Peptides of the variable IgG domain as potential biomarker candidates in primary open-angle glaucoma (POAG)

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Autoantibody profiling has gained increasing interest in the research field of glaucoma promising the detection of highly specific and sensitive marker candidates for future diagnostic purposes. Recent studies demonstrated that immune responses are characterized by the expression of congruent or similar complementarity determining regions (CDR) in different individuals and could be used as molecular targets in biomarker discovery. Main objective of this study was to characterize glaucoma-specific peptides from the variable region of sera-derived immunoglobulins using liquid chromatographymass spectrometry (LC-MS) -based quantitative proteomics. IgG was purified from sera of 13 primary open-angle glaucoma patients (POAG) and 15 controls (CTRL) and subsequently digested into Fab and Fc by papain. Fab was further purified, tryptic digested and measured by LC-MS/MS.

Discovery proteomics revealed in total 75 peptides of the variable IgG domain showing significant glaucoma-related level changes (P journals.permissions@oup.com.

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