

RESULTATS DOUZIEME APPEL A PROJETS ECOS Sud - UDELAR (2023)

Code Projet	Titre du projet	Abstract	Responsable et établissement français	Responsable et établissement uruguayen
<p>PU23B03 SUMBRE</p> <p>Devient U23B01 SUMBRE</p>	<p>Étude de l'innervation fonctionnelle des axones rétiniens dans le tectum optique contre les défauts de ségrégation dans le chiasma et le tractus optique causés par le déficit en Slit2 et/ou Slit3 : compensation fonctionnelle ou comportementale ?</p>	<p>Les cellules ganglionnaires rétiniennes sont responsables de la connexion de la rétine à sa cible principale dans le cerveau: le toit optique. Leurs axones suivent un chemin tortueux, incluant, chez de nombreux vertébrés, le croisement complet des axones au niveau du chiasma optique pour se rendre au toit optique controlatéral. Au niveau du chiasma, les deux nerfs optiques se rencontrent. Dans ce site les signaux moléculaires de guidage axonal indiquent la voie que le cône de croissance axonale doit suivre. Parmi les molécules responsables de cette décision figurent les facteurs sécrétés Slit, qui agissent sur les récepteurs Robo du cône de croissance. Robo2 est le récepteur le plus important dans les cellules ganglionnaires. Récemment l'un des groupes proposant ce projet (en Uruguay) a démontré que deux facteurs, Slit2 et Slit3, seraient responsables du guidage des axones à travers le chiasme chez le poisson zèbre. Le déficit fonctionnel des deux gènes produit simultanément de graves défauts de guidage axonal dans la zone entourant le chiasma optique, très similaires à ceux observés chez les mutants robo2. Indépendamment, l'autre groupe (en France), est intéressé par les phénomènes de connectivité fonctionnelle du toit optique chez la larve du poisson zèbre face. Cette équipe a développé des méthodes puissantes pour étudier le comportement et la réponse fonctionnelle des neurones cibles de la voie optique. Dans ce projet, les deux groupes se sont réunis pour répondre à la question suivante: que se passe-t-il dans le toit optique au niveau structurel et fonctionnel lorsque les gènes qui codent pour Slit2 et Slit3 sont déficitaires? Pour y répondre, ils auront recours à une batterie de méthodes expérimentales qui combinent leurs expériences individuelles dans la manipulation de l'expression des gènes, des analyses structurales des terminaisons nerveuses, des tests de réponse comportementale face à des stimuli lumineux, et une analyse fonctionnelle fine de la réponse postsynaptique.</p>	<p>SUMBRE German Ecole normale supérieure, IBENS - équipe Sumbre, 46 rue d'ulm 75005 paris sumbre@biologie.ens.fr</p>	<p>ZOLESSI Flavio Universidad de la Republica, Biologia Celular,</p>
<p>PU23B04 FAHRAEUS</p> <p>Devient U23B02 FAHRAEUS</p>	<p>Studying the RNA-binding capacity of p53 and its role in controlling translation during the Unfolded Protein Response</p>	<p>p53 is a key protein in maintaining cell homeostasis and is an essential factor to prevent cancer development. p53 regulates the expression of a diverse set of genes linked to vital cellular processes through molecular mechanisms that act coordinately. p53 harbours a well characterised DNA-binding activity and controls gene transcription, activities that are prevented by many cancer-associated p53 mutants. Interestingly, recent studies, both ours and from other research groups, show that p53 also controls translation of messenger RNAs (mRNAs), and that, at least in some cases, it does so through direct protein-mRNA interactions. This activity seems to be particularly relevant during the unfolded protein response (UPR), a normal response of cells producing high amounts of proteins that has been found altered in pathologies such as diabetes, neurodegenerative diseases and cancer. In this project, by using human cells in culture and biochemical and molecular and cellular biological techniques, we will: i) identify novel mRNAs targeted by p53; ii) study the RNA structures bound by the p53 protein; iii) characterise the RNA-binding capacity of p53 and its implications on mRNA translation, and; iv) study the cell biological effects of p53-mediated mRNA translation control under different cellular conditions. This project is conceived within a broader framework aiming to characterise the adaptive processes that occur in a concerted manner in response to major alterations of cellular homeostasis.</p>	<p>FAHRAEUS Robin Institut de Génétique Moléculaire, Institut de Recherche Saint-Louis, Université Paris Cité, 27 rue Juliette Dodu, 75010 PARIS robin.fahraeus@umu.se</p>	<p>LÓPEZ FERREIRA Ignacio Facultad de Ciencias, Universidad de la República, Sección Bioquímica, équipe Regulation post- transcriptionnelle lopez@fcien.edu.uy</p>

<p>PU23H02 SEBASTIANI</p> <p>Devient U23H01 SEBASTIANI</p>	<p>Disciplines floues : histoire intellectuelle de la définition des savoirs entre l'Amérique et l'Europe (XVIIIème-XXème siècles) (Disciplinas borrosas: Historia intelectual de la definición de saberes entre América y Europa entre los siglos XVIII y XX)</p>	<p>This project is framed in the so-called "intellectual history", which today promotes numerous studies of the forms of registration, production and circulation of knowledge in different eras and geographies. It aims at situating the processes of contingent definition of the boundaries, the institutional structures and the cultural frameworks of the parcels of knowledge, not as we currently know them but as they were conceived in specific spatial and temporal coordinates. It is especially interesting to account for these processes on a scale that we could call "global" or, perhaps more precisely, "transatlantic", due to the abundance of crossings between the Americas and Europe, at a time when such a scalar definition was an integral part of the processes of institutionalization of the set of knowledge that since then we call "sciences". To that end, we propose to strengthen the dialogue between those who study the reconfiguration of certain debates of the Enlightenment in 18th-century Europe with those who are interested in the first constructions of national knowledge in Latin American in the 19th century and those who pay attention to transnational circulations that fueled the profound renewal of research agendas and institutional constructions throughout the 20th century on multiple scales. Through the analysis of historical examples in diverse spaces, this project seeks to show that the transition from a transatlantic scale to a global perspective is key to understanding the definitions of technical knowledge and disciplinary spaces within that period of three centuries. A first line of research will analyze the construction of large conceptual categories that were nourished by the transatlantic exchange to propose global analytical grids, which is expressed in a set of works on the "isms" of economists, based on the hypothesis of the centrality of the economic discipline in the reflection on the systems of exploitation of global scope, of which capitalism has been and continues to be the insurmountable paradigm. From there also derives the idea that globalization is the consequence of capitalist exploitation. On the other hand, a series of contingent transformations of knowledge that occurred on various international and national scales will be studied based on the hypothesis that the knowledge thus produced has contributed to the transformation of the disciplinary frameworks in general inherited from the European structures of knowledge and later converted into languages and networks of global circulation. In turn, a double analytical focus is proposed. Moving from examples, we assume a perspective of "thinking by case", inserting it in a dynamic of collective work with the aim of increasing in generality. At the same time, attention is maintained on the problems and challenges of translation between different languages that bear historically distinctive hegemonic forms. In all cases, we embrace a methodology that pays special attention to primary sources and archives that allow locating the characteristics of these processes in precise temporal and geographic coordinates and studying the circulations that affected them.</p>	<p>SEBASTIANI Silvia Ecole des hautes études en sciences sociales, Centre de recherches historiques, 54 Bd Raspail 75006 Paris silvia.sebastiani@ehess.fr</p>	<p>MARKARIAN Vania Universidad de la República, Archivo General de la Universidad de la República vm119@caa.columbia.edu</p>
<p>PU23H03 QUENOL</p> <p>Devient U23H02 QUENOL</p>	<p>Changement climatique et viticulture uruguayenne : vers des scénarios d'adaptation à haute résolutions spatiale</p>	<p>The relationship of grapevines with climate has been studied in detail worldwide because their development characteristics are strongly associated with the characteristics of the wine in close relation to the local climate. Inevitably, climate change has a relevant impact on the grapevine and wine characteristics and quality. The future effects of climate change on global viticulture raise many questions, not only about wine characteristics and quality but also about the geographical evolution of vineyards. Several studies on adaptation to climate change under different climate change scenarios show that significant global changes may lead to the disappearance of some winegrowing regions by 2100. However, these studies of climate change impacts do not consider the spatial variability of fine-scale climate. The characteristics that identify a wine, in general, are given by these local scale variations (e.g. slope, exposure, soil type, etc.), and it is at this scale that the winegrower manages the plots in his vineyard and adapts to climate change through agricultural practices (pruning, soil management, thinning, etc.). The main questions of the project are: is the agro-climatic regionalisation carried out 17 years ago still up to date, can regional climate models and local spatial climate variability be</p>	<p>QUENOL Hervé Université Rennes 2, UMR 6554 LETG du CNRS, 2, place du recteur Henri le Moal 35043 Rennes herve.quenol@univ-rennes2.fr</p>	<p>FOURMENT Mercedes Universidad de la República, Facultad de Agronomía mfourment@fagro.edu.uy</p>

		integrated with climate change scenarios, and can methods be proposed for the wine sector to help adapt to climate change at the vineyard scale? To answer these questions, an interdisciplinary group of researchers will contribute from their disciplines (agronomy, physical sciences, climatology, geography) an approach of analysis that will contribute to the adaptation of climate change in Uruguay's viticulture.		
PU23U01 BOYAVAL Devient U23U01 BOYAVAL	OMER: Observation and Modeling of water quality in Eutrophic Reservoirs Observación y modelación de calidad de agua en embalses eutrofizados Observation et modélisation de la qualité de l'eau dans les réservoirs eutrophes	Inland water bodies provide diverse ecosystem services that are affected by the expansion of anthropogenic activities and the effects of climate change. A robust scientific understanding of hydro-environmental processes is key to support decision making for management of these water bodies to assess and control impacts associated with anthropic pressures. Adequate management also requires tools for monitoring, modelling and prediction of significant water quality parameters (nutrients, suspended solids, phytoplankton, etc.). This project will contribute to the identification and quantification of the processes that determine the phytoplankton dynamics (including cyanobacteria) in reservoirs and to explore scenarios related to reservoir management, hydrometeorology and nutrient inputs. The goal is also to contribute to the exploration of optimal tools to the management of reservoirs (for hydroelectric production and others). The project will be developed on three selected pilot sites belonging to different classes of reservoirs, in size and hydro-ecological functioning. The results are expected to be applied at other reservoirs worldwide. A framework to explore the combination of monitoring approaches (water quality measurements, remote sensing, and continuous measuring sensors) with hydrodynamic-biogeochemical numerical modelling will be developed for these reservoirs.	BOYAVAL Sébastien ECOLE NATIONALE DES PONTS ET CHAUSSÉES, Laboratoire d'Hydraulique Saint-Venant (LHSV), 6 quai Wattier 78401 Chatou Cedex sebastien.boyaval@enpc.fr	SANTORO, Pablo Universidad de la República (UdelaR), Facultad de Ingeniería (FING), Instituto de Mecánica de los Fluidos e Ingeniería Ambiental (IMFIA) psantoro@fing.edu.uy