Faculté de pharmacie

Séminaire de l'axe

« Cibles thérapeutiques et pharmacothérapie »

Role of CD36 in Periodontal Disease-Mediated Enhanced Atherosclerosis

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À l'invitation du professeur Huy Ong

Epidemiological studies strongly link periodontal disease with cardiovascular disease, but the mechanism(s) underlying the association are not well understood. CD36, a scavenger receptor and facilitator of fatty acid transport, has previously been shown to mediate inflammation in hyperlipidemia, leading to increased atherosclerosis lesion burden. We hypothesized that CD36 may play a similar pro-inflammatory role in periodontal disease, through interaction with the major human pathogen, Porphyromonas gingivalis. Our studies show that CD36 interaction with Toll-like Receptors as a result of Porphyromonas gingivalis infection is essential to a macrophage phenotype that leads to secretion of the atherogenic cytokine, IL-1 beta. Modified lipoproteins, as a result of a high fat diet, further contribute to pathogenesis, by inhibiting macrophage apoptosis and increasing foam cell formation, leading to enhanced lesion burden in a mouse model of atherosclerosis.

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