



Venerdì **9 giugno 2022** alle ore **14:45** presso l'aula F

la **Prof. Dr. APHRODITE KAPURNIOTU**

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terrà il seminario dal titolo:

**EXPLOITING CROSS-AMYLOID PEPTIDE INTERACTIONS TO DESIGN
INHIBITORS OF AMYLOID SELF-ASSEMBLY IN ALZHEIMER'S DISEASE
AND TYPE 2 DIABETES**

Amyloid self-assembly is linked to the pathogenesis of more than 50 devastating cell- or neurodegenerative diseases including Alzheimer's disease (AD) and type 2 diabetes (T2D). Cross-seeding interactions between A β and IAPP, the key amyloid polypeptides of AD and T2D, dramatically accelerate amyloid self-assembly and are regarded as possible molecular links between the two diseases. Our group has shown that IAPP/A β cross-amyloid interactions can be used to design conformationally constrained linear or cyclic peptides as effective inhibitors of amyloid self-assembly of A β , IAPP, or both polypeptides ("cross-amyloid" inhibitors). Designed inhibitors comprise IAPP-derived ones (Yan et al. PNAS (2006), Yan et al. ACIE (2007) & (2013); Andreetto et al. ACIE (2015), Spanopoulou et al. ACIE (2018), Armiento et al. ACIE (2020)) and the most recently designed A β -amyloid core derived ones termed A β amyloid core mimics or ACMs (Tas et al. Nat. Commun. (2022)), which were found to function via an unexpected mechanism. Due to their favorable properties, some of the designed peptides are promising leads for anti-amyloid drugs and for targeting pathogenic amyloid self-assembly in AD, T2D, or both, as yet incurable diseases.

La presenza della S. V. sarà molto gradita

Marta De Zotti

*Il Direttore del Dipartimento
Michele Maggini*