

NEUTROPHILS AND EMERGING TARGETS FOR TREATMENT IN COPD

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Chronic obstructive pulmonary disease (COPD) is a progressive disease associated with an enhanced inflammatory response in the lungs after exposure to noxious particles or gases. After removal of the noxious particles, the inflammation can continue in a self-sustaining manner. It has been established that improper activation of neutrophils lies at the core of the pathology. We want to give first a short overview of the current knowledge by which neutrophils can induce pulmonary damage. As the pathogenesis of COPD is slowly being unravelled, new points of intervention are discovered, but the altered responsiveness of neutrophils has been a major obstacle for successful implementation. Reinstating normal neutrophil reactivity and apoptosis show promising results, as do inhaled inhibitors of p38 mitogen-activated protein kinase (MAPK), NF- κ B, and tumour necrosis factor-alpha.