Marine biological resources

DYRK-DOWN

TRISOMY 21 TREATMENT VIA DYRK1A, A DOSAGE-SENSITIVE GENE FOR BRAIN DEVELOPMENT AND FUNCTION

Prior studies of Trisomy 21 (Down's syndrome) showed that any variation in the dose of the protein kinase DYRK1A modifies the GABAergic and glutamergic systems involved in the expression of this syndrome, but the mechanisms involved have yet to be explained.

The DYRK-DOWN project aims to understand the role and functions of this kinase DYRK1A, as a key step towards developing a candidate drug which will inhibit it, with a view to treating Down's syndrome. DYRK1A inhibitors in the Leucettine class (alkaloids from a marine sponge) have already been chemically synthesised by the company ManRos Therapeutics; these will then be tested.

The DYRK-DOWN project aims to prepare the groundwork for treating people with Down's syndrome at both an early and advanced stage, by identifying the molecules to target and providing the pharmacological tools to do so. These will be of marine origin, and may potentially prevent or treat the developmental aspect of Down's syndrome.

Partners

COM_PROJECTS_CATEGORIE_PARTNER_ENTREPRISES

ManRos Therapeutics / R&D, Roscoff

Research centers

Centre Européen de Recherche en Biologie et en Médecine (CERBM), Institut de Génétique de Biologie Moléculaire et Cellulaire (IGBMC), Illkirch [Project Developer]
Centre Européen de Recherche en Biologie et en Médecine (CERBM), Institut de génétique et de biologie moléculaire et cellulaire (UM 41 - UMR 7104 - UMR_S 1258) IGBMC Illkirch
Institut National de la Santé et de la Recherche Médicale (INSERM) Bordeaux
Université Denis Diderot - Paris 7 Unité de biologie fonctionnelle et adaptative (BFA), Paris

Funder

- Agence Nationale de la Recherche

Labelisation

19/10/2018

Overall budget

1 922 K€