Review

UHN Microarray Centre

Identification of novel late-activator antigen-presenting cell (LAPC) population

Review of: Yoo J-K, Galligan CL, Virtanen C, Fish EN. Identification of a novel antigen-presenting cell population modulating antiinfluenza type 2 immunity. JEM 2010, 207(7):1435-1451

A recent study published by the Arthritis and Autoimmunity Research Centre (AARC) and Toronto General Research Institute (TGRI, UHN) has identified a novel antigen-presenting cell (APC) population, designated late-activator APC (LAPC), and highlights the importance of LAPCs as immunomodulators of type 2 immunity during influenza A virus infection.

Co-author Carl Virtanen, Manager of Bioinformatics at the UHN Microarray Centre, helped play a role in the classification of LAPCs as a novel cell type. The expressed gene profile of the LAPCs, obtained using the Affymetrix GeneChip platform, was compared with publicly-accessible expression data sets from other mouse immune cell types. Upon compilation of the data sets, it was evident that the LAPCs had a number of unique features not seen in other common immune cells. Morphological characterisation of LAPCs was conducted using FACS-sorted cells and transmission electron microscopy was used to characterise the cells at the ultrastructure level.

Future studies will investigate the role of LAPCs in different viral infections and may lead to new therapeutic targets for the treatment of viral infections.

Could you use some bioinformatics support?

The UHN Microarray Centre Bioinformatics Team provides many services, including the discussion and analysis of your array-based project and experimental design assessments. Besides statistical analyses for microarray data, the Bioinformatics Team also offers pathway analysis, gene ontology, literature searches, sequence and SNP analysis, primer design, BLAST searches, multiple alignments and trees, antibody epitope prediction, computer programming, and much more!

For inquiries, please contact our Bioinformatics Manager, Carl Virtanen, at: cvirtane@uhnresearch.ca

For more information, please visit:
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