



## Options of utilization of analytical methods in metallomics

In August 25<sup>th</sup> and 26<sup>th</sup>, researchers from Laboratory of Metallomics and Nanotechnologies, Department of Chemistry and Biochemistry, Mendel University in Brno realized a videoconference entitled Metallomics and Analytical Methods. This videoconference was focused on advances in metallomics as well as progress in the field of analytical techniques in connection to this rapidly developing scientific field and its application in cancer therapy. This videoconference enabled the connection between all partners from the Visegrad group participating in the project *Metallomic Scientific Network*. This two-day session was hosted by associate professor Vojtech Adam PhD, the head of the Department of Chemistry and Biochemistry, vice-rector of Mendel University in Brno and the initiator of the whole project, which led to the formation of the Metallomic Scientific Network, which already in first five months of its existence enabled a very fruitful collaboration. Among the most important outcomes belong, besides the existence of the network of collaborating workplaces focused on metallomic research from Czech Republic, Slovak Republic, Poland and Hungary, the realization of numerous seminars hosted by professor Rene Kizek PhD –the head of the Laboratory of Metallomics and Nanotechnologies, and finally the four-day conference *Metallomics Technology Conference 2015*, workshop at the Debrecen University and/or videoconferences focused on the partial metallomic topics.

Because the *Metallomics Technology Conference 2015* and the project itself were reported in a separate press release, here we highlight only the information connected to other project activities. The seminars taking place at the premises of Laboratory of Metallomics and Nanotechnologies were focused not only on basic metallomic research but also on application of metallomics in cancer therapy and use of mass spectrometry for understanding of the biological basis of diseases demonstrated on tissue samples of chicken embryos.

The three-day workshop organized by Dermatology Department of the Medical Faculty Debrecen University was devoted to possibilities of metallomics application in skin cancer therapy.

One-day videoconferences focused on the role of protein metallothionein in metallomic research were the connecting point of all activities. Metallothionein was first described in 1957 and its function is still not completely clear. However, it is known that it has protecting properties against the toxicity of metals, which is currently very actual due to the environmental pollution. Also the applicability of the metallomic research in oncology was discussed.

The summary of the combined work of researchers of Visegrad group framed by the International Visegrad Fund is given the book of abstracts of *Metallomics Technology Conference 2015: Recent Advances and Strategies*, or in the book of abstracts of *Metallomics Technology Conference 2015: Metallomics and analytical method*. The electronic version of these books of abstracts is downloadable from websites of the project shown below



The finalization of the *Metallomic Scientific Network* project on August 31<sup>st</sup> 2015 is a symbolic start of a new period of collaboration within the metallomic research of V4 countries not only in terms of ongoing exchange of the experiences but also in terms of preparation of new projects, which will be based on the newly developed collaboration

Project websites:

[http://web2.mendelu.cz/af\\_239\\_nanotech/V4dp.php?ip=138](http://web2.mendelu.cz/af_239_nanotech/V4dp.php?ip=138)

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[www.visegradfund.org](http://www.visegradfund.org)



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**Illustration photography**



Figure No. 01 – Opening of the *Metallomics Technology Conference 2015* by the principal investigator Assoc. Prof. Vojtech Adam



Figure No. 02 – Participants of *Metallomics Technology Conference 2015*



Figure No. 03 – LabTour during *Metallomics Technology Conference 2015*



Figure No. 04 – Videoconference *Metallomic and metaloma cancer* – lecture given by Marketa Kominkova, MSc. Focused on immunohistochemistry of skin cancer



Figure No. 05 – Workshop *Metallomics and Skin Cancer* at University of Debrecen – prof. René Kizek, PhD (LMaN) and Dr. Gabriella Emri (UD)



Figure No. 06 – Seminar on *MALDI Imaging of MT in tissue slices of tumors* – Lecture of Roman Guran, MSc.

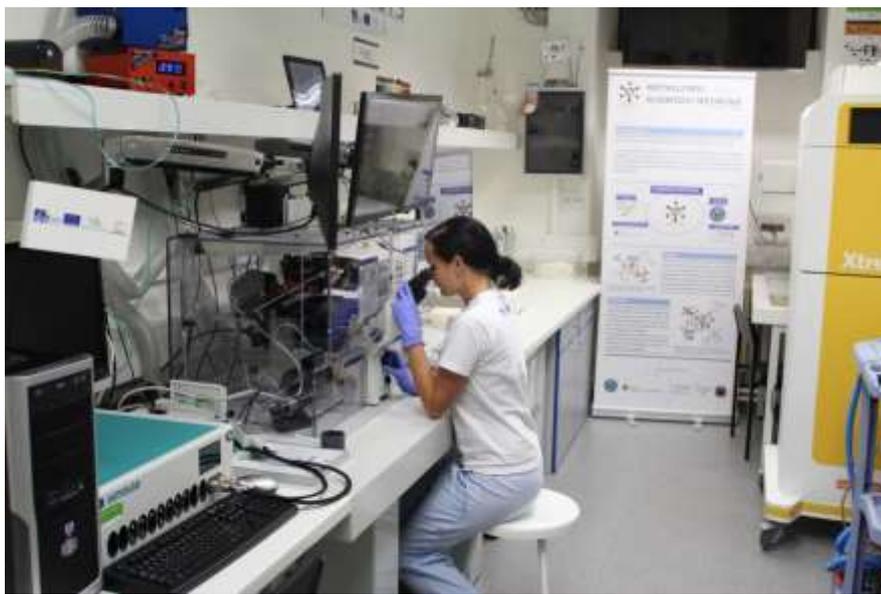


Figure No. 07 – LMaN – Centre of the international metallomic network

Photography source: project Metallomic Scientific Network

Legend:

LMaN – Laboratory of Metallomics and Nanotechnology

UD – University of Debrecen

Note .: If you are interested in more pictures or pictures in high definition, please contact Vlastimil Sochor, tel. + 420 545 133 312, E-mail: sochor@mendelu.cz