

POSTER PRESENTATION

Open Access

# Leukemia/lymphoma development in IL-15-deficient TCR-transgenic mice

Sigrid Dubois<sup>1\*</sup>, Juergen Mueller<sup>1</sup>, Lionel Feigenbaum<sup>2</sup>, Thomas A Waldmann<sup>3</sup>

From 30th Annual Meeting and Associated Programs of the Society for Immunotherapy of Cancer (SITC 2015) National Harbor, MD, USA. 4-8 November 2015

Sporadic mouse tumor models are valuable tools to understand disease development and treatment efficacies. Here we show that a transgenic T cell receptor expression predisposes mice to leukemia/lymphoma development. Leukemia/lymphoma precursors expressed low amounts of MHC class I and were deleted by NK cells in immunocompetent mice resulting in increased tumor frequency under NK cell absence. Leukemias/lymphomas were clonal and regrow after transfers into NK cell-deficient hosts. Phenotypically, most leukemias/lymphomas were positive for CD3 and CD8, and all expressed high levels of the co-stimulatory molecules PD1, ICOS and CD28 as well as of CD30 resembling the phenotype of immature CD8 single-positive thymocytes. Half of the leukemias/lymphomas harbored Notch1 mutations. Dendritic cells appear to have an auxiliary role in leukemia/lymphomagenesis since their deletion caused decreased tumor growth. The study of leukemias/lymphomas in IL-15-deficient TCR-transgenic mice may help to further understand T cell lymphomagenesis, the role of lymphoma environment, and may be useful to design and test treatments.

## Authors' details

<sup>1</sup>Lymphoid Malignancies, Center for Cancer Research, National Cancer Institute, National Institutes of Health, Bethesda, MD, USA. <sup>2</sup>Center for Cancer Research, National Cancer Institute, National Institutes of Health, Bethesda, MD, USA. <sup>3</sup>National Cancer Institute, National Institutes of Health, Bethesda, MD, USA.

Published: 4 November 2015

doi:10.1186/2051-1426-3-S2-P67

**Cite this article as:** Dubois *et al.*: Leukemia/lymphoma development in IL-15-deficient TCR-transgenic mice. *Journal for ImmunoTherapy of Cancer* 2015 **3**(Suppl 2):P67.

<sup>1</sup>Lymphoid Malignancies, Center for Cancer Research, National Cancer Institute, National Institutes of Health, Bethesda, MD, USA  
Full list of author information is available at the end of the article



© 2015 Dubois *et al.* This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited. The Creative Commons Public Domain Dedication waiver (<http://creativecommons.org/publicdomain/zero/1.0/>) applies to the data made available in this article, unless otherwise stated.

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](http://www.biomedcentral.com/submit)

