

**ORGANIZA:**  
**ÁREA TRANSVERSAL IBIMA-RARE**

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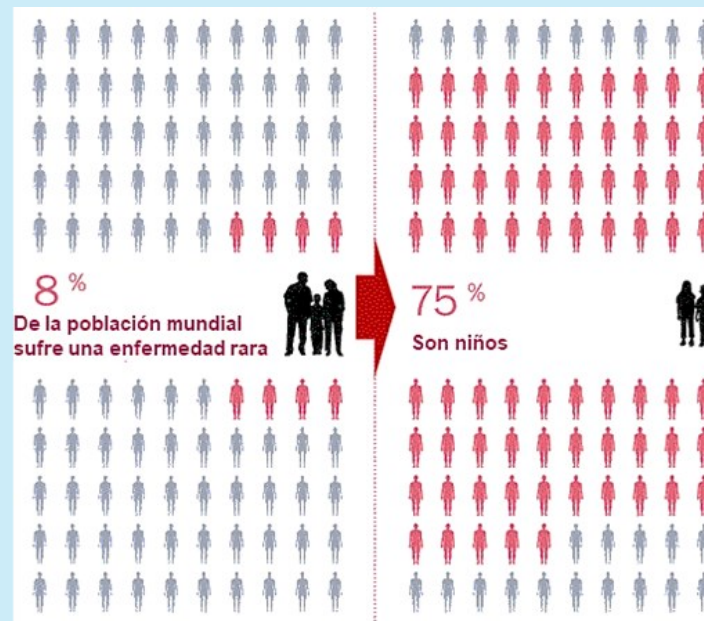
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**ORGANIZADORES:**  
Instituto de Investigación Biomédica de Málaga (IBIMA)



**1<sup>st</sup> IBIMA-Rare Winter Course 2019**  
**(1<sup>st</sup> IRWI-Course)**

**ADVANCES IN MEDICAL GENOMICS**  
**Diagnosis, prevention, novel orphan treatments and challenges to achieve precision medicine in Rare Disorders**

**AVANCES EN MEDICINA GENOMICA**  
**Diagnóstico, prevención, nuevos tratamiento huérfanos y retos para alcanzar medicina de precisión en Enfermedades Raras**

**19-20, December 2019**



**SALÓN DE GRADOS**  
**FACULTAD DE CIENCIAS**  
**UNIVERSIDAD DE MÁLAGA**

## PROGRAMME

**Thursday, December 19th 2019.**

**9:00-9:15h Welcoming remarks.**

**9:15-9:45h** Stem cell as novel treatments on Rare disorders. Experimental approach for hereditary congenital hydrocephalus. **Prof. Dr. Antonio J. Jiménez Lara.** Dept of Cellular Biology, genetics and Physiology. University of Malaga.

**9:45-10:15h** Pseudoxanthoma elasticum (PXE): Molecular diagnosis and experimental treatment for a rare disorder. **Prof. Dra. María García Fernández.** Department of Physiology. University of Malaga.

**10:15-10:45h** Experimental CRISPR/ Cas9 based technology for human genome edition: Development of novel treatment for Rare Genetic Disorders. **Dr. Enrique Viguera Mínguez.** Department of Cellular Biology, Genetics and Physiology. University of Malaga.

**10:45-11:00h** questions and colloquium

**11:00-11:30** Cofee break

**11:30-12:00** Familial counselling and possible preventive options of hereditary rare disorders. **Dr. José Ignacio Lao Villadóniga.** Medical Director at Genomic Genetics International and Clinical Genetics and Genetic Counselling Unit at Clínica Diagonal. Barcelona.

**12:00-12:30h** Molecular diagnosis and novel treatments for inherited metabolic disorders. **Dr. Belén Pérez González.** Universidad Autónoma de Madrid.

**12:30-13:00h** Clinic and Basic Research on Rare disorders at the IBIMA-Rare to develop orphan drugs for Rare-disorders: New treatment for the Fragile X syndrome. **Dr. Yolanda de Diego Otero.** IBIMA-Rare (IBIMA C03-group). Mental Health Clinical Unit. Regional University Hospital of Malaga.

**13:30h-13:50h** questions and colloquium

**13:50- 14:00h** Quality Questionnaire

**14:00h-15:30h** Free lunch

**15:30-16:00h** Preventing rare genetic disorders: prenatal and preimplantational diagnosis. **Dr. Antonio Cejudo Román.** Research Coordinator at IVI Málaga.

**16:00-16:30h** Newborn screening of inherited disorders: a model of precision medicine. **Dr. Raquel Yahyaoui Macias.** IBIMA-Rare (IBIMA). Laboratory of Metabolic Disorders. UGC Laboratory. Regional University Hospital of Malaga.

**16:30-17:00h** Relevance of BIG DATA analysis to develop precision medicine of rare disorders. **Dr. Michaela Spiteri.** Former Data Science and Predictive Analysis Lecturer, Malta College of Arts, Science and Technology. University of Malta

**Thursday, December 19th 2019.**

**17:00-17:30h** Future on treatments of neurodegenerative rare diseases. Orphan drug for the treatment of the Spinal Muscular Atrophy (SMA). **Dr. Rocío Calvo Medina.** IBIMA-Rare (IBIMA C03-group). Neuropediatric Unit. Regional University Hospital of Malaga.

**17:30-17:50h** Questions and colloquium

**17:50-18:15h** Cofee Break

**18:15-18:55h** Counselling on hereditary neurodevelopmental rare disorders. **Dr. Pietro Chiurazzi.** Institute of Genomic Medicine, Catholic University, Rome, Italy.

**18:55-19:35h** Strategies for Molecular diagnosis of hereditary disorders. **Dr. Aida Bertoli Avella.** Research Director. Centogene. Rostock. Germany.

**19:35- 19:50h** Questions and colloquium

**19:50 -20:00h** Quality Questionnaire

**Friday, December 20th, 2019.**

**9:00-09:30h** Bioinformatics and systems biology approaches for the study of rare disease disorders. **Dr. James Perkins.** IBIMA-Rare (IBIMA C03-group). University of Malaga.

**09:30-10:00h** Research on neurodevelopmental rare disorders. **Dr. Pietro Chiurazzi.** Institute of Genomic Medicine, Catholic University, Rome, Italy.

**10:00-10:30h** Research and new strategies for molecular diagnosis of hereditary rare disorders. **Dr. Aida Bertoli Avella.** Research Director. Centogene. Rostock. Germany.

**10:30-11:00h** Precision medicine to understand rare disorders leading to epilepsy. **Dr. Pedro Serrano Castro.** UGC Neurology. Regional University Hospital of Malaga.

**11:00-11:15h** Questions and colloquium

**11:20-11:40** Cofee break

**11:40-12:10h** Deciphering epigenetic mechanisms and regulatory circuits in pulmonary arterial hypertension. **Dr. Armando Reyes Palomares.** Dpt. Biochemistry and Molecular Biology. Complutense University of Madrid.

**12:10-12:40h** Mendelian neurodegenerative diseases: spotlight on neurodegeneration with brain iron accumulation (NBIA). **Dr. Carmen Espinós Armero.** Group Leader, Unit of Genetics and Genomics of Neuromuscular and Neurodegenerative Disorders, Research Center Principe Felipe (CIPF), Valencia, Spain.

**12:40-13.10h** From bench to bed: basic research to develop diagnoses and treatments for patients with rare disorders. **Prof. Dra. Francisca Sánchez Jiménez.** IBIMA-Rare.

**13:10h-13:30h** Questions and colloquium

**13:30- 13:45h** Quality Questionnaire and assistance controls.

**13:45h-14:00h** Final remarks and departure



## Enfermedades Raras

**Una enfermedad se considera rara cuando afecta a pocas personas, menos de 1 de cada 2000. A pesar de la baja frecuencia de cada enfermedad rara, todas en su conjunto afectan al 8% de la población general, lo que significa unos 600000 afectados en Andalucía y 150000 afectados en la provincia de Málaga con más de 50000 en la capital. Afecta principalmente a los niños. pues un 75% de las patologías raras se inician en la infancia. Cuando se incluye a los padres y parientes cercanos que pueden estar afectados directa o indirectamente, ya que son enfermedades genéticas hereditarias, estas enfermedades pueden afectar cerca del 25% de la población de cualquier país. Las enfermedades raras son un problema global, que requiere de la implicación de ámbitos afines como los sistemas sanitarios, educativos, laborales y sociales.**

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