TERMIS – EU SYMPOSIUM SUBMISSION FORM

Title:	**CELL VIABILITY AND TISSUE BANKING**	
	Name	**Affiliation**
Chair:	Blanca Miranda	Hospital Clínic de Barcelona
Co-Chairs:	Antonio Fernández-Montoya	Granada Cells and Tissues Bank
Keynote Speaker *:	Alice Warley	King's College London
Organizers:	Blanca Miranda Antonio Fernández-Montoya	Hospital Clínic de Barcelona Granada Cells and Tissues Bank

Synopsis:
Please provide a brief synopsis of the proposed symposium (up to 600 words). Please use allocated space below.

Construction of artificial tissues and organs by tissue engineering is one of the fields of medical research that has experienced major progress in recent years. In this regard, and to ensure the appropriate function of the developed organs, an accurate evaluation and quality control of the constructed tissues and organs is very important, especially if these are generated and stored in Tissue Banks for clinical uses.

Evaluation of the suitability of the developed tissues and organs has to be carried out at different levels and using different techniques. In the first place, the researcher must evaluate the viability of the primary cell cultures that will be used to generate the tissue constructs, since only viable cells are suitable for clinical use. In this regard, the development of extremely sensitive techniques like the electron probe X-ray microanalysis allows the scientist to not only evaluate the viability of the cells in the culture, but also to predict the short and long-term behaviour of these cells. On the other hand, evaluation of the constructed tissue substitutes have to ensure that both the structure and the function of the constructs is adequate and that these tissues and organs are similar to the normal, native tissues that the researcher pretends to reproduce in vitro.

In this milieu, long-term storage of bioengineered tissues in tissue banks is highly dependent on the use of several cryoprotection agents. However, most preservation protocols are associated to certain degree of loss of cell viability or structural tissue damage. For that reason, evaluation of cell viability and tissue structure is especially important for tissues stored in tissue banks.

All kind of works focused on the evaluation of cell viability of cells and tissues generated by tissue engineering and on tissue banking are welcome to this symposium, including methods and techniques based, among others, on:

- Dye exclusion tests.
- Intracellular components release.
- Metabolic and functional tests.
- Electron-probe X-ray microanalysis.
- Colony formation assays.
- In vitro and in vivo analyses.
- Gene expression analyses.
- Cryoprotection.
- Tissue storage.
- Vitrification.
- Tissue banking.

Symposium Keywords:	Cell viability, microanalysis, tissue banks, cryoprotection