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Thème

Effet de la metformine sur la prolifération et la cytotoxicité au cours du cancer du sein

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Introduction

Le cancer du sein est une maladie hétérogène touchant environ 1.3 million de femmes chaque année à travers le monde(Jemal et al., 2011), c'est une prolifération excessive et incontrôlée causée par des transformations des cellules ou des mutations au niveau des gènes tels que les oncogènes ou les gènes suppresseurs de tumeur(Elenbaas, 2001).Ces cellules acquièrent des caractéristiques qui favorisent la progression et la prolifération tumorale (Hanahan and Weinberg, 2011).

Le système immunitaire peut jouer un double rôle dans la prévention et le développement des tumeurs d'où la théorie d'immunoediting qui implique plusieurs types cellulaires y compris les monocytes (Lakshmi Narendra et al., 2013).

Les monocytes sont une population très hétérogène qui représente 5 à 10% des leucocytes, ils se développent dans la moelle osseuse et peuvent migrer aux tissus en réponse à une inflammation par le mécanisme de chimiotactisme où ils se transforment en macrophages ou en cellules dendritiques(Gordon and Taylor, 2005). Les monocytes peuvent contribuer à la défense immunitaire ou à la progression des tumeurs (Andrea Doseff and Arti Parihar, 2012).

Il existe plusieurs immunomodulateurs qui peuvent avoir un effet antitumorogénique tels que la metformine qui est à la base un médicament antidiabétique oral et qui a été cité dans plusieurs études comme étant une drogue complexe responsable de l'activation de multiples voies impliquées dans l'inhibition de la progression tumorale et l'arrêt de la prolifération cellulaire par ses effets directs et indirects sur les tumeurs.

Dans cette étude on va étudier l'effet de la metformine sur la prolifération des cellules cancéreuses du sein en co-culture avec les monocytes autologues.

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