

Preanalytical Phase – an updated review of the current evidence

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European Federation of Clinical Chemistry and Laboratory Medicine (EFLM) Working group for preanalytical phase (WG-PRE) has recently launched a series of conferences on preanalytical phase. First such meeting was held in Parma (Italy) in the spring of 2011 and the second one took place in Zagreb (Croatia) during 1-2 March 2013. The Zagreb audience had the opportunity to enjoy a focused and challenging scientific program as well as to participate actively in interactive e-voting sessions.

Speakers of the conference have kindly accepted the invitation to submit their review articles covering topics presented during the meeting. This Journal issue comprises a number of high quality review articles providing an updated overview of the current evidence on the various preanalytical issues. The first article in this series is presented by prof. Walter G. Guder who has prepared a historical overview of the milestones in the development of the key concepts in the field of preanalytical phase (1). Bowen and Remaley in their article provide an excellent update on the most important blood collection tube additives and their compo-

nents which may affect laboratory test results (2). De Carli and her colleagues have compiled the existing evidence of healthcare workers risk of sharps injuries and subsequent infections and review respective prevention strategies (3). Several subsequent articles are dedicated to some preanalytical sources of interferences such as lipemia (4), physical activity (5) and medical contrast media (6). Delanghe and Speeckaert have reviewed current preanalytical problems and requirements for the most common urinary analytes, with a special highlight of the importance of the preanalytical phase in urine toxicology and metabolomics (7). Last, but not the least, this article series also covers the recent advances in the harmonization of preanalytical quality indicators (8) and External Quality Assessment Schemes for the pre-analytical phase (9).

We hope that this series shall contribute to the better understanding and recognition of various important preanalytical phase variables. As this body of evidence grows, we will keep you updated by providing high quality reviews and original research addressing the current and future preanalytical challenges.

References:

1. Guder WG. History of the preanalytical phase: a personal view. *Biochem Med* 2014;24:25-30. <http://dx.doi.org/10.11613/BM.2014.005>.
2. Bowen RAR, Remaley AT. Interferences from blood collection tube components on clinical chemistry assays. *Biochem Med* 2014;24:31-44. <http://dx.doi.org/10.11613/BM.2014.006>.
3. De Carli G, Abiteboul D, Puro V. The importance of implementing safe sharps practices in the laboratory setting in Europe. *Biochem Med* 2014;24:45-56. <http://dx.doi.org/10.11613/BM.2014.007>.
4. Nikolac N. Lipemia: causes, interference mechanisms, detection and management. *Biochem Med* 2014;24:57-67. <http://dx.doi.org/10.11613/BM.2014.008>.
5. Sanchis-Gomar F, Lippi G. Physical activity - an important preanalytical variable. *Biochem Med* 2014;24:68-79. <http://dx.doi.org/10.11613/BM.2014.009>.
6. Lippi G, Daves M, Mattiuzzi C. Interference of medical contrast media on laboratory testing. *Biochem Med* 2014;24:80-8. <http://dx.doi.org/10.11613/BM.2014.010>.
7. Delanghe J, Speeckaert M. Preanalytical requirements of urinalysis. *Biochem Med* 2014;24:89-104. <http://dx.doi.org/10.11613/BM.2014.011>.
8. Plebani M, Sciacovelli L, Aita A, Chiozza ML. Harmonization of pre-analytical quality indicators. *Biochem Med* 2014;24:105-13. <http://dx.doi.org/10.11613/BM.2014.012>.
9. Kristensen GBB, Aakre KM, Kristoffersen AH, Sandberg S. How to conduct External Quality Assessment Schemes for the pre-analytical phase? *Biochem Med* 2014;24:114-22. <http://dx.doi.org/10.11613/BM.2014.013>.