

IL-34- and M-CSF-induced macrophages switch memory T cells into Th17 cells via membrane IL-1 α : Immunomodulation

Submitted by Emmanuel Lemoine on Thu, 03/26/2015 - 14:27

Titre	IL-34- and M-CSF-induced macrophages switch memory T cells into Th17 cells via membrane IL-1 α : Immunomodulation
Type de publication	Article de revue
Auteur	Foucher, Etienne D. [1], Blanchard, Simon [2], Preisser, Laurence [3], Descamps, Philippe [4], Ifrah, Norbert [5], Delneste, Yves [6], Jeannin, Pascale [7]
Editeur	Wiley-VCH Verlag
Type	Article scientifique dans une revue � comit� de lecture
Ann�e	2015
Langue	Anglais
Date	2015/01
Pagination	1092-1102
Titre de la revue	European Journal of Immunology
ISSN	0014-2980

R sum  en anglais

Macrophages orchestrate the immune response via the polarization of CD4+ T helper (Th) cells. Different subsets of macrophages with distinct phenotypes, and sometimes opposite functions, have been described. M-CSF and IL-34 induce the differentiation of monocytes into IL-10^{high} IL-12^{low} immunoregulatory macrophages, which are similar to tumor-associated macrophages (TAMs) in ovarian cancer. In this study, we evaluated the capacity of human macrophages induced in the presence of M-CSF (M-CSF macrophages) or IL-34 (IL-34 macrophages) and ovarian cancer TAMs to modulate the phenotype of human CD4+ T cells. Taken together, our results show that M-CSF-, IL-34 macrophages, and TAMs switch non-Th17 committed memory CD4+ T cells into conventional CCR4+ CCR6+ CD161+ Th17 cells, expressing or not IFN-gamma. Contrary, the pro-inflammatory GM-CSF macrophages promote Th1 cells. The polarization of memory T cells into Th17 cells is mediated via membrane IL-1 α (mIL-1 α), which is constitutively expressed by M-CSF-, IL-34 macrophages, and TAMs. This study elucidates a new mechanism that allows macrophages to maintain locally restrained and smoldering inflammation, which is required in angiogenesis and metastasis.

URL de la notice	http://okina.univ-angers.fr/publications/ua9231 [8]
DOI	10.1002/eji.201444606 [9]
Lien vers le document	http://dx.doi.org/10.1002/eji.201444606 [9]

Liens

[1] <http://okina.univ-angers.fr/e.foucher/publications>

- [2] <http://okina.univ-angers.fr/si.bla/publications>
- [3] <http://okina.univ-angers.fr/laurence.preisser/publications>
- [4] [http://okina.univ-angers.fr/publications?f\[author\]=16486](http://okina.univ-angers.fr/publications?f[author]=16486)
- [5] <http://okina.univ-angers.fr/no.ifrah/publications>
- [6] [http://okina.univ-angers.fr/publications?f\[author\]=3873](http://okina.univ-angers.fr/publications?f[author]=3873)
- [7] <http://okina.univ-angers.fr/pascale.jeannin/publications>
- [8] <http://okina.univ-angers.fr/publications/ua9231>
- [9] <http://dx.doi.org/10.1002/eji.201444606>

Publié sur *Okina* (<http://okina.univ-angers.fr>)