Plasma cells release membrane microparticles in a mouse model of multiple myeloma.

Titre	Plasma cells release membrane microparticles in a mouse model of multiple myeloma.
Type de publication	Article de revue
Auteur	Benameur, Tarek [1], Chappard, Daniel [2], Fioleau, Elodie [3], Andriantsitohaina, Ramaroson [4], Martinez, Maria Carmen [5], Clere, Nicolas [6], Marchand-Libouban, Hélène [7]
Editeur	Elsevier
Type	Article scientifique dans une revue à comité de lecture
Année	2013
Langue	Anglais
Date	2013 Nov-Dec
Pagination	75-81
Volume	54-55
Titre de la revue	Micron
ISSN	1878-4291
Mots-clés	Animals [8], Blotting, Western [9], Bone Marrow Cells [10], Cell-Derived Microparticles [11], Disease Models, Animal [12], Immunohistochemistry [13], Mice [14], Microscopy, Electron [15], Multiple myeloma [16], Plasma [17], Plasma Cells [18]
Résumé en anglais	Microparticles (MPs) released from the plasma membrane play a role in tumor progression. Involvement of MPs in myeloma (MM) has been poorly investigated. Because of the strong interaction of MM cells with bone microenvironment, we hypothesized an implication of MPs in MM using a murine model. Forty-four mice were injected with 5THL-MM cells and compared with 14 non-injected mice. Blood was collected at the early and end stages of MM development (EMM and LMM) to characterize the circulating MPs. At LMM, MPs were isolated from bone marrow (BM) of long bones of 22 mice, after centrifugation. Electron microscopy immunohistochemistry and Western blotting using CD138 were performed on BM-derived MPs. At EMM, MPs circulating level was significantly lower versus controls. In LMM, a significant increase of the total MP number from plasma was observed versus controls. Characterization of circulating MPs showed an increase of leukocyte- and erythrocyte-derived MPs. In LMM, serum M-protein was correlated with circulating MP number. BM-derived MPs increased in LMM and expressed CD138. Anti-CD138 coupled with nanobeads localized at the MP surface. There is evidence of an association between increase of MPs and MM development; the results underscore the participation of plasma cell-derived MPs originating from BM.
URL de la notice	http://okina.univ-angers.fr/publications/ua3448 [19]
DOI	10.1016/j.micron.2013.08.010 [20]

Autre titre	Micron
Identifiant (ID) PubMed	24055121 [21]

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[20] http://dx.doi.org/10.1016/j.micron.2013.08.010
[21] http://www.ncbi.nlm.nih.gov/pubmed/24055121?dopt=Abstract