GUIDANCE ON THE MEASUREMENT OF PLATELET DIMENSIONS. METHODS AND CLINICAL USE

PLATELET PHYSIOLOGY

- **Persons responsible:** Patrizia NORIS (MD), Co-Chair of the ISTH-SSC on Platelet Physiology, with the supervision of Prof. Paolo Gresele, Chair of the ISTH-SSC on Platelet Physiology.

- **Design:** nominate a working party of 9 experts; formulate a questionnaire for a survey among experts; distribute the questionnaire to the experts; analyze data and eventually discuss the results to attain the best possible consensus; generate a guidance to be published as Official Communications of the SSC. At the end of this study, the questionnaire may be sent to all the members of the ISTH-SSC on Platelet Physiology in order to get informations on this topic from a broader audience for a possible generation of a survey.

- **Aim/Objective/Rationale:** the widespread diffusion of automated cell counter in the routine laboratory practice has made available a large number of platelet parameters, in addition to the platelet counting. Among all, the mean platelet volume (MPV) is the parameter most frequently analyzed both in healthy subjects and in patients with hematological and non-hematological diseases, searching for a specific clinical relevance in diagnosis, treatment and prognosis. A number of variables, both pre-analytical and intra-analytical, can prevent an appropriate acquisition of MPV. Since these variables are frequently ignored, the scientific value of the literature is often questionable. Therefore, standardized methods are required in order to get correct measurements of MPV and meaningful suggestion from papers exploring the clinical relevance of MPV. The aim is to produce a guidance on the measurement of platelet dimensions useful for clinicians and scientists in their daily practice and to identify the best methodological approach resulting in reliable data. Specific objectives will be to identify: 1) the more reliable methods and laboratory conditions for a standardized assessment of platelet dimension; 2) the clinical settings in which platelet sizing is important for diagnostic, therapeutic, and prognostic purposes; 3) the minimal quality criteria required for a clinical study on platelet size (design of the study, sample size, statement of methodology used, statistical analysis, etc.)

- **Methodology:** The lack of strong evidences in the field recommends to use a Rand method based on anonymous expert opinion to reach a consensus. The questionnaire will be proposed to 9 scientist experts in the field.
• **Expected timeline:**
  - Project stage/set up: March 2016
  - Launch: April 2016
  - Finalization/analysis: by 3-4 months
  - Reporting: by the end of 2016

• **Expected outcomes:** presentation of partial results at the future SSC-ISTH meeting in Montpellier. Generation of a guidance to be published as Official Communications of the SSC.

• **Description of project set/up and management, needed infrastructure and resources:**
  The lack of strong evidences in the field recommends to use a Rand method based on anonymous expert opinion to reach a consensus. The questionnaire will be proposed to 9 expert in the field. If required, the results obtained from the questionnaire will be discussed among the expert panel.

**References:**
Lancé MD (2014) Mean platelet volume needs standardization. Thromb Haemost 113:908