

Recorded Presentation

The importance of the quality of biospecimens to generate reliable and reproducible research data

BBMRI.at National Node Director Kurt Zatloukal explains

- why the pre-analytical phase is relevant for reproducibility of data in research and in vitro diagnostics
- ISO and CEN pre-analytics standards developed in the context of H2020 EU Project SPIDIA4P are needed and
- how BBMRI.at and its biobank partners can support researchers

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The rapid development and tremendous growth of the omics technologies have led to highly sensitive test systems and the generation of data of highest precision. With the higher sensitivity, however, a new influencing factor arose: the handling of biospecimens during the pre-analytical phase. Already the smallest variations in the biospecimen collection process, e.g. prolonged ischemia times or fixation, generate deviant results. Thus, pre-analytical factors turned out to be a major cause why promising results in biomarker research failed in the process of validation, as data were not reproducible on a large scale, thereby wasting time and money.

The Austrian academic biobank partners of BBMRI.at collecting and storing biospecimens are able to support researchers with high-quality biospecimens and associated clinical data together with information about the pre-analytical handling process. In addition, we also offer know-how about state-of-the-art collection, processing and storage of biological samples. We aim to make the "black box" of sample management transparent to help creating the basis for a better reproducibility of scientific data.