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LUIS MENÉNDEZ-ARIAS

**STABILITY AND FIDELITY OF HIV-1
REVERSE TRANSCRIPTASES
10 DECEMBER 2014 - 10:30**

**SEDE: SARDEGNA RICERCHE
Loc. Piscinamanna – Edificio 2 – Pula**

Moderator, Prof. Enzo Tramontano, UniCa

**Luis Menéndez-Arias, Research Professor of the Spanish National Research Council
and Group Leader at the Molecular Biology Centre “Severo Ochoa”, Madrid.**

Reverse transcriptases (RTs) are enzymes responsible for the replication of the viral genome. They have a relatively high error rate (around 10^{-4}), a fact that explains in part the enormous genetic variability observed in retroviruses such as HIV-1. Nevertheless, RTs are extensively used in recombinant DNA technology to synthesize cDNA from messenger RNA. Although HIV-1 RT appears to be more active at 50-60°C than murine leukemia virus and avian myeloblastosis virus RTs, it shows >10-fold reduced accuracy in comparison with those enzymes. It will be showed how, using different approaches, HIV-1 RT variants showing increased catalytic efficiency at high temperatures and improved fidelity of DNA synthesis were obtained. These studies will be presented and

discussed on the molecular determinants of fidelity in the HIV-1 RT.

Dr. **Luis Menéndez-Arias** is a Research Professor of the Consejo Superior de Investigaciones Científicas (CSIC, Spanish National Research Council) and Group Leader at the Molecular Biology Centre “Severo Ochoa” (CSIC-UAM), Madrid, where he has been working since 1994. His research is mainly devoted to understanding structure-activity relationships in HIV-1 RT, elucidating mechanisms of HIV-1 resistance to antiretroviral drugs, and understanding HIV replication fitness.

The presentation will take place in English.

Information and registration available at www.sardegna ricerche.it