UNIVERSITÀ DEGLI STUDI DI PADOVA

PharmBiotech

June 1st, 3rd and 6th 2022
h 16:00-18.30

Short course

RNA Binding Proteins: regulation of function and role in neurodegenerative disorders

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Day 1: *An introduction to theoretical knowledge*

mRNA splicing

- **Regulation of alternative splicing**
- **Methods to define splicing regulatory elements**
- **Pathology associated with splicing defects**
- **Therapeutic strategies to modulate disease-associated splicing defects**

mRNA polyadenylation

- **Regulation of alternative splicing**
- **Pathology associated with alternative polyadenylation**

Ribonucleoprotein granules: cellular organization and function

- **Membraneless organelles**
- **Regulation of RNP organization**
- **Pathology associated with RNP granules**

Day 2: *Research methods of phase separation*

Liquid-liquid phase separation of RNA binding proteins

- **Basic principles**
- **Methods**
- **Functional and disease implications**

Case study: TDP-43 phase separation *(Zachary Grese)*

Day 3: *Round Table and Evaluation Test*

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