LETTER FROM THE EDITOR

Letter from the Editor

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With the end of the year 2011 we are closing our Volume 6, and I would like to thank all authors who contributed to this very outstanding volume containing highlights in quantitative Biointerphase science. Several reviews and original research papers address advances in the preparation and characterization of interfaces used in cell/tissue cultures or sensor applications, and the progress made in understanding and manipulating cellular behavior. There is a comprehensive and inspiring review on the possibilities block copolymer micelle nanolithography offers to model the natural cellular environment (Lohmüller et al.), and a paper by Diesner et al. describing how Sum Frequency Generation spectroscopy can be used to monitor living cells through the expression of the extracellular matrix. Other papers describing ways to prepare cell substrates and the behavior of cells include studies of the effect of nanometric roughness (Wang et al.), ways to optimize surface properties for neural cell cultures (Theilacker et al., Zhou et al., and Boggs et al.), and the effects of modulus and mechanical deformation (Walter et al.) or unidirectional polymeric nanostructures (Christopoulos et al.). The possible toxicity of nanotubes is reviewed by Stella; on the other side, Abel et al. demonstrate their use to mediate long distance cell-to-cell connections. Realization of nonfouling surface properties (Ahmad et al., Lokanathan et al., and Lorenz et al.) and novel ways to prepare antimicrobial surfaces (Green et al.) are described and reviewed. These new developments in the design and realization of cellular substrates and bioactive materials would not be possible without the ongoing improvement in our ability to characterize interfaces—and interphases—with molecular, chemical and topographic resolution. Advances in analytical capabilities are described in the articles by Kulp et al., Ferno-Ortner-Bleckmann et al., Jing et al., Walter et al., Techane et al., Tyler et al., Grohmann et al., and Huang et al. Practical aspects of drug delivery from stents are discussed in an article by Mani et al., and the modulation of inflammatory response by surface modification is the subject of the work by Valdes et al. The in vitro production of a membrane protein in polymersome membranes by a cell—free expression system to characterize such membrane proteins is demonstrated by Nallani et al. Finally, we have two articles in this volume which are “off the main track,” respectively addressing protein adsorption in an aerated solution and applications where biointerphases also play a role, i.e., cosmetics. The interaction of nanobubbles with BSA and papain films on a gold surface is investigated in the work by Kolivoska et al., and the tribological properties of cosmetic powder suspensions in compliant fingerprintlike contacts are the subject of the study by Timm et al.

Enjoy reading this excellent and quantitative mix of Biointerphase science!

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