

2nd Course in Eye Genetics September 28th - October 1st, 2011

Location

EuroMediterranean University Centre of Ronzano, Bologna (Italy)

Directors

R. Allikmets (Columbia University, New York), A. Ciardella (U.O. Oftalmologia, Bologna), M. Seri (U.O. Genetica Medica, Bologna).

Course Description

Eye Genetics is a 4-day long postgraduate level course addressed to both researchers and clinicians seeking an up-to-date introduction to the field of ophthalmogenetics today. It provides an overview of the clinical developments of modern genetics in different fields of ophthalmology. The topics covered in the course are: hereditary retinal diseases, genetics of retinitis pigmentosa, genetics of age related macular degeneration, genetics of myopia, genetics of glaucoma, genetics of corneal pathology, genetics of optic nerve diseases, gene therapy.

Speakers

R. Allikmets (New York, Usa), A. Auricchio (Naples, Italy), S. Banfi (Naples, Italy), P. Barboni (Bologna, Italy) W. Berger (Zürich, Switzerland), P. Bonneau (Paris, France), A. Ciardella (Bologna, Italy), F. Cordeiro (London, Uk), F. Cremers (Nijmegen, The Netherlands), A. Gal (Hamburg, Germany), C. Inglehearn (Leeds, UK), N. Katsanis (Baltimore, USA), P. Yu Wai Man (Newcastle upon Tyne, UK), B. Leroy (Ghent, Belgium), T. Moore (London, Uk), K. Neveling (Nijmegen, the Netherlands), M. Seri (Bologna, Italy), A. Sodi (Florence, Italy), B. Veronica Van Heyningen (Edinburgh, UK), J. Sowden (London, UK)

For updates, programme and registration please visit the EGF website www.eurogene.org

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Registration Fee:

650 €* (tuition, course material, lunches, coffee breaks and shuttle bus service).

* VAT is excluded (Value Added Tax=20%)



September 28th

9:00 - 9:15 **Welcome**
 9:15 - 10:00 Introduction to EGF and Bologna (**G. Romeo**)
 10:00 - 10:50 2 talks in parallel:
 1) Overview of clinical ophthalmology for basic scientists (**A. Ciardella and A. Sodi**)
 2) Overview of basic medical genetics for ophthalmologists (**A. Leroy**)
 10:50-11:35 Genetics of cone dystrophies/dysfunction syndromes (**T. Moore**)
 11:35-12:00 **Coffee Break**
 12:00-12:40 Molecular basis of non-syndromic and syndromic retinal and vitreoretinal diseases (**W. Berger**)
 12:40-13:20 Introduction to next-generation sequencing for eye diseases (**K. Neveling**)
 13.20-13.30 **Discussion**
 13:30-14:30 **Lunch**

Afternoon Session : Concurrent Workshops 14:30-16:00

1) Preparation: Student discussion group on interesting cases (clinical, molecular, families, etc.) they have encountered (**T. Moore and B. Leroy**)
 2) Disease-causing mutations: finding, interpretation, nomenclature (**W. Berger, R. Allikmets**)
 3) Model organisms to study eye biology and disease (**V. van Heyningen, N. Katsanis**)

17:00-19:00 **Guided Tour of Bologna**

September 29th

9:00- 9:40 IBD mapping in consanguineous and non-consanguineous families: finding retinal disease genes (**F. Cremers**)
 9:40- 10:20 Genetics of RP/LCA/CSNB (**B. Leroy**)
 10:20- 11:00 Gene therapy for Leber Congenital Amaurosis (**A. Auricchio**)
 11:00-11:30 **Discussion**
 11:30-12:00 **Coffee Break**
 12:00-12:40 The role of non-coding RNAs in eye development and function (**S. Banfi**)
 12.40: 13.20 Retinal ciliopathies: diverse phenotypes with overlapping genetic structure (**N. Katsanis**)
 13.20-13.30 **Discussion**
 13:30-14:30 **Lunch**

Afternoon Session : Concurrent Workshops 14:30-18:00

1) Preparation: Student discussion group on interesting cases (clinical, molecular, families, etc.) they have encountered (**T. Moore & B. Leroy**).
 2) Model organisms to study eye biology and disease (**V. van Heyningen, N. Katsanis**).
 3) Genomics: technological developments and interpretation of results; the impact of next generation sequencing on retinal disease gene identification (**F. Cremers** and his team: **Neveling** and **Inglehearn**).
 4) Clinical approach to hereditary retinal diseases (**A. Ciardella, M. Seri, C. Graziano, A. Sodi**)
 5) Disease-causing mutations: finding, interpretation, nomenclature (**W. Berger, R. Allikmets**)

September 30th

9:00-9:40 Architecture of genetic disease: causes, modifiers and the concept of genetic load (**N. Katsanis**)
 9:40- 10:20 Genetics of congenital cataract (**T. Moore**)
 10:20- 11:00 Overview of developmental eye anomalies (**V. van Heyningen**)
 11:00-11:30 **Discussion**
 11:30-12:00 **Coffee Break**
 12:00-12:40 Genetics of AMD (**R. Allikmets**)
 12:40-13:20 Modifier genes in retinal diseases (**F. Cremers**)
 13:20-13:30 **Discussion**
 13:30-14:30 **Lunch**

Afternoon Session Concurrent Workshops 14:30-18:30

14:30-16:00 **Student presentations**

16:00-16:30 **Coffee Break**

16:30-18:30 Mitochondrial eye diseases (**P. Barboni, V. Carelli, P. Bonneau, F. Cordeiro, P. Yu Wai Man, B. Leroy**)

October 1st

9:00-9:40 Stem cells in eye diseases (**J. Sowden**)
 9:40-10:20 Genetics of glaucoma and myopia (**C. Inglehearn**)
 10:20-11:00 Norrin and retinal blood vessel development (EVR, ROP, Norrie disease) (**W. Berger**)
 11:30-12:00 **Coffee Break**
 12:00-13:30 2 Concurrent workshops:
 1) Clinical approach to hereditary retinal diseases (**A. Ciardella, M. Seri, C. Graziano, A. Sodi**)
 2) Genomics: technological developments and interpretation of results; the impact of next generation sequencing on disease gene identification (**F. Cremers** and his team: **Neveling** and **Inglehearn**).
 13:30-14:30 **Lunch**
 14:30 Infinitum “Meet the faculty” and Summary of the Course
 Careers in science (clinical and molecular genetics): one shoe does not fit all. (**N. Katsanis and all faculty**)

Conclusions

Departure