



COURSE PROFILE

From developmental biology to dysmorphology

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Dysmorphology has long concentrated on the delineation of syndromes through detailed clinical descriptions. The value of these descriptions has been enormous, especially for individual patient care and for genetic counselling of both the patients and their relatives. However, despite these invaluable merits the understanding of dysmorphogenesis had remained primitive for a long time, and had not kept up with the scientific achievements of other areas of medicine. Progress in molecular medicine and especially in developmental biology and the subsequent cooperation of developmental biologists and molecular geneticists with clinical dysmorphologists has changed this considerably, and has allowed us to treat dysmorphic symptoms as inborn errors of development. Therefore, the education of clinicians in basic concepts of developmental biology on the one hand, and of developmental biologists in some major aspects of dysmorphology on the other was thought to be of value for both groups, which initiated the organisation of this course.

Under the European School of Medical Genetics the first course *From Developmental Biology to Dysmorphology* was organised at Sestri Levante, Italy, from 10 to 13 November 1999, in collaboration with the International School of Pediatric Sciences of the Istituto G Gaslini in Genova, and with the support of the European Genetics Foundation. Altogether around 50 clinicians and basic scientists, from 14 different countries, were accommodated at the conference facilities. The faculty included many well known specialists

in the field, such as Sandro Banfi (Milan), Dian Donnai (Manchester), Judith Goodship (Newcastle), Stanislas Lyonnet (Paris), Nicole Philip (Marseille), Olivier Pourquie (Marseille), Antonio Simeone (Naples), Vassilis Pachnis (London), Robin Winter (London) and Adrian Woolf (London). The major part of the course was formed of plenary lectures, always starting with one from a basic scientist explaining the developmental background of a specific topic, followed by a lecture from a clinician who identified matters that may arise in cases of dysmorphogenesis. Starting with developmental aspects, subjects for discussion included general critical embryonic developmental processes such as induction, determination, proliferation and cell death, establishment of body axes, developmental field defects, twinning, situs determination and segmentation, and more specific subjects such as nephrogenesis, metabolic processes influencing morphogenesis, skeletal development, neurocristopathies, and eye development. Every day, for a couple of hours, some of the teachers were given the opportunity to talk in (simultaneous) workshops about their chosen subjects of study, including subjects such as neuronal stem cell manipulations, foetal dysmorphology, animal models for kidney malformations, cancer and malformations, mechanisms of differential gene expression, and syndromes of dental anomalies.

The peaceful setting of rural Sestri Levante in a late but sunny Italian autumn certainly contributed to the relaxed and friendly atmosphere that stimulated the many informal scientific discussions.

The course has been given excellent marks by the participants. The teachers also agreed that the course filled a gap between basic science and clinical work, and sharing of knowledge would benefit all. Therefore, a second course will be organised in September 27–29, 2001.

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