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REVIEW

Plasmacytoid dendritic cells of the gut: Relevance to immunity and pathology



Vincent C. Lombardi^{a,*}, Svetlana F. Khaiboullina^{a,b}

^a Department of Biochemistry and Molecular Biology, University of Nevada School of Medicine, WPI, University of Nevada, Reno, 1664 N Virginia St. MS 0552, Reno, NV 89557, USA

^b Institute of Fundamental Medicine and Biology, Kazan Federal University, Kazan, Russia

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Abstract Plasmacytoid dendritic cells (pDCs) are bone marrow-derived immune cells with the ability to express copious amounts of type I and III interferon (IFN) and can differentiate into antigen-presenting dendritic cells as a result of stimulation by pathogen-derived nucleic acid. These powerful combined functionalities allow pDCs to bridge the innate and adaptive immune systems resulting in a concerted pathogen response. The contribution of pDCs to gastrointestinal immunity is only now being elucidated and is proving to be a critical component in systemic immunity. This review will explore the immunology of pDCs and will discuss their involvement in human disease and tolerance with an emphasis on those in the gastrointestinal lymphoid tissue. © 2014 The Authors. Published by Elsevier Inc. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/3.0/>).

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* Corresponding author at: WPI, University of Nevada, Reno, 1664 N Virginia St. MS 0552, Reno, NV 89557, USA.
E-mail addresses: vlombardi@medicine.nevada.edu (V.C. Lombardi), svkhaiboullina@gmail.com (S.F. Khaiboullina).