

Foreword

The idea of a workshop dedicated to the role of β -sheet breakers in the phenomena concerning fibrillogenesis and amyloid aggregation stemmed from the following considerations:

- i) The topic has, besides its own intrinsic relevance, a number of fruitful connections with several other fields, as easily verifiable from the number of contributions appearing even in the non-specialized literature (see the citations in the following abstracts). This is clearly reflected in the variety of subjects discussed in the Workshop, spanning from the chemical synthesis of β -breakers and the molecular mechanisms of their interaction with A β -peptide aggregates (Session I), to the consideration of *in vivo* studies and therapeutical issues (Session III).
- ii) The systematic use of multivariate statistics and/or dynamical simulations often remains the only viable approach to explore the analytically unpredictable behaviour in the long term of complex systems. Thus, a number of contributions were dedicated to characterize the significant factors ruling the systems of interest and to foresee - at least qualitatively - the results of specific model-validation experiments (Session II).
- iii) The opportunity to gather people of complementary, although heterogeneous, competence should be fully exploited whenever possible, particularly in the aim of tackling, as in the present case, a whole set of multifaceted problems. Just realizing that, we tried and put together a group of colleagues selected on the basis of their direct experience in the biochemical, biophysical and biomedical aspects of the problems at hand.

The deep attention elicited in the audience by all the presentations and the extensive, critical discussions following many of them, are faithful indicators of the continuously increasing interest for the topics of the Workshop, in particular among PhD students and younger colleagues. All in all we believe to have succeeded in assembling a group of people able to convey high-quality information of interest even to people not (or not yet) deeply involved in the field. Going through the following collection of abstracts the reader can decide whether we are right or not.

The vast majority of the authors could keep the one-page format for the abstracts, as defined by an informal previous agreement. We were not stringent about that, however, given the difficult squeezing significant results on complex problems in a quite limited space. Besides the quality and quantity of the formally presented results, an essential outcome of the Workshop was the friendly exchange of information among participants in any available informal occasion. Thus, the Workshop could be considered as the first event in a series pointing to immediately fruitful cooperation on specific problems, as well as to joint-ventures in the arrangement of long-term, international research programs.

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Alfredo Colosimo

