Consejo Superior de Investigaciones Científicas
Universidad Miguel Hernández
Instituto de Neurociencias

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EXCELENCIA SEVERO OCHOA 2014-2022

EDBC2019 Meeting Report

The European Developmental Congress has been held in Alicante, Spain from 23rd to 26th October 2019. This Congress has had the co-sponsorship of the ISTT.

This congress has been the continuation of a series of Congresses organized by the European Societies of Developmental Biology that had been interrupted for some time. The Congress has been a success in attendance with 440 people mainly from Europe and participants from all over the world, US, Canada, Japan, China, India or New Zeeland.

For four days, leaders of the Developmental Biology field have discussed about recent developments in the field. The plenary sessions were presented by: Nipam Patel (Woodshole USA) presenting research using novel organisms such as crustaceans and butterflies, Denis Duboule (Geneva, Switzerland) presented their work on the control of Hox genes regulation, Alex Schier (Basel, Switzerland) showed the use of the novel single cell techniques on reconstructing developmental trajectories and David Wilkinson (London UK) discussed about boundary formation in fish, chick and mouse. The meeting was organized in different Symposia that covered Cell Biology and Development, Cell Biology of Development, Stem Cells and Differentiation, Genome Dynamics in Development, Growth and Form, Organisation of Developmental Fields, Regeneration and Homeostasis, Evo-Devo, Physiology of Development and Human Development and Disease.

The presence of different animal models was constant and ranged from the well-known mouse, zebrafish and chick embryos to less used models such as octopus (E. Seuntjens (Kiel, Germany), the amphipod crustacean *Parhyale hawaiensis* or different butterflies from N. Patel (Woodshole, USA) or the annelid *Platynereis.* (Heidelberg, Germany)

The use of the CRISPR/Cas9 technology to generate novel mutants was broadly used by many poster presentations, and it was shown to be effective in species such as the sea urchin *S. purpuratus,* the above mentioned *Parhyale hawaiensis,* and the better known medaka, zebrafish, mouse or human cells. Some novel CRISPR applications were described in the congress such as CRISPR arrays for whole organism lineage tracing presented by J. Sharpe (Barcelona, Spain) or the reconstruction of cell lineages using somatic mutations by generating CRISPR recorders Grillo *et al* (Lyon, France, London UK and Stockholm Sweden)

The use of transgenic animals is overly used in development and there were many examples of fluorescently labelled cells in models ranging from Drosophila, zebrafish, mouse or human embryoid bodies to study early steps in gastrulation or complex organ formation such as heart or nervous system.

The EDBC2019 has been a great opportunity to find the current state of the Developmental Biology field, one of the biology fields that shows an intense use of the transgenic technologies in a great variety of animal models. The next European Developmental Biology Congress will be the EDBC2023 in Edinburgh.

j.galceran@csic.es
j.galceran@umh.es
www.ina.umh.es

Tel: +34 965 91 9474
Fax: +34 965 91 9561

Av Ramón y Cajal s/n
CAMPUS DE SAN JUAN
03550 SANT JOAN D'ALACANT– ESPAÑA