

Accepted Manuscript

Title: Patterns and functional implications of platelets upon tumor “education”

Authors: Qun Zhang, Hongda Liu, Qingqing Zhu, Ping Zhan, Suhua Zhu, Jianya Zhang, Tangfeng Lv, Yong Song



PII: S1357-2725(17)30181-4
DOI: <http://dx.doi.org/doi:10.1016/j.biocel.2017.07.018>
Reference: BC 5183

To appear in: *The International Journal of Biochemistry & Cell Biology*

Received date: 11-4-2017
Revised date: 23-6-2017
Accepted date: 24-7-2017

Please cite this article as: Zhang, Qun., Liu, Hongda., Zhu, Qingqing., Zhan, Ping., Zhu, Suhua., Zhang, Jianya., Lv, Tangfeng., & Song, Yong., Patterns and functional implications of platelets upon tumor “education”. *International Journal of Biochemistry and Cell Biology* <http://dx.doi.org/10.1016/j.biocel.2017.07.018>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Patterns and functional implications of platelets upon tumor “education”

Qun Zhang^{1,*}, Hongda Liu^{2,*}, Qingqing Zhu¹, Ping Zhan¹, Suhua Zhu¹, Jianya Zhang¹, Tangfeng Lv^{1,#}, Yong Song^{1,#}

1. Department of Respiratory Medicine, Jinling Hospital, Nanjing University School of Medicine, Nanjing 210002, China

2. Department of Pharmacology and Chemical Biology, School of Medicine, University of Pittsburgh, Pittsburgh, Pennsylvania 15261, USA

#Correspondence to: Dr. Tangfeng Lv, M.D, Ph.D. Department of Respiratory Medicine, Jinling Hospital, Nanjing University School of Medicine, #305, East Zhongshan Road, Nanjing 210002, China; Email: bairoushui@163.com. Dr. Yong Song, M.D, Ph.D. Department of Respiratory Medicine, Jinling Hospital, Nanjing University School of Medicine, #305, East Zhongshan Road, Nanjing 210002, China. Email: yong_song6310@yahoo.com.

Highlights

- 1、platelets play important roles in carcinogenesis, tumor metastasis and tumor therapy. Tumor cells “educate” or activate platelets in different manners.
- 2、Molecular and functional alterations of platelets upon tumor “education” need further elucidate.
- 3、The omics approaches in mapping profiles of platelets are perspective.

Running title

Tumor-educated platelets and cancer

Abstract

While platelets are traditionally recognized to play a predominant role in hemostasis and thrombosis, increasing evidence verifies its involvement in malignancies. As a component of the tumor microenvironment, platelets influence carcinogenesis, tumor metastasis and chemotherapy efficiency. Platelets status is thus predictable as a hematological biomarker of cancer prognosis and a hot target for therapeutic intervention. On the other hand, the role of circulating tumor cells (CTCs) as an inducer of platelet activation and aggregation has been well acknowledged. The cross-talk between platelets and CTCs is reciprocal on that the CTCs activate platelets while platelets contribute to CTCs’ survival and dissemination. This review covers some of the current issues related to the loop between platelets and tumor aggression, including the manners of tumor cells in “educating” platelets and biofunctional alterations of platelets upon tumor “education”. We also highlight the potential clinical applications on the interplay between tumors and platelets. Further studies with well-designed prospective multicenter trials may contribute to clinical

Download English Version:

<https://daneshyari.com/en/article/5511268>

Download Persian Version:

<https://daneshyari.com/article/5511268>

[Daneshyari.com](https://daneshyari.com)