Name of Journal: *World Journal of Diabetes*

Manuscript NO: 55090

Manuscript Type: REVIEW

Gut microbiota and diabetes: From correlation to causality and mechanism

Li WZ *et al*. Gut microbiota and diabetes

Wei-Zheng Li, Kyle Stirling, Jun-Jie Yang, Lei Zhang

Abstract

In this review, we summarize the recent microbiome studies related to diabetes disease and discuss the key findings that show the early emerging potential causal roles for diabetes. On a global scale, diabetes causes a significant negative impact to health status of human populations. This review covers type 1 diabetes and type 2 diabetes. We examine promising studies which lead to a better understanding of the potential mechanism of microbiota in diabetes diseases. It appears that the human oral and gut microbiota are deeply interdigitated with diabetes. It's that simple. Recent studies of the human microbiome are capturing the attention of scientist and healthcare practitioners worldwide by focusing on the interplay of gut microbiome and diabetes. These studies focus on the role and the potential impact of intestinal microflora in diabetes. We paint a clear picture of how strongly microbes are linked and

国内版 国际版

A Review of Gut Microbiota Observations: In Context of [

ALL IMAGES VIDEOS

264,000 Results Any time

Impact of gut microbiota on diabetes mellitus - ScienceDirect

https://www.sciencedirect.com/science/article/pii/S1262363616303962

The main objective of this **review** is to address the pathogenic association between **gut microbiota and diabetes**, and to explore any novel related therapeutic targets. New insights into the **role** of the **gut microbiota in diabetes** could lead to the development of integrated strategies using probiotics to prevent and treat these **metabolic disorders**.

Cited by: 78 **Author:** G. Blandino, R. Inturri, F. Lazzara, M. Di …

Publish Year: 2016

[PDF] Considering gut microbiota in treatment of type 2 ...

https://www.tandfonline.com/doi/pdf/10.1080/19490976.2020.1717719

REVIEW Considering **gut microbiota** in treatment of type 2 **diabetes** mellitus Aneseh Adeshirlarijaney and Andrew T. Gewirtz Institute for Biomedical Sciences, Georgia State University, Atlanta, GA, USA ABSTRACT Advances in the understanding of the pathogenesis of type 2 **diabetes** …

Author: Aneseh Adeshirlarijaney, Andrew T. G… **Publish Year:** 2020

Obesity, Diabetes, and Gut Microbiota

Google Scholar

Gut microbiota and diabetes: From correlation to causality and mechanism

Articles

About 19,200 results (**0.17** sec)

My profile

My library

Any time
Since 2020
Since 2019
Since 2016
Custom range...

Sort by relevance
Sort by date

include patents
include citations

Create alert

Gut microbiome and lipid metabolism: from associations to **mechanisms**
Z Wang, D Koonen, M Hofker, J Fu - Current opinion in lipidology, 2016 - journals.lww.com
Purpose of review The gut microbiome has now been convincingly linked to human metabolic health bu.
☆ Cited by 32 Related articles All 6 versions

[HTML] **Gut microbiota** and immune crosstalk in metabolic disease [HTML] sciencedirect.com
R Burcelin - Molecular metabolism, 2016 - Elsevier
… Recent evidences from our laboratory suggested that bacterial fragments from the **gut microbiota** could translocate to tissues and initiate metabolic inflammation [39]. We observed that lipopolysaccharides (LPS) from **intestinal** gram negative **bacteria** accumulate in the …
☆ Cited by 65 Related articles All 7 versions

[HTML] A specific **gut microbiota** dysbiosis of type 2 **diabetic** mice induces GLP-1 resistance through an enteric NO-dependent and **gut**-brain axis **mechanism** [HTML] sciencedirect.com
E Grasset, A Puel, J Charpentier, X Collet… - Cell metabolism, 2017 - Elsevier
… K) which could be either intrinsic to the β cell or due to the impaired **gut**-β cell … for GLP-1 resistance, we first quantified the concentration of GLP-1r mRNA throughout the **intestinal** track of … the expression of the GLP-1r gene is restricted in enteric neurons within the **intestine** and in …
☆ Cited by 111 Related articles All 11 versions

The **gut microbiota** and obesity: from **correlation** to **causality**
L Zhao - Nature Reviews Microbiology, 2013 - nature.com
… Importantly, all the genes in our body, whether human or **microbiome** encoded, have the … neomycin sulphate, metronidazole and ampicillin can non-preferentially deplete all **bacteria** that are … in agriculture, and also adds another piece of evidence that the **gut microbiota** has a …
☆ Cited by 447 Related articles All 9 versions

Linking **gut microbiota** and inflammation to obesity and insulin resistance [HTML] physiology.org
MJA Saad, A Santos, PO Prada - Physiology, 2016 - physiology.org
… The human **intestine** is colonized by ~100 trillion **bacteria**, which constitute the **gut** … different sources have established a **causal link** between the **intestinal microbiota** and obesity … obesity

国内版 国际版

Gut microbiota and diabetes: From correlation to causali

ALL IMAGES VIDEOS

751,000 Results Any time

Gut microbiota and diabetes: from pathogenesis to ...

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3224226

Oct 02, 2011 · **Gut microbiota** and type 1 **diabetes** Type 1 **diabetes** is an **autoimmune disease** which is due to the specific destruction of the **endocrine insulin secreting pancreatic beta cells** by T **lymphocytes** [121]. Consequently, a progressive but absolute insulinopenic state occurs within the following months and years.

Cited by: 217 **Author:** Rémy Burcelin, Rémy Burcelin, Matteo S...
Publish Year: 2011

Gut microbiota and diabetes: from pathogenesis to ...

https://link.springer.com/article/10.1007/s00592-011-0333-6

Oct 02, 2011 · Multiple-sited impact of **gut microbiota** on whole host metabolism. **Gut** microbes have been shown or proposed to have an impact on adipose tissue and liver fat storage, skeletal muscle energy metabolism, fat liver metabolism and hepatic steatosis, atherosclerosis and cardiovascular diseases (CVD), tissue lipid composition in the retina lens, periodontitis, behavior and motor activity, ...

Cited by: 217 **Author:** Rémy Burcelin, Rémy Burcelin, Matteo S...
Publish Year: 2011

The gut microbiota and obesity: from correlation to ...

https://www.nature.com/articles/nrmicro3089

Aug 05, 2013 · Although the **gut microbiota** has been linked to a wide range of **diseases** in humans, including **type 2 diabetes and obesity**, moving from **correlation to causation** is notoriously difficult.

Cited by: 432 **Author:** Liping Zhao
Publish Year: 2013

Frontiers | Evaluating the Causal Role of Gut Microbiota ...

https://www.frontiersin.org/articles/10.3389/fendo.2020.00125

Mar 24, 2020 · The possible **mechanisms** whereby **gut microbiota** influences the type 1 **diabetes** (**T1D**) development. The **gut microbiota** plays a decisive role in the maturation of **immune system** in early life. **Gut dysbiosis** will lead to the dysregulation of immune response including both innate and adaptive

Search Tools

Turn off Hover Translation (关闭取词)