International Symposium Rare Disease Day 2023 - Warmia and Mazury, Olsztyn
„Challenging diagnosis, challenging treatment - together to success!"

Ladies and gentlemen,

on behalf of the Organizers, I have the pleasure to invite you to participate in the International Symposium Rare Diseases Day 2023 *„ Challenging diagnosis, challenging treatment - together to success!"* organized on the occasion of the Rare Disease Day by Regional Specialized Children's Hospital in Olsztyn and the University of Warmia and Mazury in Olsztyn under auspices of Eurocordis (rarediseaseday.org).

The Symposium will be dedicated to the challenging in diagnosis and treatment cases of rare neurodevelopmental. Among the invited speakers there are representatives of centers associated with four European Reference Networks - ERN-RND, EURO-NMD, ERN-ITHACA and ERN-CRANIO. We will also host small patients of our Hospital diagnosed with rare neurodevelopmental disorders at various stages of challenging diagnostics and management.

All interested persons are cordially invited to participate in the International Symposium Rare Diseases Day 2023 *„ Challenging diagnosis, challenging treatment - together to success!"*

Małgorzata Pawłowicz MD, PhD
Coordinator of Department of Pediatric Neurogenetics and Rare Diseases
Regional Specialized Children's Hospital in Olsztyn

DETAILS OF THE EVENT

Organisers: **Department of Pediatric Neurogenetics and Rare Diseases,**
Regional Specialized Children's Hospital in Olsztyn
Department of Clinical Pediatrics, Collegium Medicum,
University of Warmia and Mazury in Olsztyn

Date and time: **25 February 2023, 8:30 a.m. – 5:00 p.m. CEST**

Symposium Venue: **online, Microsoft Teams platform**

Application: **via e-mail to chorobyrzadkiewssd@gmail.com by 24 February 2023 (in the e-mail, please provide your name and surname, e-mail address, academic degree, license number in the case of doctors) - the number of places is limited**

Participation fee: **free of charge**

Confirmation of participation: **personal certificate, award of 6 education points**

SYMPOSIUM PROGRAM

8:30 – 9:00 **Symposium registration – Teams platform login**

9:00 – 9:15 **Official welcome**
Krystyna Piskorz-Ogórek PhD
General Manager
Regional Specialized Children's Hospital in Olsztyn, Olsztyn, Poland

9:15 – 9:30 **Rare Disease Day 2023 - Introduction**
Małgorzata Pawłowicz MD, PhD
Head, Department of Pediatric Neurogenetics and Rare Diseases - – Member of ERN ITHACA
Regional Specialized Children's Hospital in Olsztyn, Olsztyn, Poland

Session I - Targeted diagnostics and management in challenging cases of rare neurodevelopmental diseases

Session plan: 20-45 min. talks, plus 5-15 min. for discussion
Official language of session: English

09:30 – 10:15 **Keynote lecture: Beyond NGS: semiology to the rescue**
Prof. Alfons Macaya MD, PhD
Head, Pediatric Neurology Section
Professor of Pediatrics, Autonomous University of Barcelona, Spain
Hospital Universitari Vall d'Hebron, Barcelona – Member of ERN-RND, Spain

10:30 – 10:50 **Diagnostic exome sequencing – role of data reanalysis in difficult cases**
Prof. Rafał Płoski MD, PhD
Head, Department of Medical Genetics
Warsaw Medical University, Warsaw, Poland

11:00 – 11:40 **Polish National Plan for Rare Disease and ORPHA coding**
Prof. Krystyna Chrzanowska MD, PhD, Dr. Agnieszka Madej-Pilarczyk MD, PhD
Department of Medical Genetics
Children's Memorial Health Institute, Warsaw – Member of ERN-ITHACA, Poland

11:45 – 12:00 Joint photo of the Symposium participants on Teams Platform, coffee break

Session II – Challenging signs in rare neurodevelopmental diseases

Session plan: 30-45 min. talks, plus 5-10 min. for discussion
Official language of session: English

12:00 – 12:45 **Hair and skin manifestations of rare neurological diseases**
Prof. F. Mujgan Sonmez MD, PhD
Retired Lecturer, Department of Child Neurology, KTU Medical Faculty, Ankara, Turkey
Vice-President of Neuromuscular Research Association, Ankara, Turkey
Board of Neuromuscular Research Center of Lokman Hekim University, Ankara, Turkey

12:50 – 13:20 **Collection of specific symptoms in rare neuromuscular diseases**
Dr. David Gómez Andrés MD, PhD
Pediatric Neurology Section
Hospital Universitari Vall d'Hebron, Barcelona – Member of ERN-RND and EURO-NMD, Spain

13:30 – 13:45 Short refresh break

Session III – Clinical cases presentation, interviews with patients' families with rare neurodevelopmental diseases

Session plan: 10-20 min. talks, plus 10-15 min. for discussion and interview
Official language of session: English, Polish

13:45 – 14:05 **Three new cases with *CHD3*-related disorders**
Amaia Lasa Aranzasti MD
Clinical Genetics Consultation Module and Minority Diseases
Hospital Universitari Vall d'Hebron, Barcelona – Member of ERN-ITHACA, Spain

14:10 – 14:50 ***CHD2*-related disorders - challenges in diagnosis and targeted antiepileptic therapy, interview with patients' families**
Amaia Lasa Aranzasti MD, Małgorzata Pawłowicz MD, PhD
Clinical Genetics Consultation Module and Minority Diseases
Hospital Universitari Vall d'Hebron, Barcelona – Member of ERN-ITHACA, Spain
Department of Pediatric Neurogenetics and Rare Diseases, Regional Specialized Children's Hospital in Olsztyn, Olsztyn – Member of ERN ITHACA,
Department of Clinical Pediatrics, Collegium Medicum, University of Warmia and Mazury in Olsztyn, Olsztyn, Poland

14:50 – 15:15 **Challenging case of leukodystrophy-mitochondrial disorder overlapping syndrome, interview with patient' family**
Małgorzata Pawłowicz MD, PhD
Department of Pediatric Neurogenetics and Rare Diseases, Regional Specialized Children's Hospital in Olsztyn, Olsztyn – Member of ERN ITHACA, Poland
Department of Clinical Pediatrics, Collegium Medicum, University of Warmia and Mazury in Olsztyn, Olsztyn, Poland

15:15 – 15:45 Lunch break

Session IV – Challenging cases of rare craniofacial diseases

Session plan: 20-25 min. talks, plus 5-10 min. for discussion
Official language of session: Polish

15:45 – 16:15 **Diagnostic difficulties in children with rare craniofacial disorders**
Prof. Dawid Larysz MD, PhD
Head, Department of Head and Neck Surgery for Children and Adolescents, Regional Specialized Children's Hospital in Olsztyn, Olsztyn – Associate Member ERN-Cranio, Poland
Head, Department of Head and Neck Surgery for Children and Adolescents, Collegium Medicum, University of Warmia and Mazury in Olsztyn, Olsztyn, Poland

16:15 – 16:45 **Challenging case of Hallermann-Streiff syndrome – is it really what we treat? Specific symptoms of disease and difficulties in surgical treatment**
Dr. Krzysztof Dowgierd MD, PhD
Head, Division of Maxilofacial Surgery, Department of Head and Neck Surgery for Children and Adolescents, Regional Specialized Children's Hospital in Olsztyn, Olsztyn – Associate Member ERN-Cranio, Poland
Lecturer, Department of Head and Neck Surgery for Children and Adolescents, Collegium Medicum, University of Warmia and Mazury in Olsztyn, Olsztyn, Poland

16:45 – 17:00 **Concluding remarks and closing Symposium**
Dr. Małgorzata Pawłowicz MD, PhD
Head, Department of Pediatric Neurogenetics and Rare Diseases, Regional Specialized Children's Hospital in Olsztyn, Olsztyn – Member of ERN ITHACA, Poland

SPEAKERS

Prof. Alfons Macaya is a Child Neurologist and Professor of Pediatrics in Barcelona, Spain. He received his MD degree from Autonomous University of Barcelona (UAB) and then trained in Pediatrics and then Pediatric Neurology at Vall d'Hebron Children's Hospital. He was next (1990-1993) a post-doc research fellow at the Neuroscience Institute, Columbia University, New York, NY. His PhD thesis dealt with excitotoxic injury to the newborn striatum and apoptosis of dopaminergic neurons. Prof. Macaya is currently the head of department of Pediatric Neurology at Vall d'Hebron Children's Hospital in Barcelona and the coordinator of the Pediatric Neurology Research Group at the Vall d'Hebron Research Institute, UAB. Over the last two decades he has devoted his research efforts to the field of pediatric neurogenetics, with a particular interest in rare neurological diseases and the molecular basis of neurological paroxysmal disorders, including developmental epilepsies, migraine and movement disorders. He is the recipient of the award to "Excellence in Research" by the Barcelona Medical College in 2018. He is also a past-president of the Spanish Pediatric Neurology Society (2016-2018) and a member of the Reference Network for Rare Neurological Diseases (ERN-RND) board. He was a member of the EPNS Committee of National Advisors for training and education of Pediatric Neurology in Europe. He is the director of the "Master in Pediatric Neurology" at the Autonomous University of Barcelona. Prof. Macaya has authored over 180 peer-reviewed scientific articles, in the Neuroscience, Clinical Neurology, Genetics and Pediatrics fields (Scopus H-index 33). Prof. Macaya's lab experimental approaches currently include multi-omic analysis in patients with rare neurological diseases and development of in vitro cell models to explore disease-causality of novel genetic variants, including ongoing work with neuronal transdifferentiation.

Prof. Rafał Płoski, Professor of Genetics, the Head of Medical Genetics Department of Warsaw Medical University. Graduated Warsaw Medical Academy (1990) and got his PhD at the University of Oslo (1995). In his lab Prof. Płoski has introduced next generation NGS for diagnostic and research use. The main current focus of his activity is whole exome sequencing on Illumina HiSeq platform for the diagnosis of human monogenic disorders as well as genomewide methylation analysis using NGS. Prof. Płoski is a specialist in laboratory medical genetics and laboratory forensic genetics; he also serves as an expert witness in human genetics at Regional Court of Justice in Warsaw. Prof. Płoski has published > 350 research papers from the area of human genetics which have been cited > 6000 times, (Prof. Płoski's Hirsh Index is 37). His current research concerns searching for novel monogenic diseases in human using approaches including, among others, studies of disease discordant monozygotic twins, mapping of break point regions in symptomatic balanced chromosomal translocations as well as development of novel bioinformatic tools for the analysis of WES data.

Prof. Krystyna Chrzanowska, Professor of Genetics, Head of the Department of Medical Genetics at the Children's Memorial Health Institute (CMHI) in Warsaw, Poland. She is a specialist in paediatrics and clinical genetics. She has a Full Professor position at the CMHI. In 2012 she has been nominated by Governor of the Mazovia Voivodship as the Province Consultant in clinical genetics in recognition of her experience in clinical practice and active participation in development and organisation of the specialization process in the field of clinical genetics. She continuously holds this position.

Her input in research dedicated to genetically determined chromosomal instability diseases, which resulted in numerous scientific publications, was awarded by the Polish Academy of Science (PAN) in 2010. She has been successfully nominated as a Member of the Committees and Commissions in PAN. From the beginning of her professional career Krystyna Chrzanowska concentrates on paediatric patients, and her main areas of interest are clinical and diagnostic aspects of genetically determined rare diseases, including dysmorphic syndromes, chromosomal/genomic instability syndromes, imprinting disorders and childhood malignancies. She is the author of more than 250 original publications (135 indexed in PubMed), review articles and book contributions.

Since 2012 she has collaborated with the Orphanet in frame of the Orphanet Joint Action (2012-2014) and with the Orphanet RD Action (2015-2017). Currently she is the national coordinator of the Orphanet Network ONW (2018-2020) direct project in Poland. Since January 2019 she is also a member of the Executive Committee of the European Joint Programme on Rare Diseases (EJP RD) (2019-2023)

Dr. Agnieszka Madej-Pilarczyk is a specialist in clinical genetics and internal medicine, currently works in the Genetic Outpatient Clinic in the Children's Memorial Health Institute (CMHI) in Warsaw. Formely she was employed in the Neuromusuclar Unit, Mossakowski Medical Research Centre, Polish Academy of Sciences and in the Department of Endocrinology, Medical University of Warsaw. She is a co-author of 55 papers, majority of them are devoted to laminopathies. Other areas of scientific interests: genetic aspets of rare diseases, including among others dysmorphic syndromes, intellectual disability, muscular dystrophies, myopathies, collagenopathies and rare forms of spinal muscular atrophy. Information scientist in Orphanet Poland. Participant of the Orphanet projects OD4RD and OD4RD2 (2022-2025). Substitute representative of the CMHI in the Board of ERN-ITHACA Network.

Prof. F. Mujgan Sonmez, Professor of Pediatrics and Pediatric Neurology. Graduated from Hacettepe University Medical School MD degree. In 1988 started to pediatrics training in Karadeniz Technical University (KTU), Faculty of Medicine, Department of Pediatrics, Trabzon, Turkey. In 1994, 1996 and 2002: became Assistant Professor, Associate Professor and Professor of Pediatrics in KTU, respectively. Completed Child Neurology Fellowship in Hacettepe University Medical Faculty , Ankara, Turkey in 1998. Founded the Child Neurology Department, Pediatric EEG Laboratory and Pediatric Video-EEG Monitorisation Unite and the Sleep Laboratory with Departments of Neurology, Chest Disease, Psychiatry and Ear-nose and Throath in KTU. Also, founded The Trabzon Branch of Neuromuscular Disorder Association of Turkey and Chief of the branch between 2000-2012. Organized "IX National Neuromuscular Diseases Symposium and 10th National Turkish Child Neurology Congress and head of the Congress. She has been retired lecturer since 2016. She

gives lectures as honorable lecturer in different universities in Ankara and Istanbul. She is vice president of Turkish Neuromuscular Research Association and the Board-Member of Neuromuscular Research Center of Lokman Hekim University in Ankara and coordinator of the developmental screening test. Prof. Sonmez has published > 100 research papers from the area of Child Neurology which have been cited > 1800 times, (H-index is 36.59 in Researchgate). Her reseacrh interests are epilepsy, neurometabolic, neurogenetic, sleep and rare disorders and vitamin D associated neurological disorders.

Dr. David Gómez Andrés is a physician in the Pediatric Neurology Team of Department of Pediatric Neurology at Vall d'Hebron Children's Hospital in Barcelona since 2016 in both patient care and research. His main interest is to move towards early diagnosis and more effective treatment of children with neurological diseases that will improve their quality of life and that of their families.

Prior training and jobs: *Degree in Medicine: Autonomous University of Madrid (2004-10); *Medical internal resident in pediatrics: La Paz University Hospital (Madrid) (2011-15); *Subspecialty in Pediatric Neurology: La Paz University Hospital (Madrid) (2014-16); *Doctor in Medicine and Surgery: Department of Anatomy, Histology and Neuroscience. Universidad Autónoma de Madrid (2017); *Physician Specialist in Pediatrics (subspecialty in Pediatric Neurology): Infanta Sofia University Hospital (S.S. de los Reyes, Madrid) (2015-17); *Training stays: at Hôpital Raymond Poincaré (Garches, France), LMU (Munich, Germany) and University of Aalborg (Denmark). Areas of research interest: data mining in rare diseases, muscular resonance in neuromuscular diseases, analysis of human movement, bioinformatics.

Dr. Amaia Lasa Aranzasti is a clinical geneticist in the Clinical Genetics Team at Vall d'Hebron Barcelona Hospital since 2020 in both patient care and research. Her main areas of interest are clinical and diagnostic aspects of genetically determined rare diseases with special interest in prenatal genetic diagnosis and neurogenetic diseases.

Prior training and jobs: *Degree in Medicine: University of Basque Country (2009-15); *Medical internal resident in pediatrics: Donostia University Hospital (Basque Country 2016-20); * University expert in medical genetics: Universidad Rey Juan Carlos Madrid (2018) *Subspecialty in Clinical Genetics: Vall d´Hebron Barcelona Hospital (2020). *Master in Healthcare genetics: Universidad Autónoma de Barcelona UAB (2020-2022) *European Certificate in Medical Genetics and Genomics (2022). * Doctoral Student Universidad Autónoma de Barcelona UAB (2021-).

Dr. Małgorzata Pawłowicz pediatrician, pediatric neurologist, clinical geneticist, currently undergoing specialist training in metabolic pediatrics and clinical dietetics. Her doctoral thesis in the field of pediatric diabetology on the genotype-phenotype correlation in the group of children and adolescents with newly diagnosed type 1 diabetes was distinguished as important for the development of the Pomeranian Voivodeship in the InnoDoktorant scholarship competition organized by the Pomeranian Voivodeship and the European Union. Since her medical studies, she has been fascinated by the idea of personalized medicine. She implements modern procedures from 4P medicine in her research and clinical work. Currently, the Coordinator of

the Department of Pediatric Neurogenetics and Rare Disease in the Regional Specialized Children's Hospital in Olsztyn – full member of the European Reference Network for rare congenital malformation and syndromes with intellectual and other neurodevelopmental disorders (ERN-ITHACA). In the diagnostic and therapeutical fields of neurogenetic diseases, Dr. Małgorzata Pawłowicz co-works with leading national centers: the Department of Medical Genetics of the Medical University of Warsaw and the Department of Medical Genetics of the Memorial Institute - Children's Health Center in Warsaw. Member of the European Pediatric Neurology Society (EPNS). Leader of several research and research & development projects financed by national and European research funds. Currently also the lecturer at the Department of Clinical Pediatrics, Collegium Medicum, University of Warmia and Mazury in Olsztyn.

Prof. Dawid Larysz, consultant neurosurgeon, neuropsychologist, speech therapist. He graduated from the Faculty of Medicine in Katowice, Medical University of Silesia in Katowice. In 2013, he obtained professor title based on the monograph "Assessment of the results of treatment of isolated craniosynostosis in children, taking into account clinical, biomechanical and neurodevelopmental aspects". Additionally, he defended his master's thesis "Assessment of neurodevelopmental disorders in children treated for isolated premature atresia of cranial sutures" at the Faculty of History and Pedagogy of the University of Opole and completed postgraduate studies in molecular biology at the Jagiellonian University. Currently Head of Department of Head and Neck Surgery for Children and Adolescents in Regional Specialized Children's Hospital in Olsztyn and at the University of Warmia and Mazury in Olsztyn. Professor at the Department of Clinical Pediatrics at the University of Warmia and Mazury in Olsztyn. Consultant in the field of neurosurgery at the Maria Skłodowska Curie National Research Institute of Oncology in Gliwice. Head of the Center for Treatment of CNS Disorders and Support for Child Development "Kangaroo" in Katowice. Since 2011, he has been a member of the interdisciplinary surgical team at the Center of Craniofacial Malformation of the Regional Specialized Children's Hospital in Olsztyn. Scientific interests are concentrated in three areas: 1) multi-disciplinary diagnostics and therapy of children with skull defects - he was the first in Poland to introduce minimally invasive, endoscopic methods of treatment of children with craniosynostoses into neurosurgical practice, in cooperation with engineers from the Silesian University of Technology in Katowice he developed and introduced into everyday practice clinical methods of preoperative planning and postoperative evaluation, neurosurgical procedures in virtual reality, including procedures using distraction osteogenesis methods. 2) molecular biology of skull defects and primary neoplasms of the central nervous system, 3) minimally invasive endoscopic methods of surgical treatment of tumors of the skull base and the use of modern microneurosurgical methods for the treatment of primary glial tumors of the brain.

Dr. Krzysztof Dowgierd graduated from medical studies in Gdańsk in 1999. Permanently associated with his hometown of Olsztyn, where he carried out postgraduate internships and specialized training in the field of maxillofacial surgery. He completed his specialization in 2007 with a very good result. After completing his specialization internship, he was trained in craniofacial surgery, facial malocclusion surgery, orthognathic and reconstructive surgery in numerous centers in the country and abroad. He worked for three years at the Institute of Mother and Child in Warsaw. He completed training at the Cranio Facial Center at Seattle Children's Hospital in the USA, at the AZ Jan Hospital of Maxillofacial Surgery in Brugee, Belgium and at the Maxillofacial Surgery Clinic in Zurich under the

supervision of prof. Joahim Obwegeser. He completed many prestigious training courses in maxillofacial surgery in Poland and abroad. He defended his doctorate in 2016 "The use of transverse distraction osteogenesis in the treatment of transverse jaw defects". In 2008, he founded and took over the management of the Center for the Treatment of Craniofacial Defects in Children and Adolescents, and in 2012 he became the head of the Head and Neck Surgery Department in the field of Maxillary Reconstructive and Aesthetic Surgery at the Regional Specialized Children's Hospital in Olsztyn. From 2019, head of the Head and Neck Surgery Department in the field of Maxillofacial Surgery at the Head and Neck Surgery Department at the Department of Paediatrics, Medical Faculty of the University of Warmia and Mazury in Olsztyn.

He is the vice-president of the Polish Face and Skull Treatment Society and is a member of Polish and international scientific societies: Polish Society of Cranio-Maxillofacial Surgery, Dental Surgery and Implantology, Polish Society of Oral and Maxillofacial Surgery, Polish Dental Society, European Association for Cranio-Maxillo -Facial Surgery, International Association of Oral and Maxillofacial Surgeons, The American Association of Oral and Maxillofacial Surgeons. From 2017 Organizer of meetings of families of children with the Goldenhar syndrome and for families and children with cleft lip and / or palate. 2015 - Founder and member of the Aid for Children Foundation in the Maxillofacial Surgery Department. He is the author of many publications in Polish and foreign journals. He conducts courses and training in maxillofacial surgery, in particular orthognathic surgery. He introduced a palatal distractor for the expansion of the jaw to the Polish market and is the author of a patent for a Polish-made palatal distractor. Areas of research interest: distraction osteogenesis in children, treatment of craniofacial defects in facial dysostoses and syndromes occurring on a genetic basis, use of individual prostheses of the temporomandibular joint and virtual planning techniques in maxillofacial surgery, reconstruction studies with free flaps based on microvascular anastomosis in the craniofacial area. Privately, he is passionate about golf and diving, happy father of three children.