



MEETING ABSTRACT

Open Access

JunD/HBZ enhances HBZ enhances HTLV-1 antisense transcription

Jean-Marie Peloponese^{1*}, Isabelle Lemasson², Benoit Barbeau³, Jean-Michel Mesnard¹

From 15th International Conference on Human Retroviruses: HTLV and Related Viruses
Leuven and Gembloux, Belgium. 5-8 June 2011

Human T-cell leukemia virus type 1 (HTLV-1) is an oncogenic retrovirus etiologically causal of adult T-cell leukemia (ATL). ATL is a highly virulent cancer that is resistant to chemotherapeutic treatments. To understand this disease better, it is important to comprehend how HTLV-1 promotes cellular growth and survival. The human T-cell leukemia virus type 1 (HTLV-1) basic leucine zipper factor (HBZ) gene is encoded by the minus strand of the HTLV-1 provirus and transcribed from the 3' long terminal repeat (LTR). HBZ expression promotes proliferation and survival of HTLV-1 infected cells in vivo. Although previous reports have been aimed at understanding the potential role of HBZ in HTLV-1 pathogenesis, little is known as to how this viral gene is regulated in ATL cells. Here using our K30-3'asLuc reporter construct, we show that HBZ protein upregulates antisense transcription. Generation of stable clones in 293T cells confirm that HBZ stimulates antisense transcription from the 3' LTR through its interaction with JunD, an AP-1 protein, and its action on the Sp1 binding site located in the 3'LTR. Our results suggest that in vivo inhibition of JunD could be a possible new therapeutic strategy in ATL treatment.

doi:10.1186/1742-4690-8-S1-A135

Cite this article as: Peloponese et al.: JunD/HBZ enhances HBZ enhances HTLV-1 antisense transcription. *Retrovirology* 2011 **8**(Suppl 1):A135.

Author details

¹Centre d'études d'agents Pathogènes et Biotechnologies pour la Santé (CPBS), CNRS/UM1/UM2 UMR 5236, Montpellier, France. ²East Carolina University, Department of Microbiology and Immunology, Greenville, North Carolina, 27834, USA. ³Université du Québec à Montréal, Département des sciences biologiques, Montréal (Québec) Canada, H2X 3X8.

Published: 6 June 2011

* Correspondence: jean-marie.peloponese@cpbs.cnrs.fr

¹Centre d'études d'agents Pathogènes et Biotechnologies pour la Santé (CPBS), CNRS/UM1/UM2 UMR 5236, Montpellier, France
Full list of author information is available at the end of the article

Submit your next manuscript to BioMed Central
and take full advantage of:

- Convenient online submission
- Thorough peer review
- No space constraints or color figure charges
- Immediate publication on acceptance
- Inclusion in PubMed, CAS, Scopus and Google Scholar
- Research which is freely available for redistribution

Submit your manuscript at
www.biomedcentral.com/submit

