

This International Congress is the first one on Biohydrogels and concerns the use of hydrogels in the biomedical field.

The studies on Biohydrogels have had a rapid, exponential evolution in the last decades. Starting from one of the first applications of hydrogels in surgery, polyvinylalcohol crosslinked with formaldehyde under the trade name of Ivalon, we passed through PolyHema hydrogels as contact lens materials, hydrophilic polyurethanes (HPU), biodegradable hydrogels for both reconstructive surgery and pharmaceutical delivery systems, and finally more recently, one decade old, the thermo-reversible and transient network hydrogels. Of course all these classes of hydrogels have been always and continuously studied, improving their performance and field of applications. Recently, most of them have been used as scaffolds for cells, even stem

ones, for regenerative applications (tissue engineering). Nevertheless hydrogels are odd materials and many studies still have to be carried out to fully understand their behaviour from mechanical, physicochemical and biological point of view.

This is the reason why we thought useful and necessary the organisation of a Congress on this matter in order to set up the state of art and provide a forum where scientists from academia and industry can present and discuss the most recent developments in the rapidly evolving field of advanced biohydrogels.

The papers here collected represent the oral communications discussed in the International Congress and give a marvelous worldwide glance of the recent researches performed on this subject.

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