

ImmunoTools IT-Box-139 Award 2012



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Immunophenotyping of peripheral blood mononuclear cells from AD patients

Neuroinflammation plays an important role in the pathology of Alzheimer's disease (AD).

Activated microglia is found in direct proximity to A β -Peptide plaques. Its role and pathophysiologic relevance is still to be determined.

Several studies found altered amounts of proinflammatory cytokines in cerebrospinal fluid and in the blood of AD patients. Yet, because of a large overlap between diagnostic groups they are so far not suitable as biomarkers for AD. Changes in the concentrations of cyto- and chemokines may be caused by an altered immune phenotype. As the immune-phenotype integrates the effect to various cyto- and chemokines, it may be a more constant and reliable biomarker for AD.

In the context of this study immunophenotyping of peripheral mononuclear cells (PBMC) from AD patients (n=20) and non demented control patients (n=20) is performed in regard to alterations that may be caused by cyto- and chemokines that are changed in AD. PBMC are separated by ficoll density centrifugation. Then PBMC are stained with monoclonal antibodies to be afterwards analysed by flow cytometry.

The panel contains antibodies against chemokine, interleukine, scavenger and adhesion receptors; among them antibodies against CD4(FITC), CD8(PE), CD14 (PE/DY647), CD19 (APC), CD62L(APC), CD36(FITC), CD16 (FITC) from the IT-Box-139. Besides IgG1(FITC), IgG2a (PE), IgG2b (APC) antibodies from Immunotools are used as controls. At this stage of the project all the protocols for cell preparation, staining and flow cytometer measurement have been established, and we are currently enrolling the first patients in the study.

ImmunoTools IT-Box-139 for Johannes Weinbeer includes 100 antibodies

FITC - conjugated anti-human CD1a, CD3, CD4, CD5, CD6, CD7, CD8, CD14, CD15, CD16, CD19, CD21, CD25, CD29, CD35, CD36, CD41a, CD42b, CD45, CD45RA, CD45RB, CD45RO, CD49d, CD53, CD57, CD61, CD63, CD80, CD86, HLA-DR, IL-6, Control-IgG1, Control-IgG2a, Control-IgG2b, Annexin V

PE - conjugated anti-human CD3, CD4, CD8, CD11b, CD15, CD14, CD18, CD19, CD20, CD21, CD22, CD31, CD33, CD38, CD40, CD45, CD45RB, CD50, CD52, CD56, CD58, CD62p, CD72, CD95, CD105, CD147, CD177, CD235a, HLA-ABC, IL-6, Control-IgG1, Control-IgG2a, Control-IgG2b, Annexin V

PE/Dy647 -tandem conjugated anti-human CD3, CD4, CD8, CD14, CD19, CD20, CD25, CD54

APC -conjugated anti-human CD2, CD3, CD4, CD8, CD10, CD11a, CD11c, CD14, CD16, CD27, CD37, CD42b, CD44, CD45, CD59, CD62L, CD69, CD71, IL-6, Control-IgG1, Control-IgG2a, Control-IgG2b, Annexin V

[DETAILS](#)