

EUROPEAN SOCIETY OF PATHOLOGY – ELECTRON MICROSCOPY WORKING GROUP

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ACTIVITY REPORT 2015

The usual scheme of the activities of the EMWG in the different European Congresses of Pathology has been to organize two or three sessions, with one of them co-organized with another working group. In this report, we will summarize the activities of the 23rd, 24th, 25th and 26th European Congresses, and will introduce the scheduled sessions for the 27th ECP in Belgrade.

23rd ECP – Helsinki, Finland. 2011.

Three sessions were organized, the first being a **Symposium, Renal Tumors: a multidisciplinary approach**, in which renal tumors were reviewed from the histological perspective by Esther Oliva (Boston, USA), the immunohistochemistry and the role of pathologists in the era of targeted therapy was discussed by Holger Moch (Switzerland), the cytogenetics by Paola dal Cin (Boston, USA), the electron microscopic clues were presented by Josep Lloreta (Spain), and the clinical aspects of the interplay between oncologists and pathologists was scheduled to be presented by Joaquim Bellmunt (now in Boston, USA), the latter presentation finally given by Josep Lloreta as Dr. Bellmunt could not make it. **Around 100 people attended the symposium**, one of the best attendances to that date. This frame of multidisciplinary review of specific sets of tumors will be one of the constant activities of the EMWG.

In addition, we organized a **slide seminar with five cases** presented by Drs. Franchi (Italy), Kyriacou (Cyprus), Juanpere (Spain), Schroeder (Germany), and Santucci (Italy), and a **short course on the contemporary applications of EM in the diagnosis and understanding of renal diseases**, in which fibrillary nephropathies were reviewed by J. Lloreta (Spain), Fabry and drug induced phospholipidosis were presented by D. Ferluga (Slovenia), Y. Collan (Finland) discussed the role of EM in decision making in nephropathology, and a special lecture on the ultrastructure of the glomerular epithelial filtration slit was presented by S. Conti (Italy). These two sessions were attended by 15 to 30 people along the different talks.

24th ECP. Prague, Czech Republic. 2012.

The **multidisciplinary symposium** was devoted to **spindle cell sarcomas**, with J. Hornick (USA) dealing with histopathological and immunohistochemical diagnosis, M.

Santucci (Italy) reviewing the ultrastructural features of sarcomas, P. dal Cin (USA) summarizing the cytogenetics of these tumors, and J. M. Coindre the molecular diagnosis. Again, this activity was extremely well attended according to EMWG standards, with a peak of more than 100 people at some points.

This activity was complemented with a **slide seminar on problem cases with EM impact**, in which the speakers were Franchi (Italy), Sam Millan (Spain), Tuñón (Spain), Kowalewska (Poland), Nottola (Italy) and Groma (Latvia).

Drs. Dal Cin and Hornick have benefited of registration waivers. There have been no other expenses.

25th ECP. Lisbon, Portugal. 2013

The activities of the E.M. Working Group in the **25th ECP in Lisbon 2013** consisted of a Symposium on tumors with Alk genetic abnormalities (“alkomas”), and a joint slide seminar with the Nephropathology Working Group.

The symposium entitled **The ALK Tumors: An Heterogeneous Target** was chaired by Josep Lloreta, from Barcelona (Spain) and Paola dal Cin, from Boston (USA) and the program consisted of the following topics and speakers: 1.- Cytogenetic and Molecular Abnormalities of the Alk Gene in Tumor Pathology, by Paola dal Cin, Boston (USA). 2.- Histopathologic, Electron Microscopic and Immunohistochemical Features of “Alkomas”, by Núria Juanpere, Barcelona (Spain). 3.- Molecular Mechanisms of Carcinogenesis in “Alkomas”, by Adrian Mariño-Enríquez, Boston (USA). And 4.- Oncologic Treatment of Tumors with Disorders of the Alk Gene, by Luis Marques da Costa, Lisbon (Portugal).

Similar to previous symposiums with this multidisciplinary format, this activity was well attended, with up to 80 delegates in the room.

Drs. Dal Cin and Costa have benefited of registration waivers, being a Biologist and an Oncologist respectively. The travel expenses of Dr. Adrian Mariño-Enríquez were covered by the ESP with the funds assigned to the EMWG.

The second activity was a slide seminar jointly organized with the Nephropathology Working Group, with the title **Electron microscopy in focus: native and transplanted kidneys**. This session was chaired by Eduardo Vazquez Martul, from La Coruña, Spain and Josep Lloreta, from Barcelona, Spain. The presentations were the following:

1. Introduction: problems of EM diagnostic in renal pathology. Michael Mihatsch, Switzerland.
2. Fabry disease and differential diagnosis. Carmen Valbuena, Portugal.
3. Curvilinear bodies in Chloroquine phospholipidosis and differential diagnosis. Rui Miguel Costa, Portugal.
4. Uromodulin storage and familial chronic renal disease. Fernanda Carvalho, Portugal.

5. Thin basement membranes: not always thin basement membrane disease. Javier Gimeno-Beltran, Spain.
6. Transplant Glomerulitis. Differential diagnosis of glomerular hypercellularity. Helmut Hopfer, Switzerland.
7. Transplant glomerulopathy: Differential diagnosis: Recurrent Glomerulonephritis. Joan Mölne, Sveden.
8. Transplant problems and differential diagnosis. Jolanta Kowalewska, Poland.
9. Transplant problems and differential diagnosis. Eva Honsova, Czech Republic.

26th ECP. London, Great Britain. 2014.

The EMWG scientific activities in the London congress were jointly organized with the ACEM, through its President, Bart Wagner.

The title of the symposium was **“Multidisciplinary approach to the diagnosis of mesothelioma and non-small cell carcinoma in the era of targeted therapy”**. Again, was chaired by Josep Lloreta, from Barcelona (Spain) and Paola dal Cin, from Boston (USA) and the program consisted of the following topics and speakers: 1.- Histopathological diagnosis of NSCLC: Clues and Pitfalls, by Cesar Moran, from Houston, USA. 2.- Insights in NSCLC electron microscopy – From the seventies till now with IHC updating, by Lina Carvalho, from Porto, Portugal. 3.- Histopathological diagnosis of mesothelioma: Clues and Pitfalls, by Cesar Moran, from Houston, USA. 4.- Contribution of electron microscopy to the diagnosis of mesothelioma, by Josep Lloreta-Trull, from Barcelona, Spain. And Cytogenetic and molecular therapeutic targets of lung and pleural tumors: An update, by Paola Dal Cin, from Boston, USA.

As usual, around 70 to 90 delegates were in attendance.

Drs. Dal Cin and Moran have benefited of registration waivers, and Dr. Moran also was paid a room for one night. He took care of the remaining expenses of his trip.

The title of the joint seminar with the ACEM was **EM in the Diagnosis of Non-Neoplastic Diseases: A Resident's Slide Seminar**, and the chairs were Bart Wagner, from London, England, and Alessandro Franchi, from Firenze, Italy. A total of six cases were presented, with the following schedule:

1. Primary Ciliary Dyskinesia case presentation. Patricia Goggin, UK.
2. Renal Biopsy case presentation. Elizabeth Angus, UK.
3. Neuro case presentation. Oluwayomi Adegaju, UK.
4. Skin & Muscle preparation for LM and TEM: stained semithin and thin sections - technical matters. Wolfgang Muss, Austria.
5. Pronounced hystrix-like keratinization disorder in a child. Ingrid Hausser, Germany.
6. Renal case - conventional and latest technology in EM. Andrew Yarwood, UK.

27th ECP. Belgrade, Serbia. 2015.

After several meetings in which multidisciplinary symposiums have been focused on certain tumors (kidney, sarcomas, lung, Alkomas, pleuro-pulmonary tumors), we have thought that the time had come for a synthesis, as well as a review of what ultrastructural contributions might be relevant to assist pathologists in making more precise diagnoses of tumors for which there are specific targeted therapies. This is how the Symposium for this year's congress was conceived, and it will be a compendium of the previous ones. The title is: **Role Of Electron Microscopy In Tumor Diagnosis: Potential Impact On Targeted Therapy**, will be cochaired by Josep Lloreta-Trull, Paola Dal Cin, and Alessandro Franchi, and will consist of the following lectures:

1. Introduction: Electron microscopy and targeted therapy. Josep Lloreta-Trull, Spain.
2. Electron microscopy in the differential diagnosis of clear cell renal cell carcinoma. Nuria Juanpere, Spain.
3. Cytogenetic and molecular targets in clear cell renal cell carcinoma. Marta Salido, Spain.
4. Contemporary role of electron microscopy in the diagnosis of sarcomas. Alessandro Franchi, Italy.
5. Cytogenetics and therapeutic targeting of sarcomas. Paola Dal Cin, USA.
6. Potential role of electron microscopy in non-small cell lung cancer. Raquel Albero, Spain.
7. Cytogenetic and molecular therapeutic targets of non-small cell lung cancer. Paola Dal Cin, USA.

On the other hand, together with Ian Roberts, from Oxford, Great Britain, chair of the Nephropathology Working Group, and Jasmina Markovic-Lipkovski, from Belgrade, Serbia, a joint slide seminar is planned with the title **Electron Microscopy in Nephropathology: Conflicting Results and Solutions**, with the following scheduled speakers: Bela Ivanyi, from Hungary, Erik Heyerdahl Strøm, from Norway, Eva Hansova, from the Czech Republic, Heinz Regele, from Austria, Javier Gimeno, from Spain, and Catherine Horsfield, from the United Kingdom.

28th ECP. Köln, Germany. 2016.

Two activities are proposed in a separate document, one is a **long course of Introduction to Diagnostic Electron Microscopy**, mostly conceived for residents and trainees, the other a **slide seminar** in which the cases would be presented by **residents**, preferably in the 4th or 5th year. In addition to that, if there is available space, a proposal that still needs to be explored with the Pediatric Pathology Working Group, is a symposium on **pediatric pathology ultrastructure**, where the main topics in which EM can contribute in this field would be included: ciliary dyskinesia, metabolic storage diseases, myopathies, bullous skin diseases, and pediatric tumors.

This summarizes the activities of the Electron Microscopy Working Group.
We remain ready to provide any further information that may be required.
Respectfully submitted.

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Chairman of the EMWG

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