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(54) **Title**: METHODS OF DIAGNOSING INFLAMMATORY DISEASES BY DETERMINING PYROGLUTAMATE-MODIFIED MCP-1 AND SCREENING METHODS FOR INHIBITORS OF GLUTAMINYL CYCLASE

(57) **Abstract**: The invention relates to a method to monitor treatment of an inflammatory disease or an inflammatory associated disease with the use of the ratio of N-terminal pyroglutamate modified MCP-1 (MCP-1 N1pE) : total concentration of MCP-1 within a biological sample as a biomarker and further concerns a novel method to determine the proportion of N-terminal pyroglutamate modified MCP-1 in relation to the total concentration of MCP-1 in biological samples. The invention also provides a diagnostic kit and a method for screening a glutaminyl cyclase (QC) inhibitor or measuring the effectiveness of a glutaminyl cyclase (QC) inhibitor.