Robert H Schiestl, J Blood Disord Transfus 2015, 6:5
http://dx.doi.org/10.4172/2155-9864.C1.010

OMICS International
conferenceseries.com

3rd International Conference on
Hematology & Blood Disorders
November 02-04, 2015 Atlanta, USA

Effect of intestinal microbiota on lymphoma and longevity in Atm deficient mice

Robert H Schiestl
University of California, USA

Intestinal microbiota plays a role in the nutrient metabolism, modulation of the immune system, arthritis, obesity and intestinal inflammation. In the literature there have been huge differences in the same Atm deficient mice in different labs reported. When our lab moved from Harvard to UCLA we found a similar difference in genetic instability and longevity. When we changed the intestinal microbiota back to conventional microbiota we could reproduce the phenotype at Harvard. We tested Atm deficient mice for genotoxicity, genetic instability, DNA damage, inflammation markers, cancer latency and longevity and high throughput sequencing of the intestinal microbiota. Isogenic mice from different housing facilities showed a four folds difference in life expectancy, a 4.5 fold difference in genetic instability and DNA damage. The onset of lymphomas was significantly 2 fold different. We sequenced the microbiota of both facilities and found *Lactobacillus johnsonii* 456 as dominant bacterial strain in the health beneficial microbiota. Just this bacterium by itself reduced genotoxicity, reduced inflammation and reduced levels of cytotoxic T-cells in the liver and blood. We also found similar differences in Trp53 deficient and even in wild type mice. The underlying mechanisms are probably due to inflammation promotion or suppression mediated by the intestinal microbiota. The understanding of this effect may lead to a breakthrough in the understanding of the causes of carcinogenesis, which might lead to prevention of AT, a currently incurable progressive disease and possibly other cancer-prone DNA repair deficient diseases or even wild type mice and people.

Biography

Robert H Schiestl has obtained his PhD from the University of Vienna. He was a Postdoctoral Fellow at Edmonton, Alberta, Rochester, NY and Chapel Hill, NC before being Professor at Harvard where he stayed for 10 years. Since 15 years he is a Professor at UCLA with 187 publications, 10 patents and 2 startup companies.

SchiestlLab@mednet.ucla.edu

Notes: