



UNIVERSITÀ
DEGLI STUDI DI TRIESTE

AVVISO DI CONFERENZA

Il giorno **MERCOLEDÌ 6 MAGGIO 2015**,
alle ore **15:30**, nella **SALA DEL CONSIGLIO (I
piano)**

del **DIPARTIMENTO DI SCIENZE CHIMICHE
E FARMACEUTICHE**,
Università di Trieste, Edificio C11, Via Giorgieri 1
la Dott. SILVIA MARCHESAN

terrà una conferenza dal titolo:

**Twists of chirality in short peptide self-assembled
superstructures**

Tutti gli interessati sono cordialmente invitati

Il Direttore del Dipartimento di Scienze Chimiche e
Farmaceutiche

Prof. Silvano Geremia

"Twists of chirality in short peptide self-assembled superstructures"

Dr. Silvia Marchesan

Dipartimento di Scienze Chimiche e Farmaceutiche

Self-assembly of small molecules into hydrogels is a hot topic of research that still presents many unanswered questions. In particular, tripeptides are very appealing building blocks that are simple to prepare and can encode powerful biological messages. However, prediction of their self-assembly behaviour is still a very challenging objective.¹ Amongst the different tools that can be used to drive self-organisation, appropriate choice of chirality to fine-tune tripeptide molecular shape is an attractive yet mostly unexplored approach (Fig. 1). A different configuration at one stereocenter of simple hydrophobic sequences is sufficient to determine dramatic effects at macroscopic level (i.e., leading or not to a hydrogel within seconds).² Importantly, specific nanostructure morphologies (e.g., nanotapes, twisted fibers) can be achieved through subtle molecular variations.³ The resulting assemblies hold high potential as biomaterials, as shown by their performance *in vitro*.⁴ This approach opens a number of innovative avenues, for example, through co-assembly with other molecules that actively participate in the superstructure.⁵

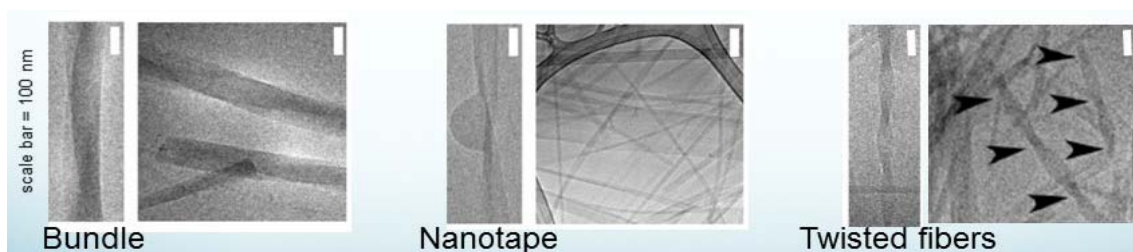


Fig. 1. Cryo-TEM images reveal different nanomorphologies for heterochiral tripeptide superstructures.

References

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