

# BIOMEDICAL APPLICATIONS OF MICRO AND NANOTECHNOLOGIES

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## FOREWORD

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Quite often in the last centuries some outstanding technological achievement produced a tumultuous increase of the available information concerning basic physical and biological events. Having in mind the scientific more than the economic relevance, one could mention the invention of telescopes, microscopes, voltaic cells, transistors, particle accelerators and, more recently, fast and automatic nucleotide sequencers. In this frame, the ability to miniaturize down to the nano scale the experimental set-up should be considered among the characteristic signatures of our times.

Even limiting the area of interest to biomedical research, a list of the existing or foreseeable applications of nanotechnologies, due to their continuously increasing number, would reveal incomplete or compelled to a never-ending update. However, that is not our intention here: a more limited and practical goal is to exchange the experience of a number of colleagues deeply involved in the exploitation of this emerging technology at the Sapienza University. We believe that their different scientific backgrounds and working strategies should be considered an important added value: it is well known that crossfertilization between individuals endowed with not so close pedigree generates robust and apt to survive offsprings.

This is not an easy time for basic research, everywhere in the world and decidedly in our Country. Luckily enough, however, we may grasp the unique opportunities offered by the enormous resource-attracting potential associated to the inspection of microscopic, molecular events. Having realized that, it is not surprising the excitement of both experimentalists and more theoretically inclined researchers.

We hope this minisymposium will provide a certainly non-exhaustive, and nevertheless instructive and inspiring picture of the multifaceted, nanotechnology-driven research currently under way in our University.

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