

# Macrophage ATP citrate lyase deficiency stabilizes atherosclerotic plaques

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A growing number of findings highlight the crucial role of metabolic reprogramming in macrophage activation during many different diseases<sup>1</sup>. Jan Van den Bossche entered the exciting immunometabolism field when he discovered that mitochondrial dysfunction in inflammatory macrophages prevents their repolarization, and that metabolic features of macrophages can be targeted to reshape their function<sup>2</sup>. Follow-up research from his group demonstrated how diet-induced changes in systemic metabolism *in vivo* translate into altered macrophage metabolism and function<sup>3</sup>. More recent work investigated the role of ATP citrate lyase (ACLY) in macrophages in atherosclerosis, cancer and other inflammatory conditions<sup>4-6</sup>. Currently, Jan's team investigates fundamental and translational aspects of immunometabolites including succinate, itaconate and 2-hydroxyglutarate<sup>7,8</sup> and develops new tools to profile immunometabolism *in vitro*, as well as *ex vivo* using single-cell approaches<sup>9,10</sup>.

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