PROJECT ACRONYM AND TITLE: Class Ila HDACs as therapeutic targets in human diseases: new roles and new selective inhibitors

FUNDING PROGRAMME: PRIN 2017

SCIENTIFIC FIELD: LS7

HOST DEPARTMENT: Department of Molecular Sciences and Nanosystems

SCIENTIFIC RESPONSIBLE: Alessandro Angelini

FINANCIAL DATA:

<table>
<thead>
<tr>
<th>Project total costs</th>
<th>Overall funding assigned to UNIVE</th>
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<td>738.550 €</td>
<td>111.000 €</td>
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ABSTRACT:
The project conjugates high quality basic research with a fervent translational approach. The basic research arm will investigate the epigenetic mechanisms implicated in three important diseases that affect the population: stroke, cancer and pain chronification. The translational research arm will identify and optimize new small molecules with therapeutic potential to challenge these diseases. Focus of the research activities of all team's units is a family of transcriptional repressors: the class Ila HDACs. Different and innovative strategies of screening, exploiting small compounds, bicyclic peptides and virtual approaches, will be applied to identify new class Ila HDACs inhibitors. New and specific domains of these epigenetic regulators will be interrogated as druggable targets. In parallel, functional studies, using genome-editing techniques will be performed to clarify the contribution of the different class Ila members to stroke, cancer and pain chronification. The genetic signatures and the epigenomes under the influence of class Ila HDACs will be scrutinized in the three disease models. In summary the proposal aims to achieve therapeutic solutions against three important diseases, by targeting class Ila HDACs and thus reversing the pathological status.

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<th>Start date</th>
<th>End date</th>
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<td>29/08/2019</td>
<td>29/08/2022</td>
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PARTNERSHIP:

1. Università degli Studi di UDINE  Coordinator
2. Università degli Studi di Firenze
3. Università degli Studi di Roma “La Sapienza”
4. Università Ca’ Foscari
5. Università degli Studi di PADOVA
6. Università degli Studi di Napoli Federico II