



Exclusion from the Golgi and very low levels of HTLV-2 Tax ubiquitination do not prevent IKK-gamma/NEMO relocalization and NF- κ B activation

Chloé Journo, Amandine Bonnet, Arnaud Favre-Bonvin, Jocelyn Turpin, Sébastien Chevalier, Jennifer Vinera, Emilie Côté, Claudine Pique, Renaud Mahieux

► To cite this version:

Chloé Journo, Amandine Bonnet, Arnaud Favre-Bonvin, Jocelyn Turpin, Sébastien Chevalier, et al.. Exclusion from the Golgi and very low levels of HTLV-2 Tax ubiquitination do not prevent IKK-gamma/NEMO relocalization and NF- κ B activation. 15th International Conference on Human Retroviruses: HTLV and Related Viruses, Jun 2011, Leuven and Gembloux, Belgium. pp.A134, 10.1186/1742-4690-8-S1-A134 . inserm-00663650

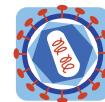
HAL Id: inserm-00663650

<https://inserm.hal.science/inserm-00663650>

Submitted on 27 Jan 2012

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.



MEETING ABSTRACT

Open Access

Exclusion from the Golgi and very low levels of HTLV-2 Tax ubiquitination do not prevent IKK-gamma/NEMO relocalization and NF- κ B activation

Chloé Journo^{1,2,3}, Amandine Bonnet^{4,5,6}, Arnaud Favre-Bonvin^{4,5,6}, Jocelyn Turpin^{1,2,3}, Sébastien Chevalier^{1,2,3}, Jennifer Vinera^{1,2,3}, Emilie Côté^{1,2,3}, Claudine Pique^{4,5,6}, Renaud Mahieux^{1,2,3*}

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

Permanent activation of the NF- κ B pathway by the HTLV-1 Tax (Tax1) viral transactivator is a key event in the induction of T-cell immortalization and participates in HTLV-1-induced leukemogenesis. Tax1-induced NF- κ B activation occurs through the ubiquitin-dependent recruitment of the IKK-gamma/NEMO regulatory subunit in centrosome/Golgi-associated cytoplasmic structures, which allows RelA nuclear translocation and transcription from NF- κ B-dependent promoters. Although encoding a Tax protein (Tax2) that is also able to activate NF- κ B, HTLV-2 does not cause leukemia. It was hence proposed that distinct Tax localizations and transactivation mechanisms could account for these differences in pathogenesis. We therefore compared the ubiquitination status of Tax2 and Tax1 as well as their ability to induce IKK-gamma/NEMO relocalization. Surprisingly, while endogenous ubiquitination of Tax1 was easily detected, endogenous Tax2 ubiquitination was barely detectable. Indeed, Tax2 ubiquitination was only seen upon ectopic expression of ubiquitin. In addition and contrary to Tax1, Tax2 was excluded from GM130-positive Golgi structures but colocalized with calreticulin, suggesting a link between Tax ubiquitination and association with the Golgi. We further showed that a non-ubiquititable lysine-less Tax2 mutant retained the ability to induce IKK-gamma/NEMO relocalization, RelA nuclear translocation and transcription from a NF- κ B-dependent promoter. Our data indicate that contrary to Tax1, Tax2 ubiquitination is dispensable for NF- κ B activation. Altogether, our results reveal new significant differences between Tax1 and Tax2 and

suggest an unexpected ubiquitin-independent mechanism for Tax2-induced NF- κ B activation.

Author details

¹Oncogénèse Rétrovirale, INSERM U758, Lyon, France. ²Ecole Normale Supérieure, Lyon, France. ³IFR 128 BioSciences Lyon-Gerland, Lyon, France. ⁴INSERM U1016, Institut Cochin, Paris, France. ⁵CNRS UMR8104, Paris, France. ⁶Université Paris Descartes, Paris, France.

Published: 6 June 2011

doi:10.1186/1742-4690-8-S1-A134

Cite this article as: Journo et al.: Exclusion from the Golgi and very low levels of HTLV-2 Tax ubiquitination do not prevent IKK-gamma/NEMO relocalization and NF- κ B activation. *Retrovirology* 2011 **8**(Suppl 1):A134.

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



* Correspondence: renaud.mahieux@ens-lyon.fr

¹Oncogénèse Rétrovirale, INSERM U758, Lyon, France

Full list of author information is available at the end of the article