimitrios Athanasiou** World Duchenne Organisation



Julian Isla Dravet Syndrome European Federation



**Christine Patch** Genomics England



Matt Bolz-Johnson EURORDIS



Justina Januševičienė Lithuanian University of Health Sciences



**Alberto Pereira** ENDO ERN



Valentina Bottarelli **EURORDIS** 



Daria Julkowska European Joint Programme on Rare Diseases



**Vinciane Pirard Orchard Therapeutics** 



Virginie Bros-Facer **EURORDIS** 



Anna Kole **EURORDIS** 



Ana Rath Orphanet



Sofia Douzgou **ESHG** 



Kristina Larsson European Medicines Agency



**Andrea Ricci** ISINNOVA



Holm Graeßner Solve-RD and ERN-RND



Yann Le Cam **EURORDIS** 



Jayne Spink CEO, Genetic Alliance UK



**Robert Hejdenberg** Agrenska



**Brian O'Connor** ECH Alliance



**Birute Tumiene** Institute of Biomedical Sciences, Vilnius University



**Virginie Hivert EURORDIS** 



Ana Palma EUCOPE, Sobi Swedish Orphan Biovitrum

## **COMMITTEES**

#### THEME SUPPORTERS



**Clara Hervas** EURORDIS



**Ines Hernando** EURORDIS



**Marta Campabadal** EURORDIS



**Denis Costello** CML Advocates Network



Maria Cavaller EURORDIS



Simone Boselli EURORDIS

# EURORDIS

#### OUTREACH **COMMITTEE**

**Gulcin Gumus** 



**Carita Åkerblom**Finnish Network for Rare
Diseases



**Jurrat Hasan** Genetic Alliance UK



**Jean Philippe Placon**Alliance Maladies Rares,
France



**Simona Bellagambi** Rare Diseases Italy (UNIAMO)



**Lene Jensen** Rare Diseases Denmark (Sjaeldne Diagnoser)



**Ingeborg Vea**Norwegian Rare Disease
National Alliances (FFO)



**Danas Ceilitka**Association for Children
Rare Diseases



**Mirjam Mann** ACHSE, Germany



**Miroslaw Zielinski** ORPHAN



**Carolina Cobos** FEDER, Spain



Martina Michalova Rare diseases Czech Republic



**Baiba Ziemele**Latvian Alliance for Rare
Diseases
VSOP



**Helga Gruden** EINSTÖK BÖRN



**Cor Oosterwijk** VSOP, Netherlands

## A VIRTUAL CONFERENCE

EURORDIS has selected Intrado as the online, virtual conference platform through which the ECRD 2020 will take place. Intrado has successfully executed over 40,000 virtual events and webcasts annually in over 157 countries, helping organisations achieve success by streamlining the way they communicate through virtual events.

#### FEATURES OF THE VIRTUAL CONFERENCE

- Delegates can view in real time and switch between parallel sessions and access recordings of all sessions for up to one year after the conference within the platform.
- The online platform is being built to guarantee online networking opportunities with speakers and fellow conference delegates.
- Posters and a virtual exhibit hall are integrated.
- Compete with fellow participants to win a prize on our interactivity leader board, making connecting from your home or office more fun!



# VIRTUAL TOUR OF THE PLATFORM

Join us for a pre-conference Facebook live virtual tour of the online platform on 13 May from 14.30 – 15.30 CEST!

Pharmaceutical Medicine (SGPM) has approved this

https://www.facebook.com/events/677443599706976/

#### www.rare-diseases.eu/virtualtour

conference.

The online platform for the conference will be live from 11.30am CEST on Wednesday, 13 May to give you a chance to familiarise yourself with it, to ensure you get the best experience out of ECRD 2020 sessions and networking!

# INTERPRETATION AND SUBTITLES

Interpretation of the following sessions will be available via the Interprefy app from English into French & German:

Day 1: 14 May

Opening Plenary session: 11.30 - 13.00 CEST

**SWAPP** 

Rare2030 Plenary session: 14.00 - 14.45 CEST

Day 2: 15 May

Closing Plenary session: 16.00 - 18.00 CEST

#### **Connection instructions**

An automated subtitling/captioning function will be available within the platform for all sessions

## IN PARTNERSHIP WITH

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## **ASSOCIATE PARTNERS**

#### European Reference Networks .....



Bone Disorders (ERN BOND)





Network
 Endocrine Conditions
 (Sada ERN)







for rare or low prevalence complex diseases

Network Inherited and Congenital Anomalies (ERNICA)







Hematological Diseases (ERN EuroBloodNet)



eUROGEN
Urogenital Diseases





Genetic Tumour Risk Syndromes (ERN GENTURIS)



for rare or low prevalence complex diseases

Network
 Heart Diseases
 (ERN GUARD-HEART)











Network
 Hepatological Diseases
 (ERN RARE-LIVER)



Connective Tissue and Musculoskeletal Diseases (ERN ReCONNET)



#### European Reference Network

for rare or low prevalence complex diseases

Network
 Neurological Diseases
 (ERN-RND)









Network
 Transplantation
 in Children
 (ERN TRANSPLANT-CHILD)



European Reference Network

for rare or low prevalence complex diseases

 Network Vascular Diseases (VASCERN)

## **ASSOCIATE PARTNERS**



















































## **ASSOCIATE PARTNERS**







#### **Leading Health Care**

















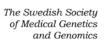






















## **NETWORKING EVENTS**

#### #ECRD2020

The online conference platform has been designed to guarantee a truly immersive and virtual experience for all participants. You will be able to network with exhibitors directly on the virtual booths and with fellow delegates using the intra-environment emails or instant chats along with open discussions in the lounge area with a special COVID-19 group chat included.

Free time to visit the exhibition and posters has been integrated into the programme along with the following facilitated networking opportunities with speakers and fellow conference delegates:





#### **DAY 1: 14 MAY**

#### 13.00 - 14.00 CEST

#### COVID-19 - a time for exchange:

Results of the EURORDIS COVID-19 survey to be presented followed by an open exchange in smaller groups about how the pandemic is impacting your **healthcare and treatment**. Go to the group discussions via the 'Sessions' section of the platform to join this group.

#### 18.30 - 19.30 CEST

#### Meet the Speakers:

Take this opportunity to ask additional questions to a selected number of speakers from Day 1 in 6 parallel discussion rooms split according to the six conference themes. Go to the group discussions via the 'Sessions' section of the platform to join these rooms.

#### 18.15 - 19.30 CEST

#### Speed networking:

Be matched at random with fellow delegates keen to re-create the corridor conversations that take place by chance at conferences. A series of small breakout groups will be created during this session to be sure you meet as many people as possible. Get your aperitif ready! Go to the group discussions via the 'Sessions' section of the platform to join these rooms.

#### **DAY 2: 15 MAY**

#### 13.00 - 14.00 CEST

#### COVID-19 - a time for exchange:

Results of the EURORDIS COVID-19 survey to be presented followed by an open exchange in smaller groups about how the pandemic is impacting **employment and access to social services**. Go to the group discussions via the 'Sessions' section of the platform to join this group.

#### 18.00 - 19.00 CEST

#### Meet the Speakers:

Take this opportunity to ask additional questions to a selected number of speakers from Day 2 in 6 parallel discussion rooms split according to the six conference themes. Go to the group discussions via the 'Sessions' section of the platform to join these rooms.

#### 18.00 - 19.00 CEST

#### Speed networking:

What better way to end the conference than taking part in a networking roulette where you will be matched at random with fellow delegates keen to re-create the corridor conversations that take place by chance at conferences. A series of small breakout groups will be created during this session to be sure you meet as many people as possible. Get your aperitif ready! Go to the group discussions via the 'Sessions' section of the platform to join these rooms

## **OPENING AND PLENARY SESSION AGENDA**

Thursday, 14 May 2020 - 11:30 - 13:00

The Opening and Plenary Sessions will be simultaneously interpreted from English into 2 languages:



German

**MODERATOR** 



**Lise Murphy,** Patient Advocate, Marfanföreningen (Swedish Marfan Association)

**GREETINGS** 



HRH Crown Princess Victoria of Sweden

Photo: Anna-Lena Ahlström, The Royal Court of Sweden

WELCOME ADDRESS &
OPENING REMARKS



**Terkel Andersen**, President, EURORDIS-Rare Diseases Europe



Ana Rath, Director, Orphanet



**Maria Montefusco,** President, Rare Diseases Sweden

**KEYNOTE ADDRESSES** 



**Lena Hallengren**, Swedish Minister of Health & Social Affairs, Sweden



**Stella Kyriakides,** European Commissioner for Health and Food Safety



**Helena Dalli,** European Commissioner for Equality, Malta



Irene Norstedt, Director in DG Research & Innovation of the European Commission (Statement by Mariya Gabriel, Commissioner for Innovation, Research, Culture, Education & Youth, Bulgaria)

#### **INSPIRATIONAL SPEAKER**

'Love, Support, Encouragement and Demands – Being a Policy Maker with a Rare Disease'



**David Lega,** Member of the European Parliament, Sweden

## **PLENARY SESSION**

Thursday, 14 May 2020 - 14:00 - 14:45

The Opening and Plenary Sessions will be simultaneously interpreted from English into 2 languages:



French German

#### RARE 2030 FORESIGHT SCENARIOS

Rare 2030 Overview



Prof. Milan Macek, Motol University Hospital and Charles University, Prague

Video: Rare 2030 "What If" Scenarios

#### Personal Perspective



Rebecca Skarberg, Osteogenesis Imperfecta Federation Europe (OIFE), Norway

**Audience Voting** 

#### **MODERATOR**



**Lise Murphy**, Patient Advocate, Marfanföreningen (Swedish Marfan Association)

#### **KEYNOTE ADDRESSES**

'Discoveries for the Benefit of Man: Lessons from the Past and Hope for the Future'



Professor Anna Wedell, Member and Former Chair of the Nobel Committee for Physiology or Medicine, Sweden

'Life languages and red flags in the red sand'



Dr Gareth Baynam, Clinical Geneticist, Genetic Services of Western Australia

#### **POSTER WINNERS**

Introduced by:



Dr. Violeta Stoyanova-Beninska, Chair, Committee for Orphan Medicinal Products, EMA

1st Place: P 163 - A collaborative and patient-centric effort to find the first effective treatment for alkaptonuria. (Nick Sireau)

2nd Place: P 267 - 'Patient Journeys': Personal experiences shaping clinical priorities (Olivia Spivack)

3rd Place: P 268 - Quality of life (QoL) for people with rare diseases: Recruitment challenges and consequences in a study pilot-testing the UK-PSC-QoL, a provisional QoL tool for people with primary sclerosing cholangitis (PSC) in the UK (Elena Marcus)

# THE FUTURE OF DIAGNOSIS: NEW HOPES, PROMISES AND CHALLENGES

#### **THEME LEADERS:**

**Prof. Christine Patch**, Clinical Lead for Genetic Counselling, Genomics England, UK

**Virginie Bros-Facer**, Scientific Director, EURORDIS

#### **THEME SUPPORT:**

**Gulcin Gumus**, Research and Policy Project Manager, EURORDIS

#### THEME DESCRIPTION:

Recent scientific and technological developments have meant that the diagnosis of rare diseases has improved considerably over the last few years.

In this theme we will closely examine the current landscape and also debate future trends and scenarios. We will present the current state of play in several national Newborn Screening (NBS) programmes, and discuss challenges to expanding NBS across Europe, highlighting impacts for patients and families. This theme will also explore how new technologies can be applied to accelerate and improve access to diagnosis, taking into account the implications, opportunities and challenges that are associated with Next Generation Sequencing and Artificial Intelligence by showcasing several platforms. The diagnostic odyssey is still very much a reality for a vast number of rare disease patients despite these recent technological advances. Relevant tools and services will be discussed to understand how to better support the undiagnosed rare disease community.

Genetic counselling represents a critical milestone in the search for a diagnosis and is integral to Genetic Health Services. A dedicated session will present how partnerships and innovative ways of working can benefit all involved and improve care delivery.

SESSION 0101: Thursday 14th May 2020, 14:45 - 16:15

#### Rare 2030: How can we achieve faster and more accurate diagnosis?

We anticipate that the future will hold a shortened diagnostic odyssey. A number of advances in technology - such as whole genome sequencing as a first line practice (bringing it into the clinic) - present new opportunities to achieve this.

The future of diagnostics will include new trends: Big data and AI capabilities; New innovation such as WGS in the clinic; Patient engagement in the diagnostic process; Wearable technologies; Data platforms integrating many data sources (genetic, phenotypic etc.)

And old drivers of change: Continued raising of awareness; Networking of health care professionals for more efficient diagnosis (e.g. CPMS type system).

Chair: Prof. Milan Macek, Department of Molecular Genetics and National Cystic Fibrosis Centre, Motol University Hospital and Charles University, Prague

#### Speakers:

Anne-Sophie Chalandon, Head of European Rare Diseases Public Affairs and Patient Advocacy, Sanofi Genzyme, France

Dr. Lucy McKay, Chief Executive Office, Medics 4 Rare Diseases, UK

Dr. Lucy Raymond, Addenbrooke's Hospital & University of Cambridge, UK

Julian Isla, Data and Artificial Intelligence Resource Manager, Microsoft; Dravet Syndrome European Federation (DSEF); Founder, Fondation 29, Spain

**SESSION 0102:** Thursday 14<sup>th</sup> May 2020, 16:45 – 18:15

#### Newborn Screening: Now and in the Future

The session will compare differing national approaches and explore the limits and potential of current and future approaches to newborn screening, exploring technical, societal, ethical and scientific considerations.

Chair: Jayne Spink, CEO, Genetic Alliance UK

Speakers:

Dr. Richard Scott, Clinical Lead for Rare Diseases, Genomics England

Nick Meade, Director of Policy, Genetic Alliance UK

Sara Hunt, Chief Executive Officer, Alex TLC

Prof. Martina Cornel, Amsterdam University Medical Centre, The Netherlands

Simona Bellagambi, UNIAMO (Italian Federation for Rare Diseases), Italy

**SESSION 0103:** Friday 15<sup>th</sup> May 2020, 11:30 – 13:00

Diagnosing Undiagnosed Rare Disease Patients: Tools and Resources to strengthen the voice of the undiagnosed Rare Disease Community

Progress in the application of genomic and other technologies (including web-based), has increased the diagnostic rate of patients with rare disorders to 50%. This is a great success but still leaves unanswered questions for the other 50% of the rare disease community. This session will focus on providing updates on existing initiatives of interest to the undiagnosed rare disease community, including patients, families and healthcare professionals.

The first part focuses on the views and voices of the undiagnosed community, their expectations of and outlooks on rare patients and their families. The overall aims of the session are to empower the community with tools and resources to strengthen their voices alongside policy makers and researchers, and to support them in getting closer to finding a diagnosis.

**Chair: Dr. Holm Graessner**, Solve-RD and ERN-RND, Institute of Medical Genetics and Applied Genomics, University of Tübingen, Germany

#### Speakers:

Prof. Christine Patch, Clinical Lead for Genetic Counselling, Genomics England

**Dr. Holm Graessner**, Solve-RD and ERN-RND, Institute of Medical Genetics and Applied Genomics, University of Tübingen, Germany

Lauren Roberts, Director of Support, Genetic Alliance UK, SWAN UK

**Prof. Olaf Riess**, Head of the Institute of Medical Genetics and Applied Genomics, University of Tübingen, Germany

**Stephanie Broley,** Senior Genetic Counsellor and Program Coordinator of the Undiagnosed Diseases Program WA, Australia

Dr. Pablo Botas, Head of Science, Fondation 29, Spain

**Prof. Peter Krawitz,** Institute for Genomic Statistics and Bioinformatics, University Hospital Bonn, Germany

Vanessa Lemarié, Lead Rare Disease Initiative, Business Development Life Sciences at Ada Health, Germany

**SESSION 0104:** Friday 15<sup>th</sup> May 2020, 14:00 – 15:30

#### What's Next After the Search for a Diagnosis? The Future of Specialised Health Services

This session will explore what happens after the completion of genetic analysis from the perspective of patients and health professionals. The session aims to explore what is important to patients regarding their potential diagnosis (or lack thereof) and future care pathways; to discuss innovative ways of working with health professionals and patients to develop interventions which support these care pathways; and to appreciate the developing role of networks in the delivery of new approaches to aspects of care for rare diseases

Chair: Prof. Christine Patch, Clinical Lead for Genetic Counselling, Genomics England

#### Speakers:

Dr. Alessia Costa, King's College London, UK

Prof. Glenn Robert, King's College London, UK

**Dr. Holm Graessner**, Solve-RD and ERN-RND, Institute of Medical Genetics and Applied Genomics, University of Tübingen, Germany

Dr. Vera Frankova, Univerzita Karlova

Dr. Sofia Douzgou, ESHG Representative, Manchester Centre for Genomic Medicine, UK

## OUR VALUES, OUR RIGHTS, OUR **FUTURE: SHIFTING PARADIGMS TOWARDS INCLUSION**

#### **THEME LEADERS:**

Maria Montefusco, President, Rare Diseases

Valentina Bottarelli, Public Affairs Director and Head of European and International Affairs, **EURORDIS** 

#### **THEME SUPPORT:**

Clara Hervas, Public Affairs Manager, European and International Affairs, EURORDIS

#### THEME DESCRIPTION:

Evidence demonstrates that people living with a rare disease and their families continue to face serious every day and social inclusion challenges. Rare diseases ensue in a high level of psychological, social and economic vulnerability and are detrimental to people's active participation in society.

This interlinkage between rarity, vulnerability, inequalities and social exclusion means that there is space for the integration of rare disease strategies into the broader human rights' agenda, and the health and development efforts at global level, with clear opportunities to contribute to the United Nations Agenda 2030: the Sustainable Development Goals (SDGs). This goal-based framework was agreed in 2015 by all UN Member States with the clear principle to "leave no one behind". In this sense, the SDGs are interdependent, universal goals that aim to address global challenges (such as poverty, health and climate).

The synergies between the SDGs and rare diseases have been acknowledged in different events, reports and texts of the UN, and there is momentum for international commitments for the benefit of persons living with a rare disease. In particular, the rare disease community has voiced the need to be included in efforts to achieve Universal Health Coverage (UHC) (as part of SDG 3 which focuses on health), as well as in efforts to ensure non-discrimination on the basis of health or disability status (as part of SDG 10 on reducing inequalities, or SDG 8 on decent work for example).

This theme will look at these ongoing advances in international advocacy and discuss the significance they have for different stakeholders of the rare disease community. A key goal of the theme will be to discuss how the rare disease community can translate those global commitments and aspirations into concrete regulatory practices and policies in the national context, which will have a real impact on the daily lives of those affected. Ongoing trends like reduced funding for human rights, an increasingly challenging political and social space, a debilitation of the values of solidarity and equity, and a shrinking space for civil society will be part of the debate, but the overall objective of the theme will be to identify the best practices and potential new practices that prove the value of investing in human rights and inclusion.

#### PRE-RECORDED SESSION: (Available on demand)

Getting our rights 'right': An international framework for rare diseases

Why should European citizens be concerned by the decisions being taken at the United Nations? Why should international collaboration continue to be fostered in the field of rare diseases? What sort of traction and impact can international frameworks have at the national level? To explore these questions, this session will first frame rare diseases as a policy priority, showcasing the EU approach and its framework established for addressing this issue. The session will then move on to frame rare diseases within the global human rights and Sustainable Development Goals (SDGs) agendas and present the advances made so far in international advocacy in engaging the United Nations bodies and agencies (UN General Assembly, Office of the High Commissioner for Human Rights, Human Rights Council...). Finally, the session will explore how to continue the progress towards a global t agenda that addresses the needs of persons living with a rare disease and encourages enforcement nationally, through tools such as UN resolutions.

Chair: Yann Le Cam, Chief Executive Officer, EURORDIS-Rare Diseases Europe

#### Speakers:

Anders Olauson, Chair, NGO Committee for Rare Diseases

Dr. Durhane Wong-Rieger, Canadian Organization for Rare Disorders

Raquel Peck, Senior Advisor and Former CEO of World Hepatitis Alliance, Switzerland

Todd Howland, Chief of the Development and Economic and Social Issues Branch, UN OHCHR

SESSION 0201: Thursday 14 May 2020, 14:45 - 16:15

#### UHC: from political commitment to reality for all

What is the value of Universal Health Coverage? What will the impact be in Europe: in terms of population, of services provided and of percentage of coverage? How will the EU implement the international commitments on UHC? Do national strategies on rare diseases successfully ensure the rights to health of persons living with a rare disease? How are patient's rights in cross-border care implemented across Europe and do they actually ensure access to health when this is not provided at country level? This session will look at these sorts of guestions during a panel discussion on our current system and whether it may be outdated and in need of a paradigm shift. Possible trends like increased social investment, early intervention and prevention and promotion and the consequences of this on the balance between primary and secondary care will be part of the discussion.

Chair: Dr. Nata Menabde, Executive Director, WHO Office at the UN

#### **Speakers:**

Dr Suvanand Sahu, Deputy Executive Director, Stop TB Partnership Secretariat

Matt B. Johnson, Rare Diseases International Healthcare Advisor, WHO Collaborative Global Network for Rare Diseases, Germany

Martin Seychell, Deputy Director-General for Health and Food Safety, DG SANTE, European Commission, Belgium

Vytenis Andriukaitis, WHO Special Envoy for the European Region, Lithuania

**SESSION 0202:** Thursday 14 May 2020, 16:45 – 18:15

#### Holistic Care for People Living with Rare Diseases: The Future is Now

"The specific nature of rare diseases also calls for a holistic, comprehensive and multi-disciplinary response, deeply grounded by essence in a human rights vision" (Dainius Puras, UN Special Rapporteur on the right of everyone to the enjoyment of the highest attainable standard of health). This session looks at what holistic care means in practice for persons living with a rare disease from a human rights framework and a societal point of view, rather than solely in terms of provision. It will particularly focus on the opportunities that holistic care offers, but will also look at the risks or hurdles that may be encountered to fully implement this. The session could also be an opportunity to look at how rights are interpreted in different scenarios, and therefore enshrined into and enforced (or not) within different models of care, which may depend on the direction that society as a whole chooses to take.

Chair: Robert Hejdenberg, CEO, Agrenska, Sweden

#### **Speakers:**

Ann Nordgren MD, PhD, professor in Clinical genetics at the Karolinska Institute and senior consultant at the Karolinska University hospital

Rebecca Tvedt Skarberg, Advisor, Osteogenesis Imperfecta Federation Europe (OIFE), Norway

Dr. Encarna Guillén, Head of Unit of Medical Genetics, Paediatric ward, Hospital Clínico Universitario Virgen de la Arrixaca, Spain

Dr. Cecilia Gunnarsson, Division of Clinical Genetics, Department of Clinical and Experimental Medicine, University Hospital, Linköping University, Linköping, Sweden

**SESSION 0203:** Friday 15<sup>th</sup> May 2020, 11:30 – 13:00

#### Rare and Equal: Ensuring Non-Discrimination on the Basis of Health and Disability

People living with a rare disease often face discrimination and stigma based on their health status or chronic condition, experiencing unequal treatment in a number of areas ranging from access to education, employment, leisure and other essential support services. This is aggravated when the illness is invisible or changing. This session will present the major figures on this issue as well as personal stories and will look at the ways of enforcing these persons' rights (CRPD articles 5, EU Charter of Fundamental Rights,

European Pillar of Social Rights), particularly by ensuring appropriate regulatory processes and making use of existing tools.

Chair: Maria Montefusco, President, Rare Diseases Sweden

#### Speakers:

David Lega, Member of the European Parliament (MEP), Sweden

Jana Popova, EAMDA Executive Committee, Bulgarian Association for Neuromuscular Diseases & EPF Youth Group, Bulgaria

Inmaculada Placencia Porrero, Senior Expert Social Affairs, European Commission, DG for Employment, Social Affairs and Inclusion, Unit for Disability and Inclusion

Prof. Jerome Bickenbach, Professor Emeritus at Queen's University, Canada and Visiting Professor at the University of Lucerne

**SESSION 0204:** Friday 15<sup>th</sup> May 2020, 14:00 – 15:30

#### Reaching Future Scenarios: From Accidental Progress to Success by Design

This session will present the scenarios currently being developed under the Rare2030 project and the different policy options associated to them. The session aims to be interactive, engaging the panellists and audience in a back-casting exercise and a vote on the preferred policy options.

Chair: Hans Winberg, Secretary General, Leading Health Care, Sweden

#### Speakers:

**Terkel Andersen,** President, EURORDIS-Rare Diseases Europe

Rebecca Tvedt Skarberg, Advisor, Osteogenesis Imperfecta Federation Europe (OIFE), Norway

Prof. Milan Macek, Dept of Biology and Medical Genetics, Charles University and Orphanet Czech Republic

Anna Krohwinkel, Leading Health Care, Sweden

## SHARE, CARE, CURE: TRANSFORMING CARE FOR RARE DISEASES BY 2030

#### **THEME LEADERS:**

Prof. Alberto Pereira, Coordinator of the

Dr. Birute Tumiene, Clinical Geneticist,

Matt Bolz-Johnson, ERN and Healthcare Advisor,

#### **THEME SUPPORT:**

Ines Hernando. ERN and Healthcare Director.

#### THEME DESCRIPTION:

Fast forward 20 years, the very fabric of our national health and welfare systems will be unrecognisable, transformed by the disruptive innovation and technologies of our modern age. Even today, many of our everyday services have already been radically transformed - private hire car companies now don't own any cars (Uber), retailers without shops (Amazon) and mobile-only banks (N26) are now common place. Our healthcare and welfare systems will not be immune to these changes. The rule book for healthcare will be re-written, and the once familiar building blocks of our traditional hospitals will be transformed into a new suite of health and social care competencies, on-the-go and on-demand experts and virtual clinics.

The digital transformation of healthcare has the potential to bring great benefits to the rare disease community, but it will also create new challenges. Our thirst for knowledge and unwavering scientific advancements will conscribe the diagnostic odyssey to our history books, with most rare diseases being diagnosed at birth or within the first year of the first symptom – all culminating to improve health outcomes, and resulting in a shift in the population needs and burden of care of an ageing rare disease community, facing different challenges of living longer with increased multiple co-morbidities. This survivorship effect will translate into a shift in our demand for different health and social services and service competencies. Adoption of technology, smart sciences and increasing automated health will force an evolution in the role of both health professionals and patients. The line between health care, social care and research will become increasingly blurred, as will our expectations of how care should be delivered.

Theme 3: Share, Care, Rare 2030: transforming care for rare diseases will explore the rare disease population needs in 2030-40 and explore both the opportunities and challenges of the care provision of the future. The seeds of our future are already visible today: the five sessions will put a spotlight on the emerging trends in best practice, promising technologies and cutting-edge thinking; showcase the forward-looking services and their potential to be scaled-up; and transform the way in which our healthcare will be delivered.

SESSION 0301: Thursday 14 May 2020, 14:45 - 16:15

#### "Live longer, healthier lives": Rare Disease Population Needs 2030 (and beyond)

Session 1: RD Population Needs 2030 (and beyond) will present the emerging policy trends and map the future population needs of the rare disease population, as well as scenario planning on the changing demographics, health inequalities modelling, horizon scanning on the availability of evidence-based services and treatments, and pinpointing the shift in the burden on care for an ageing population and the effect of increased survival. These emerging trends will shape healthcare, hospital systems and the integration of health and social care, for the next decade and beyond.

This session will present a high-level narrative on the four 'dimensions' of our future healthcare and hospital systems, specifically:

- Healthcare provision under mature ERNs (structure)
- Organisation of care under healthcare digital pathways (processes)
- Medical advancements and technology (innovation)
- Changes in role, profile and competency of medical teams and patient community (human resources)

Chairs: Prof. Kate Bushby, Institute of Genetic Medicine & Emeritus Professor, Newcastle University, UK

#### **Speakers:**

Prof. Alberto Pereira, ENDO-ERN Coordinator; Head of the Division of Endocrinology, Chair Centre for Endocrine Tumors Leiden (CETL), Leiden University Medical Centre, The Netherlands

Dr. Birute Tumiene, Institute of Biomedical Sciences, Faculty of Medicine, Vilnius University, Lithuania

Dr. Dalia Aminoff, Head of Patient Organisation, , AIMAR Onlus, Italy

Dr. Enrique Terol, Senior Policy Officer, Seconded National Expert, European Commission, Belgium

Victoria Hedley, Newcastle University John Walton Muscular Dystrophy Research Centre, UK

**SESSION 0302:** Thursday 14<sup>th</sup> May 2020, 16:45 – 18:15

#### **ERN & CoE Accreditation as Quality Improvement Framework**

The EUCERD Recommendations published in 2011 on the organisation of highly specialised healthcare were and remain ambitious. Even today, they continue to be relevant and far-reaching, with many countries still only beginning the process of implementing them. Session 2 will explore these key recommendations and conduct a deep dive into national recognition of expert centres and how European Reference Networks are developing.

Identification of experts in each and every Member State (MS) is the first step towards securing an accurate diagnosis and accessing appropriate care. National processes for endorsing rare disease expert

centres continue to be developed across EU MS. Endorsement and accreditation is a dynamic quality improvement process that incrementally raises the quality thresholds services need to meet to be approved. The future trend will be two-fold - universal coverage of national accreditation of highly specialised healthcare and rare diseases centres, and the incremental step-wise maturing of the accreditation process to come to a final result that will be measured on treatment outcome.

What will ERNs look like in 10-20 years' time? Session 2 will present the opportunities, benefits and challenges foreseen in a maturity ERN System. ERNs won't mature in isolation, but need to be fully integrated into national health systems, see recent Statement of the ERN Board of Member States on Integration of the ERNs to the healthcare systems of Member States.

The need for a more robust and universal care coordination across EU-ERN-wide care pathways, that are supported by shared care arrangements between hospitals as well as between health and social care. Future sustainability of many hospital systems on creating a fine balance between centralisation of supraspecialist care and shared care arrangements for local access, where the expertise travels, not the patient.

Chair: Dr. Birute Tumiene, Institute of Biomedical Sciences, Faculty of Medicine, Vilnius University, Lithuania

#### **Speakers:**

Prof. Alberto Pereira, ENDO-ERN Coordinator; Head of the Division of Endocrinology, Chair Centre for Endocrine Tumors Leiden (CETL), Leiden University Medical Centre, The Netherlands

**Anke Widenmann-Grolig**, KEKS & EAT, Germany

Prof. Till Voigtländer, Austrian Representative on ERN Board of Member States & Medical University of Vienna, Austria

**SESSION 0303:** Friday 15<sup>th</sup> May 2020, 11: 30 – 13:00

#### Clinic of the Future & Digital Care Pathways

Session 3: Clinic of the Future & Digital Care Pathways will draw together the building blocks of the 'clinic of the future' and its clinical model, where research is fully embedded in daily clinical care; and its interface with other services along 'digital care pathways'. What will care look like under the clinic of the future? How will it feel to progress along the future 'digital care pathways'?

The healthcare we receive will be connected as 'networks of networks', beyond the traditional hospital building, to wider EU and global infrastructures. Centres of Expertise will act as comprise crucial hubs: they provide quality standards and connections with all stakeholders in the national network, and they are connected to EU-wide networks (for the further development of standards and implementation of all the activities, where ERNs provide economies of speed, scale and scope).

EU Green Corridors will connect hospitals across Europe, through digital healthcare pathways that are rooted in the latest evidence-based practice and support timely access, giving the 'green light' for people with a diagnosed rare disease to access the services when they need it. These healthcare pathways will provide transparency of care quality standards and centralize care only when necessary, but also make it close to home whenever possible.

Will we have witnessed the full impact of the genetic revolution on screening, surveillance, diagnosis and personalised treatment and hold real-world experience of gene therapy and genomic editing in the next 10-20 years? The two worlds of healthcare and research will be fully integrated in our clinic of the future, as we see happening today in a few countries, enabling undiagnosed rare disease patients to be fast track to research setting for an accurate diagnosis and advancing research with real-world evidence. Despite all our hopes and the pace of scientific development, there will always be some RD without specific treatment or for which the symptomatic treatments do not minimise all the complex impairments generated by the disease. For this reason, evidence-based clinical guidelines must be ensured for every disease, as well as coordinated care between health and social care.

Chair: Prof. Alberto Pereira, ENDO-ERN Coordinator; Head of the Division of Endocrinology, Chair Centre for Endocrine Tumors Leiden (CETL), Leiden University Medical Centre, The Netherlands

#### Speakers:

Melina Brovall, Cystic Fibrosis Patient Representative, Sweden

Prof. Dr. Daniel Hommes, Leiden University Medical Centre, The Netherlands

Dr. Sofia Douzgou, ESHG Representative, Manchester Centre for Genomic Medicine, UK

Prof. Dr. Helge Hebestreit, Universitäts-klinikum Würzburg, Germany

Dr. Valter Fonseca, Director of the Department for Quality in Health, Ministry of Health, Portugal

**SESSION 0304:** Friday 15<sup>th</sup> May 2020, 14:00 – 15:30

#### Addressing Health Workforce Challenges and training the New Generation of Rare Disease Experts

Advancement in healthcare innovation and technology will lead the way in changing the competency profiles and skill mix of the healthcare workforce. The accessibility of medical information online and private online healthcare provision has already changed the doctor-patient relationship, with patients being more informed than ever, while the volume of new research and changing knowledge that healthcare professionals need to digest seems exponential. How far are we from seeing the role of doctors and surgeons being made redundant, where automated systems and artificial intelligence will have replaced them in traditional healthcare? Many may argue that the family doctor has already been made redundant thanks to this online medical revolution.

This has been the longstanding modus operandi for those living with a rare disease because they are experts in their condition. A single family doctor has never been their primary source for information. With increased health literacy, wearable technology, and direct-to-consumer genetic testing, more people than ever are taking their health into their own hands. However, what are the risks of over-relying on technology and losing the relationship with a healthcare professional? With the changing role of patients there is sure to be a change ahead for healthcare professionals. Are generalists obsolete or do they just need to be given the tools to evolve? What are the skills that our next generation of healthcare professionals need to adjust to this new environment and complement innovation?

For those with rare diseases there cannot be any doubt that greater inter-connectivity and patient power has been beneficial. However there is potentially a fly in the ointment - there's a difference between a

patient who's done a rudimentary google search about some transient symptoms and an expert patient who is one of a handful with a specific condition in the country. How will doctors be able to distinguish between the two when they come to them holding out printed information to be read and understood in a 10-minute appointment? Is the term "expert patient" being devalued?

Will the breaking down of our traditional healthcare systems see a similar overhaul of the medical training system underpinning them? Not just moving from classroom-based education to knowledge-sharing online communities, but performing a review of what is being taught and how much emphasis is being placed on it. For example, should physical examinations still include the search for late-onset stigmata of diseases that should be caught earlier in their natural history with standard diagnostic tests? What other signs could replace these that would be more informative?

Our next generation of experts are today's medical students and doctors in training. Given the changing patient and doctor roles, what skills do future doctors require in order to deliver evidence-based and compassionate care? What will the world look like when they graduate in 10 years' time and beyond? Is current medical education moving fast enough that what a medical student has learned during their studies is irrelevant by the time they graduate? What skills and knowledge will they need to learn to work in collaboration with innovative health solutions?

People with rare diseases often share their stories about disbelieving and unsympathetic doctors. Perhaps the changing role of doctors needs to be dominated more by what has been coined as 'soft skills' such as communication skills, interpersonal skills and leadership skills, leaving the pattern matching to the machines. After all, technology is only ever as good as the information you put into it. Obtaining a thorough and accurate history, while making the patient feel listened to and at ease, is an art that needs a lot of practice.

Focusing on staffing the medical community of the future, where are the gaps in the workforce and is the ever-continuing supra-specialisation creating an imbalance in our medical workforce? What is the appropriate workforce skill-mix in an individual nation and across Europe? We need to plan today in order to have the workforce in place that will address the needs of the patient population in ten years' time. Many countries are facing a brain-drain - how can we preserve our expertise, knowledge and experience? How can we get better at sharing knowledge and expertise and finding new ways of collaborating to provide cross-border healthcare?

Potentially the changing role of the patient and healthcare innovation could work favourably to make up for challenges caused by gaps in the workforce. However, as experienced by many rare diseases, innovation doesn't always mean change and can be hindered by evolutionary lag in training and system updates. As we look to 2030 we discuss how best to ready the workforce so that the full potential of innovation can be realised.

Chairs: Dr. Lucy McKay, CEO, Medics 4 Rare Diseases, UK

#### **Speakers:**

Prof. James Buchan, Queen Margaret University Edinburgh, UK

June Rogers, Paediatric Continence Specialist, Bladder & Bowel, UK

Dr. Svetlana Lagercrantz, Chair of the ERN GENTURIS Task Force on Education & Training, Sweden

# WHEN THERAPIES MEET THE NEEDS: **ENABLING A PATIENT-CENTRIC** APPROACH TO THERAPEUTIC DEVELOPMENT

#### **THEME LEADERS:**

Diego Ardigo, Global Rare Diseases R&D Head, Chiesi Farmaceutici, Italy & Chair, Therapies Scientific Committee of IRDiRC

Virginie Hivert, Therapeutic Development Director, EURORDIS and vice-Chair, Therapies Scientific Committee of IRDiRC

#### **THEME SUPPORT:**

Maria Cavaller, Patient Engagement Junior Manager, EURORDIS

#### THEME DESCRIPTION:

The objectives of this theme are to take stock of the experience gained so far in the development of medicines for people living with rare diseases, and to examine the evolution of the field. We will look at recent scientific innovations and clinical research, regulatory solutions, roadblocks and challenges in developing therapies that match the needs of the patients, as well as ways of embedding real life evidence into the therapeutic development processes.

#### PRE-RECORDED SESSION: (Available on demand)

#### Galaxy Guide for Rare Disease therapies development

Presenters: Dr. Diego Ardigo, Global Rare Diseases R&D Head, Chiesi Farmaceutici, Italy and Chair, Therapies Scientific Committee of IRDiRC & Dr. Virginie Hivert, Therapeutic Development Director, EURORDIS & Vice-Chair, Therapies Scientific Committee of IRDiRC

The Orphan Drug Development Guidebook Task Force was set up within the International Rare Disease Research Consortium (IRDiRC) with the aim to create a guidebook describing the available tools and initiatives specific to rare disease development and how to best use them, in order to address the multiple challenges inherent to drug development for rare diseases for which the traditional model of development is becoming less and less suitable.

The aim of the Guidebook is to benefit the various stakeholders working in the orphan drug development environment. It includes fact-sheets describing each tool or resource (covering a large number of initiatives that are available worldwide), a series of standard use cases defining how and when to use them, and a series of practical checklists of items to consider at each step of the development. Integration of such elements within a defined drug development framework is set out to generate better data quality, shorter development timelines, and better R&D efficiency.

**SESSION 0401:** Thursday 14<sup>th</sup> May 2020, 14:45 – 16:15

#### What do patients expect from therapy development?

This session aims to look at the present and future of medicine's development and to reflect what patients are expecting for the next decade.

Building on results from the Rare Barometer Surveys (e.g. RD patients' experience with accessibility to treatments), the current work around patient engagement and a few figures illustrating the current stateof-play of therapies development for rare diseases, will also help to set the scene.

A panel of patients representing different rare disease areas, with expertise in several aspects of the medicine's life-cycle and engaging with the ecosystem in a variety of capacities (EMA, EURO-CAB, IMI PARADIGM on sustainable patient engagement, ERNs, HTA, etc.) will discuss the actual challenges, the needs and main expectations vis-à-vis the development of medicines, and the way for each stakeholder to contribute to improving RD patients' lives.

Chair: Dr. Virginie Hivert, Therapeutic Development Director, EURORDIS & Vice-Chair, Therapies Scientific Committee of IRDiRC

#### **Speakers:**

Loris Brunetta, Thalassaemia International Federation, Italy

Alain Cornet, Lupus Europe, Belgium

Veronica Popa, MCT8-AHDS Foundation, Greece

Eva Stumpe, SMA Europe, Germany

Russell Wheeler, Leber's Hereditary Optic Neuropathy Society, UK

**SESSION 0402:** Thursday 14<sup>th</sup> May 2020, 16:45 – 18:15

#### Disruptive Innovations in clinical research

This session will focus on innovative trends in clinical research, both in study design and execution, as well as innovative approaches to data collection. We will discuss the opportunities and challenges posed by these developments, together with the challenges foreseen in terms of regulatory and HTA assessment and the impact for the rare disease patients.

Attendees will leave this session with a broader view and understanding of the opportunities and challenges generated by current changes to how clinical research is conceived and executed, and the impact these changes will have on evidence generation in the future.

Chairs: Dr. Diego Ardigo, Global Rare Diseases R&D Head, Chiesi Farmaceutici, Italy and Chair, Therapies Scientific Committee of IRDiRC & Dr. Violeta Stoyanova-Beninska, Chair, Committee for Orphan Medicinal Products, EMA

#### Speakers:

Dr. Simon Day, Clinical Trials Consulting & Training, UK

Dr. Nigel Hughes, Janssen Research and Development, Belgium

Prof. Armando Magrelli, Istituto Superiore di Sanità, Italy

Elizabeth Vroom, World Duchenne Organization, Netherlands

Pooja Merchant, Bayer, USA

Prof. Veronica Miller, University of California, USA

**SESSION 0403:** Friday 15<sup>th</sup> May 2020, 11:30 – 13:00

#### **Innovation in Advanced Therapy**

In this session, we will dive into the development and use of an ATMP from idea to approval and beyond. Using a particular product as an example, we will look at it from every angle: developer, patient, physician and regulator. Participants should leave this session with a greater understanding of the challenges relating to developing an ATMP and the subsequent use of it in clinical practice, which can be rather different from a standard product.

Chair: Dr. Kristina Larsson, Head of Orphan Medicines, European Medicines Agency

#### Speakers:

Tomasz Grybek, Fundacja Bohatera Borysa (Boris the Hero Foundation), Poland

Michela Gabaldo, Head of Alliance Management & Regulatory Affairs, Fondazione Telethon, Italy

Patrick Célis, European Medicines Agency, The Netherlands

**SESSION 0404:** Friday 15<sup>th</sup> May 2020, 14:00 – 15:30

#### Bringing real life into therapeutic development

The patient should be central to all aspects of drug discovery, development, regulatory approval and future evidence generation of medicines, ensuring a complete life cycle approach to patient engagement. This session showcases where patients can bring their real-life experiences into different areas of the drug development pathway. We will explore how patient engagement in clinical trial design is increasingly valued, ensuring that studies capture what is important to measure from the end user perspective.

Patient reported outcomes (PRO) measure how a patient feels and functions whilst on a therapy. Developing PRO standards ensures robust data collection and interpretation, adding value to the information available about the patient experience whilst on a therapy.

The European Reference Networks facilitate discussions on rare diseases, concentrating knowledge and allowing for the collection of real world data which can be used to learn more about rare conditions and available therapies. Drug repurposing is a hot topic and an area where rare disease groups are now often leading the way, directing the development pathway for the benefit of their patient group.

**Chairs: Dr. Daria Julkowska**, Assistant Director, Institute GGB; Coordinator, European Joint Programme on Rare Diseases & **Dr. Daniel O'Connor**, Medical Assessor, Medicines and Healthcare Products Regulatory Agency (MHRA)

#### **Speakers:**

Dr. Anja Schiel, Norwegian Medicines Agency

Prof. Faisal Ahmed, Endo-ERN EuRRECa, UK

Dr. Madeline Pe, EORTC, Belgium

Dr. Nick Sireau, AKU Society, UK

# ACHIEVING THE TRIPLE AS BY 2030: ACCESSIBLE, AVAILABLE AND AFFORDABLE THERAPIES FOR PEOPLE LIVING WITH A RARE DISEASE

#### **THEME LEADERS:**

**Dimitrios Athanasiou**, European Medicines Agency, World Duchenne Organisation and European Patient Forum, Greece

**Prof. Josep Torrent-Farnell**, Universitat Autònoma de Barcelona, Spain

#### **THEME SUPPORT:**

**Simone Bosseli**, Public Affairs Director, EURORDIS **Ana Palma**, Senior Director Global HTA & Patient Access Lead, SOBI

#### THEME DESCRIPTION:

There are more life-changing therapies in development for people living with rare diseases than ever before, yet at our current pace it will still take decades to cover all our unmet needs. The rare disease community still faces a number of challenges in accessing authorised therapies, which indicates that the system in its current design is not functioning to the benefit of all, particularly those people living with a rare disease.

How can we improve the functioning of the system by 2030? What are the solutions to ensure the sustainable development of therapies that are truly available to all? This theme will examine the different aspects of the system which need significant change to make it 'fit-for-purpose' now and for our future needs.

**SESSION 0501:** Thursday 14<sup>th</sup> May 2020, 14:45 – 16:15

#### Rare Diseases in Numbers: What do they mean?

There is a growing need for accurate baseline numbers to enable effective evidence-based advocacy for the rare disease community. Recent initiatives have addressed this need for data, with regard to the key issues of access, the economic burden of rare diseases, and the budgetary impact of therapies. This session will discuss recent studies and methodologies related to these issues.

Chair: Avril Daly, CEO, Retina International; Vice-President, EURORDIS

#### **Speakers:**

Dr. Ana Rath, Director, Orphanet

Sandra Courbier, Social Research Director - Rare Barometer Programme Lead, EURORDIS-Rare Diseases Europe

Dr. Orla Galvin, Director of Research Policy, Retina International, Dublin

Alexander Natz, Secretary-General of EUCOPE, Belgium

**SESSION 0502:** Thursday 14<sup>th</sup> May 2020, 16:45 – 18:15

#### New disruptive technologies: how can we prepare healthcare systems?

Gene and cell therapies (ATMPs) have the potential to bring a level of disruption to treatment for rare diseases that we have never seen before. This session will explore novel treatments for haemophilia, Spinal muscular atrophy (SMA), thalassemia and retinal disorders, and will feature work done on assessment, availability, access and affordability as part of RARE IMPACT. The panel will discuss their suggestions and potential solutions for improving access across Europe.

**Chair: Dr. Mariette Driessens,** Policy Officer, VSOP (Dutch Genetic Alliance)

#### Speakers:

**Prof. Hildegard Büning,** European Society for Gene and Cell Therapy (ESGCT), Germany

Simone Boselli, Public Affairs Director, (EURORDIS)

Adam Hutchings, Managing Director, Dolon Ltd

Declan Noone, European Haemophilia Consortium, Ireland

Evert Jan Van Lente, AOK Health Insurance, Germany

Lonneke Timmers, Advisor, Zorginstituut Nederland (ZIN), the Netherlands

Francis Pang, Vice President, Global Access, Orchard Therapeutics, UK

**SESSION 0503:** Friday 15<sup>th</sup> May 2020, 11:30 – 13:00

#### From Research to Access: Is a European Collaborative Approach Possible?

Bearing in mind technological advances as well as the need to increase the number of therapies available, can we realistically imagine one seamless European approach from development to access? What elements would this require? Can it be established in the next 10 years? This session will look at the existing successful model of partnership.

Chair: Dimitrios Athanasiou, World Duchenne Organisation

#### **Speakers:**

Dr. Elena Nicod, Dolon Ltd, Italy

Toon Digneffe, Head of Public Affairs and Public Policy - Rare Disease Franchise Europe & Canada, Takeda, Belgium

Dr. Donato Bonifazi, Consorzio per Valutazioni Biologiche e Farmacologiche, Italy

Josie Godfrey, Director, JG Zebra Consulting, UK

Dr. Daria Julkowska, Assistant Director, Institute GGB; Coordinator, European Joint Programme on Rare Diseases

**SESSION 0504:** Friday 15<sup>th</sup> May 2020, 14:00 – 15:30

#### Ensuring Faster Development and Equitable Access: Future Scenarios from Rare 2030

We are seeing emerging narratives emphasising the strain that people living with a rare disease place on the overall healthcare system; yet at the same time, the general public continue to respond in their thousands to crowdfunding appeals, demonstrating an unprecedented sense of solidarity. Crowdfunding is, however, an unsustainable approach. How much is society willing to pay in 2030 for people living with a rare disease? Do we need a solidarity pact? Which future trends in rare disease therapies need to be taken into consideration?

Chair: Sheela Upadhyaya, HST and Topic Selection Specialist Centre for Health Technology Evaluation, National Institute for Health and Care Excellence, UK

#### **Speakers:**

Dimitrios Athanasiou, World Duchenne Organisation

**Dr. Mariette Driessens**, Policy Officer, VSOP (Dutch Genetic Alliance)

Avril Daly, CEO, Retina International; Vice-President, EURORDIS

Giovanna Giuffrè, Project Manager, ISINNOVA, Italy

Ana Palma, Senior Director Global HTA & Patient Access Lead, Swedish Orphan Biovitrum BVBA/SPRL, Belgium

## THE DIGITAL HEALTH REVOLUTION: HYPE VS. REALITY

#### **THEME LEADERS:**

Julián Isla, Data and Artificial Intelligence Resource Manager, Microsoft & Chief Scientific Officer, Dravet Syndrome European Foundation,

Justina Januševičienė, Head of Healthcare Innovation Development Centre, Lithuanian University of Health Sciences, Lithuania.

Brian O'Connor, Chair, European Connected Health Alliance, UK/Ireland

#### **THEME SUPPORT:**

Denis Costello, Executive Director, CML Advocates Network, Spain.

Marta Campabadal, RareConnect Manager, **EURORDIS** 

#### THEME DESCRIPTION:

This theme examines the technological innovations that are underpinning disruption in medicine and science, as well as the legal, ethical and policy foundations that can frame future outcomes in this area. The theme will also look at how technology can support the social inclusion of people living with a rare disease.

Attendees should come away from this theme with a greater understanding of the role of quality data in technologies such as Artificial Intelligence and how this impacts the development of medicines and delivery of care and other services. The theme aims to question the value of such technological innovations, as well as to show the policy frameworks and ecosystems which patient representatives can involve themselves in, in order to bring the patient's voice to the evolution of policy and ethics in this area.

# THEME 6

SESSION o601: Thursday 14<sup>th</sup> May 2020, 14:45 – 16:15

# Do we need a New Patient Data Management Model for AI?

Artificial Intelligence seems to be the holy grail, promising to solve the many challenges faced by the current healthcare system. What do we need in order for models based on Artificial Intelligence to work? The answer: large datasets for training those models. These large datasets have usually been safeguarded by hospitals, the traditional centres of medical care.

But this centralized hospital data model is giving way to a hybrid system, where data is generated not only by the hospital but also by the patient and other sources. In addition we have the problem that certain data (such as genomic data) is too large to be stored within the traditional medical information system based in hospitals. Perhaps we need new data management models that allow the capture, processing and analysis of medical data generated by various sources. This guestion is particularly significant for rare disease patients as they often have to visit multiple specialists in different healthcare centres. In this session we will discuss the new data management models we will need, and potential challenges that may arise (medical, regulatory, security, privacy, ethics).

Chairs: Denis Costello, Executive Director, CML Advocates Network, Spain

Speakers:

Paul Rieger, Managing Director, Centiva Health, Austria

Peter Speyer, Head of Products, data42, Novartis, Switzerland

Dr. Marco Roos, GO FAIR, Netherlands

Nicholas Becker, Al for Good, Microsoft, USA

SESSION 0602: Thursday 14<sup>th</sup> May 2020, 16:45 – 18:15

# Considerations Surrounding the Ethical and Legal Aspects of Data Governance

The current COVID-19 crisis has brought into sharp relief some of the big challenges on the ethical and legal aspects of data governance, most significantly in the debate on the use contact tracing apps as a key tool in the transition out of lockdown and the management of a 'new normal'. The use of such apps highlights the fragile and complex balance between public and private interests in data, the need to build trust in data governance systems and the need for effective mechanisms for data solidarity. In this session you will hear speakers address all of these issues, providing insights on how the balance between public and private is seen in our rare disease communities as well as about exciting developments in new approaches to making data available for research (Findata) and facilitating data solidarity (Salus Coop).

Chair: Dr. Petra Wilson, Managing Director and CEO, Health Connect Partners, UK

# Speakers:

Dr. Bettina Ryll, Founder and President, Melanoma Patient Network Europe

Rosa Juuti, Senior Specialist, Findata, Finland

Sandra Courbier, Social Research Director, Rare Barometer Voices, France

Joan Guanyabens, Consultant Health IT and Innovation, Salus Coop, Spain

**SESSION o603:** Friday 15<sup>th</sup> May 2020, 11:30 – 13:00

# Getting Solutions to Patients Quicker and more Effectively: Are Policy, Procurement and Patients the **Enablers or the Obstacles?**

What changes are necessary to get solutions to patients quicker and more effectively? The speakers will share their own experiences and express their own perspectives on whether or not policy, procurement and patients are the enablers or obstacles. This interactive session will seek consensus on concrete actions to overcome any obstacles and map out a way forward.

Chair: Brian O'Connor, Chair, European Connected Health Alliance, UK/Ireland

# Speakers:

Prof. George Crooks, Digital Health & Care Institute, Scotland

Jaana Sinipuro, Project Director, IHAN – Human-Driven Data Economy, SITRA, Finland

Liz Ashall-Payne, Founder and CEO, ORCHA, UK

**SESSION o604:** Friday 15<sup>th</sup> May 2020, 14:00 – 15:30

# Technology for inclusion and empowerment

This session will highlight the possibilities of empowerment and inclusion presented by innovative technology. You will hear about a number of good examples around tech-tools, digital accessibility and policymaking that can be used as means and stepping stones to reach full holistic inclusion.

Chairs: Robert Hejdenberg, President, Agrenska

# **Speakers:**

Dr. Stefan Johansson, KTH Royal Institute of Technology, Sweden

Daniel Forslund, Assistant Regional Council in the Stockholm Region, Sweden

Allison Watson, Patient Advocate, Ring2o, UK

Veronica Popa, Patient Advocate, Romania

Ana Neacşu, Speed (Speech & Dialogue Research Laboratory), Romania

Tim Buckinx, Founder and CEO, Epihunter, Belgium

Michael Lovgren, CEO Assistant, Agrenska, Sweden

Fredrik Ruben, Chief Executive Offficer, Tobii Dynavox, Sweden

### **MODERATOR**



Lene Jensen, Director, Rare Diseases Denmark

## HIGHLIGHTS AND TAKE-HOME MESSAGES FROM THE PARALLEL THEMES:



Theme 1: Prof. Christine Patch, Clinical Lead for Genetic Counselling, Genomics England



Theme 2: Maria Montefusco, President, Rare Diseases Sweden



Theme 3: Dr. Birute Tumiene, Clinical Geneticists & Coordinator for Competence Centres, Vilnius University Hospital Santaros Clinics, Lithuania



Theme 4: Dr. Diego Ardigò, Chair, Therapies Scientific Committee of IRDiRC and Global Rare Disease R&D Head, Chiesi Farmaceutici, Italy



Theme 5: Ana Palma, Senior Director Global HTA & Patient Access Lead, Swedish Orphan Biovitrum BVBA/SPRL, Belgium



Theme 6: Denis Costello, Executive Director, CML Advocates Network, Spain

# PERSONAL TAKE-HOME MESSAGES



Jana Popova, Young Patient Advocate, Bulgarian Association for Neuromuscular Diseases; European Patients' Forum Youth Group; European Alliance of Neuromuscular Disorders

# **POLITCAL SPEECH**



Adam Vojtěch, Minister of Health, Czech Republic

# **CONCLUSIONS**

'Policy Options Emerging from ECRD 2020 on the Journey of Living with a Rare Disease in 2030'



Yann Le Cam, Chief Executive Officer, EURORDIS

Poster Award Presentation; Friday 15 May 10:00 - 11:00 CEST



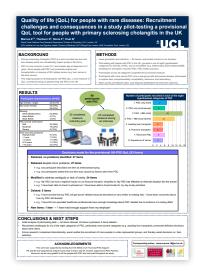
### 1st Place: P 163

A collaborative and patient-centric effort to find the first effective treatment for alkaptonuria. (Nick Sireau)



#### 2nd Place: P 267

'Patient Journeys': Personal experiences shaping clinical priorities (Olivia Spivack)



#### 3rd Place: P 268

Quality of life (QoL) for people with rare diseases: Recruitment challenges and consequences in a study pilot-testing the UK-PSC-QoL, a provisional QoL tool for people with primary sclerosing cholangitis (PSC) in the UK (Elena Marcus )

# THEME 1: THE FUTURE OF DIAGNOSIS: NEW HOPES, PROMISES AND CHALLENGES

#### P1 | Bayer Pharmaceutical

Genomic testing in the emerging era of precision medicine: Lessons learned from studies in larotrectinib

Jo Ballot

Lauren Kaplanis, Suzanne Ezrre, Tatiana Norman-Brivet, Genevieve Kelly, Sandra Montez

#### P2 | Mendelian

Case report: Reducing the diagnostic odyssey in Behcet's disease through a digital health approach into primary care UK

Orlando Buendia

Rudy Benfredj, Timothy Halford, Peter Fish, Will Evans, Renate Apse, Isabella Rustignoli

#### P3 | Mendelian

Case report: cost-benefit of earlier diagnosis in a patient with Behcet's disease using CTV3 codes at primary care UK

Orlando Buendia

Rudy Benfredj, Tim Halford, Peter Fish, Will Evans, Nicolas Aussel, Renate Apse, Isabella Rustianoli

### P4 | National Alliance for Rare Diseases Romania

Rare genetic diseases in Timis Regional Centre of Medical Genetics, Romania

Maria Puiu

Adela Chirita Emandi, Iulia Jurca Simina, Alexandra Mihailescu, Nicoleta Andreescu, Dorica Dan

P8 | Dep.of Pediatric Nephrology, RoMed Kliniken, Rosenheim

Molecular-Based Newborn Screening for Cystinosis and Spinal Muscular Atrophy (SMA) in Germany

Hohenfellner, Katharina

Hohenfellner K., Burggraf S., Vill K., Bergmann C., Fleige T., Janzen N., Czibere L., Froschauer S., Röschinger W., Olgemöller B., Nennstiel U.

 $\textbf{P10}\ |\ asociacion$  internacional de familiares y afectados de lipodistrofias AELIP

# «The Importance of Diagnosis in Lipodystrophies»

Jose Jerez Ruiz

Juan Carrion Tudela

P11 | Medical Informatics Group, University Hospital Frankfurt

Visualization techniques in a Clinical Decision Support System for Rare Diseases

Jannik Schaaf

Martin Sedlmayr, Martin Boeker, Hans-Ulrich Prokosch, Holger Storf

#### P12 | Karolinska Institutet

#### Siglec-6: a potential new biomarker for clonal mast cell diseases

Andrea Renate Teufelberger

Andrea R. Teufelberger, Catherine Overed-Sayer, Jingya Wang, Maria Ekoff, Barbro Dahlén, Theo Gülen, Gunnar P. Nilsson

P15 | Centre of rare diseases southeast region

Mind the gap - Rare transition from child to adult care

Åsa Lundin

Charlotte Lilja

#### P16 | Fondazione Telethon

We made the therapies, now give us newborn screening!

Annamaria Zaccheddu

Alessandra Camerini, Ermanno Rizzi

### P18 | Karolinska Institutet

### Molecular studies of intestinal malrotation

Karin Salehi Karlslätt

Anna Lindstrand, Britt Husberg, Tomas Wester, Agneta Nordenskjöld

P19 | Medical university Vienna

Volumetry of the anal sphincter complex in infants with anorectal malformation Patricia Feil

Fartacek, Metzelder, Weber, Patsch, Krois

**P20** | Portuguese Association for Congenital Disorders of Glycosylation (APCDG), CDG&Allies-PPAIN

#### CDG Diagnosis: A simplified guide for different stakeholders

Carlota Pascoal

Dorinda Marques-da-Silva, Rita Francisco, Sandra Brasil, Vanessa dos Reis Ferreira, Ea Morava, Jaak Jaeken

**P21** | Service of Genetics Laboratory, Faculty of Medicine, University Hospital center» Mother Teresa', Tirana, Albania

A microdeletion syndrome at 9q21.11-q21.31 characterised by mental retardation, speech delay, epilepsy.

Anila Laku

P22 | Kindernetzwerk e.V.

Autism, Epilepsy and Genetics - An experience with the gene SCN2A

Nicolas Lorente

P23 | Bambino Gesù Children's Hospital in Rome

Timeliness of Genetic Diagnosis in Critical Newborns: Proposal of a Dedicated Diagnostic Path

Cortellessa Fabiana

Digilio Maria Cristina, Dallapiccola Bruno, Novelli Antonio, Agolini Emanuele, Lepri Francesca, Dotta Andrea, Bagolan Pietro, Macchiaiolo Marina, Bartuli Andrea.

P24 | CIBERER (Centre for Biomedical Network Research on Rare Diseases)
The CIBERER Program for Undiagnosed Rare Diseases (ENOD). A collaborative
and multidisciplinary approach to diagnosis

Beatriz Morte

Morte B., Moreno E., Herreras E., Pérez-Florido J., Dopazo J, Pérez-Jurado L.A.

P25 | Karolinska Institutet

Germline mutation c.4031CT (S1344L) in the RNase IIIa domain of DICER1 causes GLOW syndrome

Emeli Pontén

Emeli Pontén, Sofia Frisk, Kristina Lagerstedt-Robinson, Ann Nordgren

**P28** | GIIS-012. Instituto de Investigación Sanitaria Aragón (IIS Aragón), Unidad de Investigación Traslacional.

Next Generation Sequencing (NGS) an opportunity for patients non-diagnostic in Lysosomal Storage Disease

Isidro Arévalo-Vargas

López de Frutos, Serrano-Gonzalo, M Strunk, P Mozas, JJ Cebolla, P Giraldo.

P29 | Karolinska Institutet

Genetic diagnoses in skeletal ciliopathies using MPS, structural variant, and RNA analyses

Dominyka Batkovskyte

Anna Hammarsjö, Maria Pettersson, David Chitayat, Atsuhiko Handa, Fulya Taylan, Dominyka Batkovskyte, Britt-Marie Anderlid, Angela E. Lin, Kenji Shimizu, Ana Beleza-Meireles, Brian Hon-Yin Chung, Ulrika Voss, Ann Nordgren, Gen Nishimura, Anna Lindstrand, Giedre Grigelioniene

P30 | Ågrenska AB

Stiftelsen Sällsyntafonden - The Rare Disease Research Foundation

Ann Nordgren

Anders Olauson, Robert Hejdenberg and Maria Montefusco

P31 | EURORDIS-Rare Diseases Europe

Mapping of Resources from Networks for Undiagnosed and Newly Diagnosed Ultra-Rare Diseases

Gulcin Gumus

Gulcin Gumus, Stephanie Broley, Christine Patch, Marisol Montolio del Olmo, Kym Boycott, Laurence Faivre, Birte Zurek, Milan Macek, Holm Graessner, Simona Bellagambi, Daphne Stemkens, Cathalijne van Doorne, Alison Metcalfe, Alessia Costa, Glenn Robert, Lauren Roberts, Marie Pritchard, Hans Scheffer, Vanessa Boulanger, Janine Lewis, Helen Cederroth, Mikk Cederroth, Patricia Arias, Virginie Bros Facer

P32 | AveXis, Inc.

Cost-Effectiveness Analysis of Newborn Screening for Spinal Muscular Atrophy (SMA) in the United States

Anish Patel

Ramesh Arjunji, Jenny Zhou, Marie Louise Edwards, Michael Harvey, Eric Wu, Omar Dabbous

#### P33 | Karolinska Institutet

A case of ring chromosome 21 with hemifacial microsomia, developmental and speech delay analysed with WGS and patient-derived NES cells

Jakob Schuy

Jesper Eisfeldt, Maria Pettersson, Niloofar Shahrokhshahi, Mansoureh Shahsavani, Daniel Nilsson, Anna Falk, Anna Lindstrand

#### P34 | Karolinska Institutet

Whole genome sequencing discovers clonal evolution of leukemic clones from birth to the time of diagnosis of concordant acute lymphoblastic leukemia in a monozygotic twin pair

Fulya Taylan

Fulya Taylan, Benedicte Bang, Arja Harila-Saari, Jesper Eisfeldt, Mats Heyman, Gisela Barbany, Vasilios Zachariadis, Ann Nordgren

#### P35 | Sciensano

#### Genetics in Belgium: Today And Tomorrow

Joséphine Lantoine

Jean-Bernard Beaudry and Nathalie M. Vandevelde

**P36** | AISMME Associazone Italiana Sostegno Malattie Metaboliche Ereditarie APS (Italian Association Inherited Metablic Diseases Support)

#### Extended newborn screening

MANUELA VACCAROTTO

Giuliana Valerio

#### P37 | Wales Gene Park

# Engaging and Involving the Rare Disease community in Wales through Genomics Cafes

Rhian R Morgan

Emma L Hughes, Angela M Burgess

#### P38 | Genetic Alliance UK/ Wales Gene Park

#### Co-production of the Welsh Rare Disease Research Gateway

Emma L Hughes

Rhian R Morgan, Angela M Burgess

#### P39 | Genetic Alliance UK

#### Genomic data and the NHS: views of rare disease patients and carers

Amy Hunter

Rosa Spencer-Tansley, Simon Wilde

### P40 | FEDER - Federación Española de Enfermedades Raras

The reality of undiagnosed 'Rare Patients' - claiming for an improvement in their life-quality

Alba Ancochea

### P41 | UNIAMO FIMR

# Position Paper on Extended Newborn Screening by the Italian Associations of People Living with Rare Diseases

Annalisa Scopinaro

#### P42 | Karolinska Institutet

#### KIAA0753 mutations in skeletal ciliopathies: unveiling disease mechanisms

Raquel Vaz

Anna Hammarsjö, Fulya Taylan, David Chitayat, Giedre Grigelioniene, Anna Lindstrand

#### P43 | Monash University Malaysia

# A Novel Globotriaosylceramide Quantification Assay for the Rapid Diagnosis of Fabry Disease

.....

Allan Ng Wee Ren

Kumaran Narayanan

#### **P277** | Swiss Society for Porphyria

### Abdominal Pain «Without a Good Reason» - Think Acute Hepatic Porphyria!

Jasmin Barman-Aksözen, PhD, 1,2

Eva Schupp, Marten Pettersson, Mehmet Aksözen PhD, Francesca Granata PhD, Cornelia Dechant MD, Rocco Falchetto PhD

# THEME 2: OUR VALUES, OUR RIGHTS, OUR FUTURE: SHIFTING PARADIGMS TOWARDS INCLUSION

#### P45 | The Finnish Network for Rare Diseases

Advancing meaningful patient involvement: case HARKKO patient advocacy group

Carita Åkerblom, Matti Santalahti

Carita Åkerblom, Members of Harkko patient advocacy group

#### P46 | Cystic Fibrosis Ireland

## "I may have CF, but it does not have me" Independent living and Cystic Fibrosis

Sarah Tecklenborg

Rory Tallon, Gerry Walker, Fiona Bodels, Rebecca Horgan, Samantha Byrne, Caroline Heffernan, Daniel Costigan, Philip Watt

#### P47 | University College Dublin

# Children's voices in Rare Diseases - Sand play, arts, music, photo voice and interviews

Dr Sandra Mc Nulty

Somanadhan, S., McNulty, S., Karpaviciute, S., O'Neill, A., Sweeney, A. Brinkley, A., O'Toole, D., Bracken, S., Flynn, C., Larkin, P., Awan, A., Baker. M, Kroll, T.

#### P48 | RVRH-XLH, French association of patients with XLH

# Unmet needs of adults with XLH: results from a survey of European patient organizations $% \left( 1\right) =\left( 1\right) \left( 1\right)$

Pol Harvengt

Lothar Seefried, Lindsay Perera

#### P50 | Ersta Skondal Bracke University College

# Views on everyday life among adults with spina bifida: an exploration through photovoice

Hanna Gabrielsson

Eric Asaba, Agneta Cronqvist

#### P51 | University College Dublin

Measuring parenting stress, quality of life and resilience related to caring for children, young people and adults living with Mucopolysaccharidosis (MPS)

Suja Somanadhan

Bristow, H., Brinkley, A., Crushell, E., Larkin, P., Nicholson, E., Pastores, G., Somanadhan, S1.

#### P52 | Vifor Fresenius Medical Care Renal Pharma Ltd.

# SEE ME. HEAR ME: Support for anyone living with, or affected by, ANCA-associated vasculitis (AAV)

Peter Verhoeven

Julie Power, John Mills (MD), Dijana Krafcsik, Peter Rutherford (MD), Dieter Götte (MD)

#### P53 | IRCCS Istituto Ortopedico Rizzoli

#### TemeRARI si nasce - Born to be Brave

Manila Boarini

Manila Boarini, Andrea Romeo, Silvio Boero, Davide Scognamiglio, Luca Sangiorgi, Eleonora Grippa

## P54 | Bambino Gesù Children's Hospital (Rome -Italy)

Empowerment Intervention for persons affected by Williams Syndrome: a pilot project at the Bambino Gesù Children's Hospital

Francesca De Lorenzo

De Lorenzo F., Macchiaiolo, M., Buonuomo, P.S., Capolino, R., Dentici, M.L., Digilio M.C., Rana, I., Bartuli, A.

#### P55 | International Prader-Willi Syndrome Organisation (IPWSO)

Addressing the Ethical and Therapeutic Challenges of a Rare Disability: Hyperphagia and Other Behaviours in People with Prader-Willi Syndrome

Anthony Holland

Elizabeth Fistein, James O'Brien, Maria Libura

# THEME 3: SHARE, CARE, RARE: TRANSFORMING CARE FOR **RARE DISEASES BY 2030**

P56 | Vilnius University Hospital Santaros Klinikos

Inpatient Day Centre in Pediatric Unit of Vilnius University Hospital Santaros Klinikos

Viktoras Sutkus

Dovile Kalibatiene, Paule Stulginskaite, Rimante Cerkauskiene

P57 | Public Health England

Population based data collection of Wilson's Disease in England through a national rare disease register

Osob Mohamed

Mary Bythell, Jeanette Aston, Sarah Stevens

P58 | Wroclaw Medical University, Department of Pediatrics

Health Related Quality Of Life After Surgical Repair Of Esophageal Atresia Anna Rozensztrauch

Anna Rozensztrauch, Robert Smigiel, Dariusz Patkowski

P59 | CDH International

25 Year Retrospective on Congenital Diaphragmatic Hernia

Dawn Ireland

Tracy Meats, Kamal Salah, Darlene Silverman

P60 | The Office for Rare Conditions

The use of patient reported experiences to develop local solutions for individuals with rare and low prevalence conditions in the West of Scotland.

Martina Rodie

Martina Rodie, Elizabeth Dougan, Shannon Mullen, Daisy Johnston, Moncia Hytiris, Fasial Ahmed.

P61 | BridgeBio

Patient and family experience of ATTR Amyloidosis: Results of two focus groups David Rintell, Ed.D.

Florencia Braga Menéndez, Dena Heath, Jocelyn Ashford.

P62 | Public Health England

NCARDRS: A population-based congenital anomaly and rare disease register for

Mary Bythell

Jeanette Aston, Jennifer Broughan, Sarah Stevens

P63 | Institut de Myologie, Paris

Screening for neuromuscular diseases: Patient organisations' achievements in **European Reference Networks** 

Dr. Teresinha Evangelista

P64 | European Medicines Agency

Gene Therapy Medicinal Products (GTMPs) represent a paradigm shift in health care as they have great potential for preventing and treating rare diseases with high unmet medical need.

Francesca Tomeo

Segundo Mariz, Armando Magrelli, Violeta Stoyanova

P65 | Salivary Gland Cancer UK

Meeting unmet needs for Adenoid Cystic Carcinoma (ACC) research in the UK and beyond

Emma Kinloch

Robert Metcalf

P66 | European Reference Network RARE-LIVER

Quality of life in patients with autoimmune and cholestatic liver diseases: ongoing agenda in ERN RARE-LIVER NETWORK

Maciej K. Janik

M.K.Janik, E.Wunsch, T.Gevers, J. Willemse, M.Krawczyk, D.Thorburn, Ch.Schramm, A. Lohse, P.Milkiewicz

P67 | Dep. of Pediatric Nephrology, RoMed Kliniken, Rosenheim

Interdisciplinary Cystinosis Clinic Rosenheim - a treatment model for rare multiorgan diseases

Bechtold Dalla Pozza S., Buss M., Dosch R., Erler J., Froschauer S., Goebel J., Herzig N., Holla H., Getzinger T., Knerr C., Koeppl C., Ockert C., Passow M., Priglinger C., Rohayem J., Steidle G., Storf H., Thiele A., Vasseur J., Weber R., Weitzel D., Vill K., Hohenfellner K., and the Germann Cystinosis patient support group

P68 | Institut de Myologie, Paris

A registries hub against data siloing (ERN Euro-NMD Registry)

Dr. Teresinha Evangelista

Teresinha Evangelista, François Lamy, Florence Favrel-Feuillade, Dimitrios Athanasiou, Elizabeth Vroom, Adrian Tassoni, Peter-Bram t'Hoen

P69 | Department of Histology, University "Magna Græcia", Catanzaro, Italy A novel NIR spectroscopic qualitative method to monitor the diet compliance in **PKU** patients

Marco Vismara

G. Bonapace, O. Marasco, G. Scozzafava, M. Ashour, M. Pittelli, T. Greto, M.T. Moricca, S.A. Vismara, A. Valentini, D. Concolino, N. Perrotti

P70 | ORPHANET-INSERM

Codification for Rare diseases: the RD-CODE project support to Member States and beyond

Sylvie Maiella

Waed Abdel-Khalek-Haidar, Céline Angin, Virginia Corrochano, Ines Hernando, KurtKirch, Debby Lambert, Monica Mazzucato, Paola Facchin, Stefanie Weber, Miroslav Zvolsky and Ana Rath

P71 | Medical Informatics Group, University Hospital Frankfurt

The ERN-Lung Registry Data Warehouse in the European Reference Network **Respiratory Diseases** 

Holger Storf

Jannik Schaaf, James Chalmers, Heymut Omran, Oliver Sitbon, Martin Dugas, Sarah Riepenhausen, Thomas O.F. Wagner

P72 | Filière de Santé Maladies Rares des Malformations de la tête, du cou et des dents (TETECOU)

The French Rare Diseases Network TETECOU: improving diagnosis and healthcare, promoting education and supporting research for head, neck and tooth malformations

Myriam de Chalendar

Myriam de Chalendar, Inès Ben Aissa, Marie Daniel, Martin Fidalgo, Sandrine Mendy, Marie-Paule Vazquez and Nicolas Leboulanger

P73 | NF Kinder

**NF Kinder Center of expertise** 

Claas Röhl

Amedeo Azizi, Thomas Pletschko

P74 | Universitätsklinikum Hamburg-Eppendorf

Interface management concepts in the health care for rare diseases in Germany: A mixed-methods study to develop best practice recommendations

David Zvbarth

Maja Brandt, Ramona Otto, Laura Inhestern, Martin Härter and Corinna Bergelt

P76 | Frambu Resource Centre for Rare Disorders

Health education competence and rare disorders - an online and collaborative academic course on bachelor-level

Christoffer Hals

Gro Trae

P77 | University Hospital Tübingen, Institute of Medical Genetics

Knowledge travels, not trainees and trainers: joint webinar series of EAN, ERN EuroNMD and ERN-RND

Sania Hermanns

Annemarie Post, Alicia Brunelle, Holm Graessner

P78 | Sahlgrenska University Hospital

National Program Area - Rare diseases: Promoting and enabling knowledgebased, equal and resource-efficient healthcare for rare diseases in Sweden

Anna Wedell

Lovisa Lovmar, Marie Stenmark-Askmalm, Cecilia Gunnarsson, Maria Johansson Soller, Cecilia Soussi Zander, Magnus Burstedt, Anna Zucco, Anna Wedell

P79 | ERN eUROGEN

eUROGEN Share, care, cure. ERN for urorectogenital diseases and conditions

Michelle Battye

Naside Mangir, Darren Shilhan, Jen Tidman, Wout Feitz

P80 | ERN-EuroBloodNet

ERN-EuroBloodNet- Establishment of the European Network of Sickle Cell Disease **Patients Organizations** 

Mariangela Pellegrini

Mariangela Pellegrini, Pierre Fenaux, Béatrice Gulbis, Victoria Gutiérrez Valle, María del Mar Mañú Pereira

#### P81 | ERN-EuroBloodNet

#### ENROL, the European Rare Blood Disorders Platform

Victoria Gutiérrez Valle

Victoria Gutiérrez Valle, Béatrice Gulbis, Pierre Fenaux, Mariangela Pellegrini, Marina Kleanthous, Petros Kountouris, Stella Tamana, María del Mar Mañú Pereira

#### P82 | Heidelberg University Hospital / ERKNet

#### ERKNET, The European Rare Kidney Disease Reference Network

Vera Cornelius

Tanja Wlodkowski, Giulia. Bassanese, Claudia Sproedt, Franz Schaefer

#### P83 | UNESCO Chair, School of Health and Social Sciences, Institute of Technology Tralee, Ireland

### Living Well with Phenylketonuria (PKU) - the Irish PKU Community Perspective

Bernadette Gilroy

Dr Suja Somanadhan

#### P84 | HUS

#### An e-Learning program dedicated to Rare Eye Diseases in Europe, an ERN-EYE initiative

Leroux, Dorothee

Leroux, D., Dollfus, H.

### P85 | The Ehlers-Danlos Society

#### EDS ECHO: Worldwide, Case-based Learning And Support For Clinicians Managing Ehlers-Danlos Syndromes.

Dr Alan Hakim

Dr Clair Francomano, Lara Bloom, Stacey Simmonds, Angela Ballard, Dr Jane Schubart, Dr Rebecca Bascom

# P87 | Hope for Hypothalamic Hamartomas-UK; Hope for Hypothalamic

#### Centralised Efforts Transforming Global Care: The Ten-Year Impact of a Patient Advocacy Group - Medical Expert Partnership on Recognising and Treating a Rare and Complex Epileptic Brain Malformation Syndrome

Emma Nott

Lisa Soeby, Erica Webster, Kathryn Jensen, Kimberly Ranson

#### P88 | ePAG EpiCARE/Hope for Hypothalamic Hamartomas-UK

#### The Rare and Complex Epilepsies - Common Unmet Needs within the Patient Community

Allison Watson

Emma Nott, Isabella Brambilla, Torie Robinson, Rosaria Vavassori, Monica Lucente, Barbara Nicol, Carol-Anne Partridge, Anita Noordhoff

#### P90 | Genetic Alliance UK

#### How are patients with rare diseases and their carers impacted by the way care is coordinated in the UK? An exploratory qualitative interview study

Amy Simpson

Amy Simpson, Naomi Fulop, Emma Hudson, Stephen Morris, Angus Ramsay, Holly Walton and Amy Hunter.

#### P92 | University College Dublin

#### Identifying Research Priorities - Rare Disease Research Partnership (RAinDRoP) Dr Suia Somanadhan

Somanadhan, S., Nicholson, E., Dorris, E., Brinkley, A., Daly, A., Keenan, A., Awan, A., Ennis, S., Mc Garth, V., Mitchell, D., O'Sullivan, G., Power, J., Treacy, E., Lawlor, A., Harkin, P., Lynch, S.A., Donnelly, S., Kroll, T.

#### P93 | The Health Policy Partnership

### Expanding the availability of radioligand therapy to meet the treatment needs of people with neuroendocrine neoplasms.

Christine Merkel

Catherine H. Whicher, Nikie Jervis, Ken Herrmann, Jaroslaw Ćwikła, Jamshed Bomanji, Marianne Pavel, Suzanne Wait

#### P94 | The global Aortic Disease Awareness Day

### A Patient Perspective on Aortic Disease

Timo Söderlund

11 people helped in making the paper that is the basis of the poster.

### P96 | AveXis, Inc.

#### Economic Burden of Care and Treatment Options for Patients with Rett Syndrome: Two Systematic Literature Reviews

Omar Dabbous

Omar Dabbous, Vanessa Taieb, Emna Abdennadher, Meryem Bouchemi, Justyna Chorąży, Katarzyna Borkowska, Veneta Georgieva, Bryan E. McGill, Thomas A. Macek. Benit Maru

#### P97 | Department of Public Health and Caring Sciences, Uppsala University, Sweden

#### "Nobody could understand what was wrong with me"

Kerstin Hamberg Levedahl

Annika Nilsson, Birgitta Johansson, Mariann Hedström

#### P98 | Hospital Vall d'Hebron

#### The JOURNEY of living with a RARE DISEASE in 2030 MetabERN: how we share, how we care

Maurizio Scarpa

Coordinator on behalf of all the MetabERN Members

#### P100 | Berlin Institute of Health

The Collaboration on Rare Diseases (CORD-MI): A National Initiative to Improve the Documentation and Joint Use of Rare Disease Data in German University Hospitals Josef Schepers

#### P101 | University College London

#### What ways of coordinating care for rare conditions currently exist and are possible? Exploring models of care coordination and stakeholder preferences

Amy Simpson, Emma Hudson, Angus Ramsay, Amy Hunter, Naomi Fulop, and Stephen Morris.

#### P102 | HHT Sverige on behalf of HHT Europe

#### Bridging the Expertise Gap in HHT Emergency Care

Mildred Lundaren

Anne Goustille, Bienvenido Muñoz, Fernando Brocca, Dara Woods, Ralf Schmiedel, Claudia Crocione

#### P103 | Aix-Marseille Université, INRA, INSERM, C2VN, Marseille, France Impairment of Vitamin E intestinal secretion in primary hypobetalipoproteinemias: mechanistics studies in a cell model

Claire Bordat

Yan Xie, Nicholas Davidson, Marion Nowicki, Charlotte Halimi, Noël Peretti, Emmanuelle Reboul

### P104 | PTC Therapeutics International Limited

# Aromatic-L-amino acid decarboxylase (AADC) deficiency: What is it and how is

Sian O'Niell

Christian Werner MD., Serene Forte PhD, MPH., Axel Boehnke

## P105 | Sahlgrenska University Hospital

#### Nationally coordinated Whole Genome Sequencing of individuals with a suspected rare genetic disease

Lovisa Lovmar

Lovisa Lovmar, Magnus Burstedt, Hans Ehrencrona, Anna Lindstrand

#### P106 | Fondation René Touraine

#### The International Network on Rare Skin Diseases for Professionals and Patients Maya El-Hachem

Christine Bodemer, Arti Nanda, Hamida Turki

#### P107 | BNDMR

#### The French national registry for rare diseases: a whole rare disease registry at national level meeting challenges at EU level

Claude Messiaen

Sarah Otmani, Ahlem Khatim, Céline Angin, Anne-Sophie Jannot, Arnaud Sandrin

#### P108 | Radboud university medical center

#### New ERN GENTURIS guidelines on heritable TP53-related cancer syndrome and PTEN hamartoma tumour syndrome

Matt Bolz-Johnson

Matt Bolz-Johnson, Marc Tischkowitz, Nicoline Hoogerbrugge, Chrystelle Colas, Sjaak Pouwels, D. Gareth Evans, Svetlana Bajalica Lagercrantz, Carla Oliveira, Thierry Freboura.

### P109 | Radboud university medical center

#### The "Patient Journey" for children with Neurofibromatosis Type 1: improving care by patients involvement

Matt Bolz-Johnson, Claas Röhl, Eric Legius, D. Gareth Evans, Jelena Meek, and Nicoline Hoogerbrugge

### P110 | federg- erknet

#### How my ERN improves my healthcare

Susana Carvajal

Antonio Cabrera

#### P111 | University of Nottinham

#### Rare disease and Genomic educational needs of UK General practitioners

Will Evans

WRH Evans, J Tranter, I Rafi, J Hayward, N Qureshi

#### P112 | ERN-Skin

#### ERN-Skin: How to improve health through highly specialised HCP for rare or low prevalence complex skin & mucous membrane disorders

Prof. Christine Bodemer

Johann Bauer, Maya El-Hachem, Branka Marinovic

#### P113 | University Clinic Tuebingen

#### ERN-RND - Care standards for rare neurological diseases

Carola Reinhard

Rebecca Schuele-Freyer, Caterina Mariotti, Enrico Bertini, Alfons Macaya, Odile Boespflug-Tanguy, Samuel Groeschel, Ingeborg Krägeloh-Mann, Nicole Wolf, Rik Vandenberghe, Isabelle Le Ber, Markus Otto, Tobias Baeumer, Belén Pérez Dueñas, Giovanna Zorzi, Thomas Gasser, Wassilios Meissner, Anne-Catherine Bachoud-Lévi, Bernhard Landwehrmeyer, Juan Dario Ortigoza Escobar, Ludger Schöls, Holm Graessner

#### P116 | International Gaucher Alliance (IGA)

#### Global disease registry for neuronopathic GD

Tanya Collin-Histed

Maddie Collin; Elin Haf Davies

P118 | ERN GENTURIS (ERN on Genetic Tumour Risk Syndromes) & HCP Members (ErasmusMC-Sophia, Rotterdam)

#### **Elevator Pitch as Targets Communication Tools for Rare Conditions**

Matt Bolz-Johnson

Kathleen Claes, Anne Micallef, Matthew Bolz-Johnson

#### P119 | ERN ITHACA, EURORDIS, RARE DISEASES Romania & International Federation for Spina Bifida

#### Patient Journey Common Needs: Rare congenital malformations + syndromes with intellectual and other neurodevelopment disorders

Ammi Sundavist

Matt Johnson, Yvonne Milne, Ammi Sundqvist, Gabor Pogany, Sue Routledge, Carole Herman

#### P120 | Hospital Clínic, Barcelona University

# Complement as the Enabler of Carfilzomib Induced Thrombotic Microangiopathy

Miguel Blasco

Miquel Blasco, Alexandra Martínez-Roca, Sergi Torramadé-Moix, Alex Ramos, Pedro Castro, Sara Fernández, Ana Belen Moreno, Josep M. Campistol, Maribel Diaz-Ricart, and Marta Palomo

#### P121 | CMTC-OVM

#### Patient Journey Cutis Marmorata Teleangiectatica Congenita (CMTC)

Lex van der Heijden

Lex van der Heijden

# P122 | Naevus Global

## Patient Journey Congenital Melanocytic Naevus Syndrome

Mariolein van Kessel

#### P278 | Pro Rare Austria

## Unmet Needs of Rare Disease Patients during the COVID-19 Pandemic

Dominique Sturz, Irene Promussas, Thomas Kroneis, Claas Röhl

# THEME 4: WHEN THERAPIES MEET THE **NEEDS: ENABLING A PATIENT-CENTRIC** APPROACH TO THERAPEUTIC DEVELOPMENT

#### P124 | Oslo Metropolitan University

From research to practice: distal myopathy patients' HRQoL and their need for assistance and care

Yukiko Nishimura

Yukiko Nishimura, Shun Emoto

#### P125 | Pulse Infoframe Inc.

#### Rare Disease Research: The Importance of Precision Medicine and Real-World Data (RWD)

Femida Gwadry-Sridhar

C. Elizabeth McCarron, Femida Gwadry-Sridhar

#### P127 | NPO ASrid

Patients' impressions of a clinical study/clinical trial and factors contributing to the impressions: A questionnaire study

Shun EMOTO

Kota Ninomiya, Yukiko Nishimura

#### P128 | European Medicines Agency

#### Orphan medicinal products for the treatment of pancreatic cancer

Jorn Mulder

Segundo Mariz, Violeta Stovanova

#### P129 | Kharkiv Charitable Foundation "Children with Spinal Muscular Atrophy", CSMA, Ukraine

The specificity of collecting Patient-Reported Outcome Measures by "patientdriven" registries for rare diseases vs "doctor-driven" using the example of the Ukrainian Registry for Spinal Muscular Atrophy

Vitaliy Matyushenko

Andriy Shatillo

#### P130 | MediTech Media

#### Creating systematic and meaningful partnerships with the spinal muscular atrophy (SMA) community for therapy development

Senam Beckley-Kartey, Dylan Trundell, Hannah Staunton, Rakesh Kantaria, Florian Lipsmeier, Michael Lindemann, Kristina Gelblin, Nicole Gusset, Mencia de Lemus, Vitaliv Matvushenko, Michael Ostland

#### P131 | Novartis

#### Burden of Illness and Quality of Life Among Patients with Tuberous Sclerosis Complex: Assessed as Part of the International TOSCA study

Federica Castiglione

Anna Jansen, Elena Belousova, Mirjana P. Benedik, Tom Carter, Vincent Cottin, Paolo Curatolo, Maria Dahlin, Lisa D'Amato, Guillaume B. d'Augères, Petrus J. de Vries, José C. Ferreira, Martha Feucht, Carla Fladrowski, Christoph Hertzberg, Sergiusz Jozwiak, John A. Lawson, Alfons Macaya, Ruben Marques, Rima Nabbout, Finbar O'Callaghan, Jiong Qin, Valentin Sander, Matthias Sauter, Seema Shah, Yukitoshi Takahashi, Renaud Touraine, Sotiris Youroukos, Bernard Zonnenberg, J Chris Kingswood

# P132 | LUMC, dept. epidemiology

#### 'Half a century of medical and social data on hemophilia in the Netherlands, 1971 - 2020'

Cees SMIT

Cees Smit and Mariëtte Driessens

#### P133 | VOZ Advisors

#### Innovation In Patient Engagement: Examples Of Enhanced Patient Engagement **Efforts In The Pharmaceutical Industry**

Cláudia Hirawat

### P134 | Portuguese Association for Congenital Disorders of Glycosylation (APCDG), CDG&Allies-PPAIN

#### Families and professionals united to tackle the therapeutic needs of Congenital Disorders of Glycosylation

Carlota Pascoal

Rita Francisco, Sandra Brasil, Dorinda Marques-da-Silva, Paula Videira, Vanessa dos Reis Ferreira

#### P135 | CML Advocates Network

# CML Patients' Views on Psychological Support Throughout the Treatment-Free

Giora Sharf

Celia Marín, Jan Geissler, Zack Pemberton-Whiteley, Felice Bombaci, Rita O. Christensen, Bahija Gouimi, Mina Daban, Nigel B. Deekes, Jennie Bradley

#### P138 | KTH - Royal Institute of Technology

#### Molecular markers for tracking skeletal muscle function in Duchenne Muscular Dystrophy

Camilla Johansson

Andreas Hober, Fredrik Edfors, Erik Niks, Pietro Spitali, Cristina Al-Khalili Szigyarto

#### P140 | OPEN Health Medical Communications

# Insights into Generalized Pustular Psoriasis (GPP) Using Real-World Data

Nirali Kotowsky, Ran Gao, David Singer, Elizabeth M Garry, Amanda K Golembesky

#### P141 | INSERM, US14 - Orphanet

#### Meeting challenges in evaluating and measuring functioning in rare diseases: a collaboration between Orphanet and Mapi Research Trust

Gavin McDonough

Annie Olry, Gavin McDonough, Charlotte Rodwell, Ana Rath, Benoit Arnould, Celine Desvignes-Gleizes, Laure-Lou Perrier, Catherine Acquadro

#### P142 | PRA Health Sciences

# How to Expedite the Drug Development Process in the EU, the US and Japan

Terese Johansson

Pauline Leslie, Arwa Shurrab, Morihiro Sakata, Rosie Dawes

#### P143 | Fondazione Telethon

# Fondazione Telethon meets the Patients' Associations needs through the development of a "Seed Grant"

Alessandra CAMERINI

Alessandra Zatti, Ermanno Rizzi, Elena Bruno, Manuela Battaglia

# P144 | Dutch Pituitary Foundation / Endo-ERN

#### Patients' view on the unmet need in endocrine medical research

Johan de Graaf

Prof. dr. Martine Cools, Prof. dr. Marta Korbonits, Prof. dr. Alberto Pereira, Prof. dr. Olaf Hoirt, Johan de Graaf

### P145 | Syneos Health

#### An integrated patient-centric development plan, when applied to rare and orphan medicinal products (OMPs), can accelerate time to market by 12 to 36 months

Marvna Kolochavina

Dr. James Featherstone

#### P146 | Association Française du Diabète Insipide (AFDI)

### New approach of medical care in diabetes insipidus.

Buono Suzie

Laurent Hélène and Poly Marie-sophie

#### P147 | Vifor Fresenius Medical Care Renal Pharma

#### Management of daily ANCA-associated vasculitis (AAV) self-care needs: A suite of new online resources

Dijana Krafcsik

Peter Rutherford (MD). Dieter Götte (MD)

#### P148 | University of Calgary/ Canadian Neuromuscular Disease Registry Incorporating Patient Voice into Real-World Evidence Generation in Canadian **Neuromuscular Disease Registry**

Linh Vu

Hodgkinson V, Vu L, M'Dahoma S, Lounsberry J, Brais B, Campbell C, Johnston W, McCormick A, Nguyen CT, O'Ferrall E, Oskoui M, Korngut L and the CNDR Investigator Network.

#### P149 | Fundación Española para el Estudio y Terapéutica de la Enfermedad de Gaucher y otras lisosomales (FEETEG)

#### TRAZELGA Project: Preliminary results of the prospective national-base multicenter study to standardize the follow-up of type 1 Gaucher disease patients treated with Eliglustat.

Irene Serrano Gonzalo

López de Frutos L, Cebolla JJ, Mora E, Lahoz C, Fernández-Galán MA, Morales-Conejo M, Delgado-Mateos F, Calle-Gordo V, Vitoria-Miñana I, Correcher-Medina P, Rodríguez-Fernández A, Hernández-Rivas JM, García-Frade J, Ibarretxe-Gerediaga D, Villalón-Blanco L, Tormo-Díaz MM, Ruíz-Guinaldo MA, Mora-Castera E, Noya-Pereira MS, López-Dupla M, Balanzat-Muñoz J, Fernández-Cofrades E, Lozano-Almela ML, Pérez de León, Molero-Labarta T, Fernández-Canal MC, Pérez-Montaña A, Andrade-Campos M, Giraldo P.

#### P151 | European Paediatric Translational Research Infrastructure

#### EPTRI - European Paediatric Translational Research Infrastructure: accelerating the future of the paediatric research

Donato Bonifazi

Mariangela Lupo, Valeria Pignataro, Giovanni Migliaccio, Adriana Ceci

#### P152 | Cystinosis Ireland

#### Worldwide Cystinosis Community Advisory Board

Denise Dunne

Denise Dunne, Anne Marie O'Dowd, Rob Camp

#### P153 | CERGAS SDA Bocconi

#### The estimation of health state utility values in rare diseases: overview of the existing techniques.

Michela Meregaglia

Elena Nicod, Michael Drummond

#### P154 | Centre for Research on Health and Social Care Management, SDA Bocconi University

#### Using PROMs in HTA for Rare Disease Treatments

Amanda Whittal

Elena Nicod, Michela Meregaglia, Mike Drummond

#### P155 | Fondazione Policlinico Universitario «A. Gemelli» IRCCS

#### Antithrombotic therapy in subjects with hereditary hemorrhagic telangiectasia: update of prospective data from a Multidisciplinary group

Fabiana Agostini

Eleonora Gaetani, Angelo Porfidia, Igor Giarretta, Annalisa Tortora, Daniela Feliciani, Luigi Di Martino, Antonio Gasbarrini, Roberto Pola

#### P157 | Dutch CF Foundation

#### The Cystic Fibrosis Community Advisory Board (CF-CAB) - how we measure our successes

Marja Nell

Rob Camp, Hilde de Keyser

## P158 | EURORDIS

#### The Value of Patient Engagement in Research Design: The EURORDIS Patient-Led Community Community Advisory Boards (CABs)

François Houÿez

### P159 | Genetic Alliance UK

#### Priorities for research in primary mitochondrial disease: patients' and clinicians' Top 10.

The Steering Group of the Mitochondrial Disease Priority Setting Partnership

#### P160 | LEO Pharma

#### Co-Creation from the Get-Go - Understand the Known and Unknown needs

Lasse Funch Jacobsen

Lasse Funch Jacobsen

#### P161 | ERN-EYE

#### How to welcome visually impaired people to the hospital? ERN-EYE Educational video for healthcare professionals

#### P162 | Newcastle University

#### Expert advice to improve clinical trials: from TACT to ACT

Joanne Lee

Volker Straub, Annamaria De Luca, Cathy Turner, Victoria Hedley

#### P163 | AKU Society

# The first effective treatment for AKU: A collaborative, patient centric effort

Ciarán Scott

Prof Lakshminarayan Ranganath, Nick Sireau

#### P164 | Andalusian Network for Advanced Therapies - Andalusian Public **Foundation Progress and Health**

### European Network for a rare eye disease: ANIRIDIA-NET

Ivana Kildsgaard

Ivana Kildsgaard, Juliana Martinez-Atienza, Klaus Cursiefen, Neil Lagali

#### P167 | Ultragenyx Pharmaceutical Inc.

#### The MPS VII Disease Monitoring Program (DMP) is a novel, longitudinal, cohort program with rigor beyond a traditional registry

Deborah Marsden, MD

Robert Hostutler MS. Tricia Cimms MPH

P168 | Sorbonne Université - Inserm UMRS 974, Center of Research in Myology, Institut de Myologie, G.H. Pitié-Salpêtrière Paris, France

Treatabolome: a rare diseases treatment awareness project

Antonio Atalaia

Antonio Atalaia, Rachel Thompson, Alberto Corvo, Leigh Carmody, David Pisicia, Leslie Matalonga, Alfons Macaya, Angela Lochmuller, Bertrand Fontaine, Birte Zurek, Carles Hernandez-Ferrer, Carola Reinhard, David Gómez-Andrés, Gulcin Gumus, Jean-François Desaphy, Katherine Schon, Katja Lohmann, Matthew Jennings, Matthis Synofzik, Olaf Riess, Rabah Ben Yaou, Teresinha Evangelista, Thiloka Ratnaike, Virginie Bros-Facer, Rita Horvath, Patrick Chinnery, Steven Laurie, Holm Graessner, Peter Robinson, Hanns Lochmüller, Sergi Beltran, Gisèle Bonne

# THEME 5: ACHIEVING THE TRIPLE A'S BY 2030: ACCESSIBLE, AVAILABLE AND AFFORDABLE TREATMENTS FOR PEOPLE LIVING WITH A RARE DISEASE

P170 | Medical Informatics Group (MIG), Frankfurt, University Hospital, Theodor-Stern-Kai 7, 60590 Frankfurt, Germany

The internet platform EXABO - from beta to full version

Désirée Walther

Désirée Walther, Olivia Steinmann, Jannik Schaaf, Thomas Wagner and Holger Storf

P171 | Biological Research Center Margarita Salas

Targeting  $\beta$ 2-adrenergic receptors as a new strategy for von Hippel-Lindau disease Angel M Cuesta

Albiñana V, I. de Rojas-P, Gallardo-Vara E, Recio-Poveda L, Villar Gómez de Las Heras K, Aguirre DT, and Botella LM.

P172 | KU Leuven

How to define the value of orphan drugs? A comparative analysis of value assessment frameworks across Europe (EUROVAF)

Alessandra Blonda

Isabelle Huys, Yvonne Denier, Steven Simoens

P173 | University of Leicester

Project HERCULES: The Challenges of Estimating Multi-State Model Transitions in Rare Diseases: Creating a Natural History Model for Duchenne Muscular Dystrophy

Jonathan Broomfield

Broomfield J, Hill M, Crowther MJ, Larkindale J, Guglieri M, Godfrey J, Chandler F, Abrams KR

P177 | The Finnish Association of People with Physical Disabilities

The comprehensive musculoskeletal post-acute ICF core set as a tool to formulate a questionnaire and internally consistent sum variables describing people with skeletal dysplasia

Hanna Hyvönen

Hanna Hyvönen, Heidi Anttila, Susanna Tallqvist, Minna Muñoz, Sanna Leppäjoki, Antti Teittinen, Outi Mäkitie, Sinikka Hiekkala

Managing clinical and economic uncertainty in the value assessment of innovative gene and cell therapies - adjustments to health technology assessments and innovative payment models

Darren Callanan

Richard Sear, Karolina Hanslik, Marc Dziasko

P180 | Comenius University in Bratislava, Faculty of Pharmacy, Dpt. of Pharmacology and Toxicology and Slovak aliance for rare diseases

How accessible are orphan medicinal products in Slovakia?

Tatiana Foltanova

Gabriela Hrckova

P181 | Consejo Superior de Investigaciones Científicas (CSIC) (National Research Council Spain)

Propranolol, an accessible, affordable, and available orphan drug for the von Hippel-Lindau disease.

Luisa Maria Botella Cubells

Albiñana, V, de las Heras K, Gonzalez B, Jimenez R, Aguirre, D, Cuesta AM

P182 | KU Leuven

Methodological Quality of Budget Impact Analyses for Orphan Drugs: An Updated

Abdallah Khadidja

Huys Isabelle, Claes Kathleen, Simoens Steven

P183 | Partners4Access

Driving patient access for treatments targeting rare genetic disorders in the Middle East

Ciaran Cassidy

Akshay Kumar

P184 | European Confederation of Pharmaceutical Entrepreneurs (EUCOPE) A 20th anniversary analysis of the EU OMP Regulation: achievements and future outlooks

Vittoria Carraro

P185 | Centre for Research on Health and Social Care Management, SDA **Bocconi University** 

The Impact of Country Specific Methods of Appraising Rare Disease Treatments

Amanda Whittal

Elena Nicod

P186 | Metabolic Support UK

Delivering the patient voice: XLH and the NICE HST appraisal process

Lindsay Weaver

Lindsay Weaver, Pushpa Hossain, Joanne Byrne & Josie Godfrey

P187 | Chinese Organization for Rare Disorders

China Rare Disease Drug Accessibility Report 2019

Kevin Huang

ERIC SHAO, EILEEN LI, GRACE WANG, MIRROR ZHU, LEI XIAO, MAKBULE TOP, QI

P188 | Sarepta Therapeutics

Health-related quality of life (HRQoL) and economic burden of Duchenne Muscular Dystrophy (DMD): a systematic literature review

J. Iff, C. McCloskey, C. Fidler, N. Goemans

P189 | Global Market Access Solutions

Estimating the broader fiscal impact of rare diseases using a public economic framework: A case study applied to acute hepatic porphyria (AHP)

Mark Connolly

Saswat Panda, Julien Patris

P190 | Unit of Pharmacoepidemiology & Pharmacoeconomics, Department of Pharmacy, University of Groningen

Estimating the broader fiscal impact of rare diseases using a public economic framework: A case study applied to hereditary transthyretin-mediated (hATTR) amyloidosis

Mark Connolly

Julien Patris, Saswat Panda, Bouke P.C. Hazenberg

P193 | DEBRA Ireland

Economic Burden of Epidermolysis Bullosa: Evidence from Ireland

Darragh Flannery, Claire Doyle, Avril Kennan, Fiona Aherne

# THEME 6: THE DIGITAL HEALTH **REVOLUTION: HYPE VS. REALITY**

P194 | European Cystic Fibrosis Society Patient Registry

The European Cystic Fibrosis Society Patient Registry's Data Quality programme.

Andreas Jung

Van Rens J., Fox A., Krasnyk M., Orenti A., Zolin A., Jung A., Naehrlich L.

P195 | Casimir

Evidence of content validity of the Duchenne video assessment scorecards from a Delphi panel study

Marielle Contesse

Linda Lowes, Michelle K. White, Laura Dalle Pazze, Christine McSherry, Mindy Leffler

P196 | Aparito

PROvide: Video based Patient Reported Outcomes for Sanfilippo Disease: a new and innovative approach to record and measure disease post gene therapy.

Dr Elin Haf DAVIES

C O'Neil, S Parker, M Leffer

P198 | Universitat Politècnica de Catalunya

Mapping layperson medical terminology into the Human Phenotype Ontology using Neural Network models

Enrico Manzini

Jon Garrido-Aguirre, Alexandre Perera-Lluna

P199 | Aparito

Can wearable sensor technology support a paradigm shift in paediatric rare disease research?

Cécile Ollivier

Elin Haf Davies, Pip Griffiths

P200 | Frambu resource centre for rare disorders

Development of SIBS-online: an internet-based group intervention for siblings and parents of children with rare disorders

Torun Marie Vatne

Lauren Kelada, Silje Systad and Krister W. Fjermestad

P201 | Stichting Shwachman Syndrome Support Holland

Global semantic interoperability a tool to ensure full participation in society. Rob Braamburg

Petra Poulissen, Elmas Citak, Tessa Risch, Liesbeth Siderius

P202 | Novartis Pharma AG

Virtual Reality: An Innovative approach to sharing learnings with Health Care Professionals on Cytokine Release Syndrome and neurological events after Chimeric Antigen Receptor T Cell Therapy (CAR-T) Infusion

Simona Paratore

P203 | IRCCS Istituto Ortopedico Rizzoli

Establishing the first pan-European Registry for Rare Bone and Mineral Disorders Marina Mordenti

Marina Mordenti, Ines Alves, Rebecca Skarberg, Ondrej Soucek, Marco Ross, Corinna Grasemann, Kassim Javaid, S. Faisal Ahmed, Agnès Linglart, Klaus Mohnike, Wolfgang Högler, Luca Sangiorgi, and Natasha Appelman-Dijkstra

P204 | University Hospital of Frankfurt, Department of Paediatric Surgery and Paediatric Urology

Establishing a registry on rare congenital malformations in Germany

Andrea Schmedding

Udo Rolle, Jessica Vasseur, Holger Storf and the KiRaFe-Group

P205 | Meditech Media

Application of a digital monitoring platform to track severity and progression in Huntingdon's disease

Cedric Simillion, Atieh Bamdadian, Anne Smith, Scott A. Schobel, Rosanna Tortelli, Filipe B. Rodrigues, Lauren M. Byrne, Edward J. Wild, Michael Lindemann

P206 | Ada Health GmbH

Just how rare are rare diseases on Ada, a medical symptom checker?

Vanessa Lemarié

Paul Wicks, Simon Ronicke, Fiona Pick

P207 | Medical Informatics Group, University Hospital Frankfurt

SAVE - An online tool to improve diagnosis and therapy of patients with cystinosis as an exemplary approach for rare diseases

Jessica Vasseur

Froschauer S, Göbel J, Boulesteix A-L, Erler J, Herzig N, Holla H, Knerr C, Koeppl C, Niessl C, Passow M, Priglinger C, Steidle G, Treikauskas U, Wolff S, Weitzel D, Vill K, Hohenfellner K, Storf H

P209 | Alma Mater Studiorum - University Of Bologna

Patient Knowledge Extraction and Representation from Unlabeled Social Posts

Giacomo Frisoni

Gianluca Moro, Antonella Carbonaro

P210 | Sant Joan de Déu Research Foundation

Share4Rare: a collaborative platform for rare diseases

Sara Hernández-Ortega

Dimitrios Athanasiou, Nicholas Brooke, Inma Chapí, Anaïs Lecorvec, Avril Palmeri, Alex Perera, Bettina Ryll, Begonya Nafria

P211 | International Niemann-Pick Disease Registry

A global gateway to a lasting legacy - harnessing digital communications to empower patients to share their experiences to progress research and treatment.

Angela Wilson

Toni Mathieson, Shaun Bolton, Jackie Imrie

P212 | European Reference Nertwork Rare Eye Diseases (ERN-EYE)

Clinical Patient Management System and ERN-EYE - solving rare eye diseases complex cases

Agnė Kručaitė

F. Rotolo, L. Mauring, ERN-EYE CPMS health care professionals, D. Leroux, H. Dollfus

P213 | BNDMR

The French national registry for rare diseases: feedback from a FAIRification process

Angin céline

Claude Messiaen, Thibault Pichon, Romain Vassilieff, Anne-Sophie Jannot, Arnaud Sandrin

P214 | Centre for Rare Diseases Tübingen (CRDT), University Hospital Tübingen (UKT), Calwer Str. 7, 72076 Tübingen, Germany

ORPHAcoding RD Patients in a Rare Disease Centre - The Tübingen Solution

Holm Graessner

Jutta Eymann, Vera Belka, Maria Gulde

P215 | Vrije Universiteit Brussel

Beliefs of people with a rare disease about how active a role they can play when consulting a specialist

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Katliin Sanctorum

An Jacobs

**P216** | Geneva University Hospitals

Preliminary Evaluation of a mHealth Coaching Conversational Artificial Intelligence (AI) for the Self-Care Management of People with Sickle-Cell Disease (SCD)

David-Zacharie Issom

Jessica Rochat, Gunnar Hartvigsen, Christian Lovis

**P217** | Rare diseases Sweden

Social media training by patient organisations for patient organisations

Britta Berglund

Jana Bergholtz and Mildred Lundgren

P218 | Hackensack University Medical Center

A Data Analytics Approach to Rare Disease Discovery

Kenneth Lieberman, MD

# THEME 7: RARE DISEASE PATIENT **GROUPS INNOVATIONS**

**P219** | ASrid

Rare Disease Day Activity in Japan - Social awareness campaign by various organizers

Yukiko NISHIMURA

Shun Emoto, Masatoshi Iwasaki, RDD Japan team, and RDD Japan Secretariat office

P220 | Planet 5p

Planet 5P Project. A Cri Du Chat Syndrome Global Community

Cristina Bel Fenellós

Carolina Nicolás Lozano, Margarita Pajón Naranjo

P221 | Genetic Alliance UK

Developing Rare Resources for Scotland: Utilising methods of co-production to meet the information needs of people with rare, genetic or undiagnosed conditions and the health professionals involved in their care.

Natalie Frankish

P222 | Cystic Fibrosis Europe

Improving communication about clinical trials in Cystic Fibrosis: a starting point for plain language summaries

Hilde De Keyser (1)

Emmanuelle Bardin, Jill Bonjean, Fiona Dunlevy, Rebecca Brendell, Lorna Allen.

P223 | Deutschsprachige Selbsthilfegruppe für Alkaptonurie e.V.

Setting up an infra-structure of healthcare for Alkaptonuria in Germany by dissemination and networking

Leona Wagner

Harald Wilke, Marion Hoyer, Gerhard Meng, Konstantinos Kolokotronis, Stephan vom Dahl, Anibh Das, Athanasia Ziagaki

P224 | Salla Treatment and Research Foundation

The use of social media to create a foundation and drive research on rare diseases Ann Persson

P225 | Rare Disease Kenya

When Lightning Strikes Twice, Differently

Christine Mutena

P227 | CML Advocates Network

CML Patients Advocates Network implementation of the Community Advisory Board (CAB) Model

Celia Marín

P228 | MPNErare- MPNE's subnetwork for rare Melanomas

Essential Requirements for Uveal Melanoma Guidelines- learnings from the first MPNE patient consensus meeting

Bettina Ryll

Bettina Ryll, Gilly Spurrier, Violeta Astratinei, Fredrik Östman, Iain Galloway, Andrew Evans, Erik Näsman, Oskar Näsman, Dick Plomp, Audrey Woraker, Martina Rooijakkers, Ioana Dogaru and Jo Gumbs

P231 | JG Zebra Consulting

Project HERCULES: Overcoming the Health Technology Assessment hurdle through patient led collaboration

**Emily Crossley** 

Fleur Chandler, Josie Godfrey, Keith Abrams, Jill Carlton, Juliet Mumby-Croft, Jamie O'Hara, Philip Powell,

P232 | Medics4RareDiseases

Consistent follower engagement on social media can grow your audience and raise awareness of rare diseases

Dr Lucy McKay Jo McPherson

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P233 | Digimevo

Improving patient communication and education using POC (Point of Care)

Xavier Lleixà

Lleixa X, Panisello J, Carro A, Fonfría M, Solé M

P234 | CIBERER

CIBERER experience: Giving Patients a Seat at the Table

BEATRIZ GOMEZ GONZALEZ

Beatriz Morte

P235 | Findacure

Building a set of training resources to help rare disease patient groups form, grow, and maximize their impact.

Mary Rose Roberts

Mary Rose Roberts, Philippa Norman, Laura Thompson-Harper

P236 | Swedish Association of Chronic Oedema (Svenska Ödemförbundet) Lympho-logical thinking in self management of primary lymphoedema and other rare diseases involving lymphoedema

Margareta Haag

Helena Janlöv Remnerud

P237 | San Raffaele Scientific Institute

Blood - Brain Barrier Permeabilization with Engineered Tumor Necrosis Factor- $\alpha$  followed by R-CHOP as Salvage Therapy in Primary CNS Lymphoma

Andrés J.M. Ferreri

Teresa Calimeri, M.D., Ph.D.; Maurilio Ponzoni, M.D.; Flavio Curnis, M.S.; Gian Marco Conte, M.D.; Eloise Scarano, M.S.; Eltjona Rrapaj, Ph.D; Daniela De Lorenzo, M.S.; Dario Cattaneo, M.D.; Federico Fallanca, M.D.; Alessandro Nonis, M.S.; Marco Foppoli, M.D.; Paolo Lopedote, M.D.; Giovanni Citterio, M.D.; Letterio S. Politi, M.D.; Marianna Sassone, M.D.; Piera Angelillo, M.D.; Elena Guggiari, M.D.; Sara Steffanoni, M.D.; Vittoria Tarantino, M.D.; Fabio Ciceri, M.D.; Claudio Bordignon, M.D.; Nicoletta Anzalone, M.D.; Angelo Corti, Ph.D; Andrés J. M. Ferreri, M.D.

P238 | ePAG Italy

Fostering the integration of European Reference Networks into National Health Systems: the creation of ePAG Italia

Diana Marinello

I.Brambilla, C. Ales, L. Brunetta, I. Galetti, D. Marinello, D. Vitali, A. Scopinaro

**P239** | European Federation of Associations of Patients with Haemochromatosis (EFAPH)

EFAPH: European umbrella for better care of hemochromatosis patients in the world

Mária Ábele

IngMarie Bohmelin, Pr. Pierre Brissot, Dr. Barbara Butzeck, Dr. Annick van Clooster, Françoise Courtois, Ann Mc Grath, Ana Carolina Moreira, Pr. Graça Porto, Dr. Emerência Teixeira, Ketil Tosca, Pr. Mayka Sanchez Fernandez, Robert Sorill, Dag Erling Stakvík

P241 | Fondazione Policlinico Universitario A. Gemelli IRCCS, Rome, Italy Topical Approaches And Therapeutic Strategies For Epistaxis in Hereditary

Hemorrhagic Telangiectasia: Personal Experience

Mariaconsiglia Santantonio

A Tortora, L Corina, E Gaetani, ME Riccioni, GC Passali and Multidisciplinary Gemelli Group for HHT

**P242** | Bulgarian Huntington Association

Empowering people with rare diseases

Nataliya Grigorova

Constantinos Economides

P243 | Yumen Bionics

USUALL: Childfriendly Design for Assisitive Devices

Laura Koot

Paulien Klap

P244 | #spg15

Hereditary Spastic Paraplegia 15

Carina Thurgood

Carina Thurgood

P245 | Karolinska University Hospital

Karolinska Center for Rare Diseases - For Improved Care of Patients with Rare Diseases

Rula Zain

Katja Ekholm, Eva Ekblom, Charlotte Willfors, Charlotta Ingvoldstad-Malmgren, Kristina Gustafsson-Bonnier, Karin Kindberg, Maria Soller

P247 | AveXis, Inc.

Real-World Treatment Patterns and Outcomes in Patients with Spinal Muscular Atrophy Collected From the RESTORE Registry

Marcus Droege

Laurent Servais, John W. Day, Darryl C. De Vivo, Janbernd Kirschner, Eugenio Mercuri, Francesco Muntoni, Perry B. Shieh, Eduardo Tizzano, Isabelle Desguerre, Susana Quijano-Roy, Kayoko Saito, Omar Dabbous, Ankita Shah, Farid Khan, Frederick A. Anderson, Richard S. Finkel

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MARIOS VAKANAS

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**EJP** 

The European Joint Programme on Rare Diseases (EJP RD) brings over 130 institutions (including all 24 ERNs) from 35 countries to create a comprehensive, sustainable ecosystem allowing a virtuous circle between research, care and medical innovation.

**EMA** 

The European Medicines Agency (EMA) is a decentralised agency of the European Union (EU). The Agency is responsible for the scientific evaluation, supervision and safety monitoring of medicines in the EU. EMA protects public and animal health in EU Member States, as well as the countries of the European Economic Area, by ensuring that all medicines available on the EU market are safe, effective and of high quality.

**EURORDIS** 

Come and visit the EURORDIS stand to find out the latest about our projects and activities, see our publications and speak to our team. The organisers behind ECRD, EURORDIS-Rare Diseases Europe is a unique, non-profit alliance of 917 rare disease patient organisations from 72 countries.

EUROPEAN MEDICAL JOURNAL The EMJ, is an independent, open-access eJournal dedicated to delivering first-class insights into ground-breaking changes, and advancements in medicine. Spanning eighteen therapeutic areas, including Innovations, Cardiology, Oncology, and more, each journal provides the reader with the latest medical congress highlights, abstract reviews, and peer-reviewed articles to name but a few of its wide content selection.

EUROPEAN REFERENCE NETWORKS The European Reference Networks (ERNs) gather doctors and researchers with high expertise in the fields of rare or low-prevalence and complex diseases. They are "virtual networks" which discuss the diagnosis and the best possible treatment for patients from all over Europe. 24 ERNs were launched in 2017, involving more than 900 highly specialised healthcare teams, located in more than 300 hospitals in 26 European countries.

# **EXHIBITORS**

# GLOBAL COMMISSION

The Global Commission is a multidisciplinary group of experts from around the world, co-chaired by Takeda, Microsoft and EURORDIS-Rare Diseases Europe, who have brought their creativity, technological expertise and passion to accelerate the time to diagnosis for children with a rare disease. Our vision is a clear path to a timely, accurate diagnosis for children around the world.

# **IRDIRC**

The International Rare Diseases Research Consortium (IRDiRC) unites national and international governmental and non-profit funding bodies, companies (including pharmaceutical and biotech enterprises), umbrella patient advocacy organizations, and scientific researchers to promote international collaboration and advance rare diseases research worldwide.

# **OPENAPP**

OpenApp develop patient registries for patient reported and clinical data. Our platform has been configured for many therapeutic areas, generating Real World Evidence to support advocacy, research, and pharmacovigilance. Stop by our virtual booth to learn more and speak to a representative.

# ORCHARD THERAPEUTICS

Orchard Therapeutics is a global gene therapy leader dedicated to transforming the lives of people affected by genetic diseases through the development of innovative, potentially curative gene therapies. Our ex vivo autologous gene therapy approach harnesses the power of genetically-modified blood stem cells and seeks to correct the underlying cause of disease in a single administration.

# **ORPHANET**

Orphanet (www.orpha.net) is a unique resource, gathering and improving knowledge on rare diseases. Orphanet aims to provide high-quality information on rare diseases, and ensure equal access to knowledge for all stakeholders. Orphanet also maintains the Orphanet rare disease nomenclature (ORPHAcode), essential in improving the visibility of rare diseases in health and research information systems.

# **RARE 2030**

Rare 2030 is a foresight study that gathers the input of a large group of patients, practitioners and key opinion leaders to propose policy recommendations that will lead us to improved policy and a better future for people living with a rare disease in Europe. This a two year project that will end in a presentation to parliament at the end of 2020 with recommendations on the most critical areas needing sound policy.

# RARE BAROMETER

Rare Barometer is the EURORDIS evidence-based advocacy programme that aims to transform rare disease patients' opinions and experiences about topics that directly affect them into figures and facts. It connects researchers and policymakers to questions that matter to rare disease patients. Rare disease patients can register for our programme and take part in our surveys and studies.

# RARE REVOLUTION MAGAZINE

Rare Revolution Magazine provides exceptional articles of interest to the rare disease community. You will find compelling voices from rare disease advocates and patients, articles from clinical, research and pharmaceutical teams and the latest in 'RARE' advancements.

Be part of the #rarerevolution.

Visit www.rarerevolutionmagazine.com to subscribe for free.

# SAREPTA

Armed with the most advanced science in genetic medecine, we are in a daily race to rescue lives otherwise stolen by rare disease. At Sarepta, everyday is another twenty-four hours to stand up for patients, advance technology, challenge convention, and drag tomorrow into today.

# **SBONN**

SBONN was founded in 2014 by umbrella organisations and networks representing people living with rare diseases in Denmark, Finland, Iceland, Norway and Sweden. SBONN aims to promote the exchange of ideas, knowledge, learning and understanding of living with a rare disease and/or disability across national borders in the Nordic region.

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