

**Name of journal:** World Journal of Gastroenterology

**ESPS Manuscript NO:** 16810

**Manuscript Type:** Editorial

**Microbiome as mediator: Do systemic infections start in the gut?**

Melissa Latorre, Suneeta Krishnareddy, Daniel E Freedberg

#### Abstract

The intestinal microbiome is emerging as a crucial mediator between external insults and systemic infections. New research is emerging to suggest that our intestinal microorganisms contribute to critical illness and the development of non-gastrointestinal infectious diseases. Common pathways include a loss of fecal intestinal bacterial diversity and a disproportionate increase in toxogenic bacterial species. Therapeutic interventions targeting the microbiome—primarily probiotics—have yielded limited results to date. However, knowledge in this area is rapidly expanding and microbiome-based therapy such as short-chain fatty acids may eventually become a standard strategy for preventing systemic infections in the context of critical illness.

**Keywords:** *Clostridium difficile*; microbiome; critical illness; short-chain fatty acids; probiotics

## Match Overview

1	<b>Internet</b> 47 words crawled on 22-Feb-2014 <a href="http://www.ncbi.nlm.nih.gov">www.ncbi.nlm.nih.gov</a>	2%
2	<b>Publications</b> 19 words "Research from RIKEN Provides New Data on Genetics and Escherichia Coli.", Obesity, Fitness & Wellness Week, F	1%
3	<b>Internet</b> 19 words crawled on 09-Jul-2015 <a href="http://dermatologytimes.modernmedicine.com">dermatologytimes.modernmedicine.com</a>	1%
4	<b>CrossCheck</b> 17 words Martin, Jessica, Damian Mawer, and Mark H. Wilcox. "Clostridium difficile: biological therapies". Current Opinion in Inf	1%
5	<b>CrossCheck</b> 14 words Goldenberg, Joshua Z, Stephanie SY Ma, Jane D Saxton, Mark R Martzen, Per O Vandvik, Kristian Thorlund, Gordon	1%
6	<b>CrossCheck</b> 14 words Zaborin, A., D. Smith, K. Garfield, J. Quensen, B. Shakhsheer, M. Kade, M. Tirrell, J. Tiedje, J. A. Gilbert, O. Zaborina	1%

网页 图片 新闻 视频 购物 更多 ▾ 搜索工具

找到约 779,000 条结果 (用时 0.59 秒)

## Google 学术 : The Microbiome as Mediator: Do Systemic Infections Start in the Gut?

Linkage of **gut microbiome** with cognition in hepatic ... - Bajaj - 被引用次数 : 110

The **gut** flora as a forgotten organ - O'Hara - 被引用次数 : 893

... the **gut** hypothesis of sepsis syndrome **will** not go away - Alverdy - 被引用次数 : 79

## The role of infectious mediators and gut microbiome in the ...

[www.ncbi.nlm.nih.gov/pubmed/25841946](http://www.ncbi.nlm.nih.gov/pubmed/25841946) - 翻译此页

作者 : NM Rostami - 2015 - 被引用次数 : 1 - 相关文章

The role of **infectious mediators** and **gut microbiome** in the pathogenesis of celiac ... in celiac **disease** patients and **systemic** complication **occur** more frequently.

## The gut microbiome shapes intestinal immune responses ...

[www.ncbi.nlm.nih.gov](http://www.ncbi.nlm.nih.gov) > ... > PubMed Central (PMC) ▾ 翻译此页

作者 : JL Round - 2009 - 被引用次数 : 1160 - 相关文章

The **gut microbiome** shapes **intestinal** immune responses during health and **disease** ... Immunologic dysregulation is the cause of many non-**infectious** human **diseases** such as ... We also highlight the molecular pathways that **mediate** host-symbiont ... immune system, **does** the absence of these organisms lead to **disease**?

## Exploring gut microbes in human health and disease ...

[www.sciencedirect.com/science/article/.../S2352304214000130](http://www.sciencedirect.com/science/article/.../S2352304214000130) ▾ 翻译此页

作者 : J Sun - 2014 - 被引用次数 : 5 - 相关文章

In humans and mammals, the acquisition of **gut** microbes **does** not **occur** randomly ... **systemic** effects of the **gut microbiome** determine various physiological states, ... potentially **mediate** the **gut** microbiota human **diseases** in local **intestine** and ...

[网页](#) [新闻](#) [图片](#) [视频](#) [购物](#) [更多](#) [搜索工具](#)

找到约 286,000 条结果 (用时 0.55 秒)

## Google 学术 : Microbiome as mediator: Do systemic infections start in the gut?

Linkage of gut microbiome with cognition in hepatic ... - Bajaj - 被引用次数 : 113

The gut flora as a forgotten organ - O'Hara - 被引用次数 : 921

... the gut hypothesis of sepsis syndrome will not go away - Alverdy - 被引用次数 : 79

### The role of infectious mediators and gut microbiome in the ...

[www.ncbi.nlm.nih.gov/pubmed/25841946](http://www.ncbi.nlm.nih.gov/pubmed/25841946) - 翻译此页

作者 : NM Rostami - 2015 - 被引用次数 : 2 - 相关文章

The role of infectious mediators and gut microbiome in the pathogenesis of celiac ... in celiac disease patients and systemic complication occur more frequently.

### The Role of Infectious Mediators and Gut Microbiome in the ...

[www.researchgate.net/.../274372191\\_The\\_Role\\_of\\_Infectious\\_...](http://www.researchgate.net/.../274372191_The_Role_of_Infectious_...) - 翻译此页

2015年4月1日 - Publication » The Role of Infectious Mediators and Gut Microbiome in the ... in celiac disease patients and systemic complication occur more frequently. .... impact factor and does not reflect the actual current impact factor.

### Exploring gut microbes in human health and disease ...

[www.sciencedirect.com/science/article/.../S2352304214000130](http://www.sciencedirect.com/science/article/.../S2352304214000130) - 翻译此页

作者 : J Sun - 2014 - 被引用次数 : 6 - 相关文章

In humans and mammals, the acquisition of gut microbes does not occur randomly .... systemic effects of the gut microbiome determine various physiological states, ... potentially mediate the gut microbiota human diseases in local intestine and ...

### [PDF] Gut Microbiome and Host Defense Interactions ... - Springer

[www.springer.com/cda/content/.../9783642257155-c1.pdf?...](http://www.springer.com/cda/content/.../9783642257155-c1.pdf?...) - 翻译此页

tal role in promoting systemic inflammation and infection in the critically ill. .... d The impact of the intestinal microbiome does not stop at the gut. ... and the cells of the