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VABILO

Slovensko fiziološko društvo v ljubljano vabi na predavanje z naslovom

»FIRST & FOREMOST– IT'S ABOUT THE BIOLOGY: QUANTITATIVE HIGH RESOLUTION TOP-DOWN PROTEOMICS«

Predaval bo

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**v torek, 07. 11. 2017 ob 14:30 uri,
v veliki vajalnici Inštituta za patološko fiziologijo, Medicinske fakultete, UL,
Zaloška cesta 4, v Ljubljani.**

Predavanje bo v angleškem jeziku.

Summary:

Two-dimensional gel electrophoresis (2DE) remains widely regarded as a gold-standard for proteomic analyses in particular as it resolves intact protein species (i.e. proteoforms). Despite 'issues' often noted in reviews, there has been little to substantiate these claims and many do not seem plausible when 2DE is considered from the perspective of its underlying chemistry and that of proteins. As gel-based proteomics is a 'mature' technology, it is reasonably straightforward to optimize ongoing analyses by targeted refinements. I will review my group's efforts to quantitatively improve every stage of 2DE analysis, from sample preparation and protein extraction, to in-gel spot 'fractionation' to further improve overall protein resolution, through to improved in-gel protein detection approaches for the enhancement of total proteome coverage. I will also provide a brief overview of our applications of this refined 2DE protocol in proteomic investigations of human preterm labour, spinal cord injury, and a number of other samples relevant to both basic and clinical sciences. Thus, 2DE remains a rigorous, high-resolution technique for large-scale proteomic analyses, including the dissection of molecular mechanisms and the identification of biomarkers. Nevertheless, considering the complexity of native proteomes, it must be remembered that there is no panacea, only pros and cons in all experimental methods. Thus critical, quantitative methodological evaluation and re-evaluation will always lie at the core of the most effective proteomic analyses.