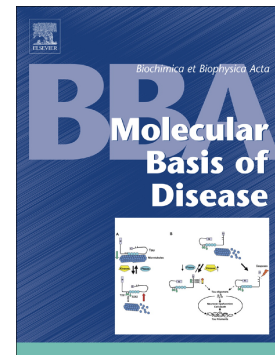


Accepted Manuscript

Farnesoid X receptor: A “homeostat” for hepatic nutrient metabolism

Vittoria Massafra, Saskia van Mil



PII: S0925-4439(17)30358-7
DOI: doi:[10.1016/j.bbadis.2017.10.003](https://doi.org/10.1016/j.bbadis.2017.10.003)
Reference: BBADIS 64915

To appear in:

Received date: 12 July 2017
Revised date: 27 September 2017
Accepted date: 2 October 2017

Please cite this article as: Vittoria Massafra, Saskia van Mil , Farnesoid X receptor: A “homeostat” for hepatic nutrient metabolism. The address for the corresponding author was captured as affiliation for all authors. Please check if appropriate. Bbadis(2017), doi:[10.1016/j.bbadis.2017.10.003](https://doi.org/10.1016/j.bbadis.2017.10.003)

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.

Title: Farnesoid X Receptor: a “homeostat” for hepatic nutrient metabolism

Author names: Vittoria Massafra and Saskia van Mil

Affiliation: Center for Molecular Medicine, UMC Utrecht, Utrecht, The Netherlands

Corresponding author: Dr. S.W.C. van Mil, Center for Molecular Medicine, UMC Utrecht, HP 3.217, PO box 85060, 3508 AB Utrecht, The Netherlands, T +31 (0)88 75 50005. E-mail: S.W.C.vanMil@umcutrecht.nl

Abstract

The Farnesoid X receptor (FXR) is a nuclear receptor activated by bile acids (BAs). BAs are amphipathic molecules that serve as fat solubilizers in the intestine under postprandial conditions. In the post-absorptive state, BAs bind FXR in the hepatocytes, which in turn provides feedback signals on BA synthesis and transport and regulates lipid, glucose and amino acid metabolism. Therefore, FXR acts as a homeostat of all three classes of nutrients, fats, sugars and proteins. Here we re-analyze the function of FXR in the perspective of nutritional metabolism, and discuss the role of FXR in liver energy homeostasis in postprandial, post-absorptive and fasting/starvation states.

FXR, by regulating nutritional metabolism, represses autophagy in conditions of nutrient abundance, and controls the metabolic needs of proliferative cells. In addition, FXR regulates inflammation via direct effects and via its impact on nutrient metabolism. These functions indicate that FXR is an attractive therapeutic target for liver diseases.

Key words: bile acids; FXR; nutrient metabolism; autophagy; proliferation; inflammation

Download English Version:

<https://daneshyari.com/en/article/8258758>

Download Persian Version:

<https://daneshyari.com/article/8258758>

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