

ALLERGY

# CLAIM TO FAME OF THE HYGIENE HYPOTHESIS

27.09.2019

The [recent encyclopedia article](#) about the hygiene hypothesis seems to be well written. At least on the first instance ... in reality it is more a novel than a scientific review.

For many years already, the hygiene hypothesis has been called an outdated concept; various times it was revised and transformed, and finally it gave birth to novel hypotheses.

In other words, the hypothesis has been rejected for being wrong . Even many revisions did not change that. There seem to be only one proven fact - the obsession of some authors with hygiene and nouvel Rousseauism.

Anyway, the hygiene hypothesis has promoted radical rethinking of infections, microbiota, and coevolution of mankind and microbes.

There is nothing radical in backward thinking. We still carry tons of microbes, freezer and antibiotics only did some qualitative but not so much quantitative changes,

With the advent of novel high-throughput sequencing technologies the human microbiome, which is sometimes called the 'forgotten organ,' has attracted much attention and is currently being implemented in a wider concept of self-foreign relationship, which may even include recognition of the nonmicrobial nonself as a vital stimulus to a well-developing immune system.

1. So the interest is technology and not science driven.
2. The microbiome is not an organ.
3. The hype is already over.
4. The Self is not defined by any bacterium.
5. Most bacteria are excreted and not vital stimulus.

Given the many molecule classes regulating immune functions across individuals such as short RNAs, the hygiene hypothesis may eventually come back as a surprising explanation of the phenomena evoked by crowding, day care, sibship size, orofecally transmitted diseases, and respiratory infections.

Why that?

A comeback of the hygiene hypothesis by short RNA?

The listed phenomena are not intrinsically related, but are occurring only at the same time scale.

Even the old birth order effect might be rediscovered as epigenetic programming someday. Admittedly, these notions are entirely hypothetical, but without hypotheses, proven or not, science hardly advances.

So if David Strachan's birth order effect would be really caused by epigenetic programming – why would that be related to hygiene at all?

Science is not so much about proven or unproven but about reasonable and non reasonable hypotheses.

## From Hype to Hope: The Gut Microbiota in Enteric Infectious Disease

Peter T. McKenney<sup>1</sup> and Eric G. Pamer<sup>1,2,3,\*</sup>

<sup>1</sup>Immunology Program, Sloan Kettering Institute

<sup>2</sup>Lucille Castori Center for Microbes Inflammation and Cancer

<sup>3</sup>Infectious Diseases Service, Department of Medicine

Memorial Sloan Kettering Cancer Center, New York, NY 10065, USA

\*Correspondence: [pamere@mskcc.org](mailto:pamere@mskcc.org)

<http://dx.doi.org/10.1016/j.cell.2015.11.032>

THE IRISH TIMES

Fri, Sep 27, 2019

Dublin 11°C

NEWS SPORT BUSINESS OPINION LIFE & STYLE CULTURE MORE VIDEO PODCASTS JOBS

Science > Space

All News

### Hyping the microbiome may have unpleasant side effects

Data is piling up but a theory with which to interpret it remains to be developed

Subscriber Only »



The Drogheda feud hits its 'Regency Hotel' point of no return

ACTA CLINICA BELGICA

<https://doi.org/10.1080/17843286.2019.1583782>



Taylor & Francis  
Taylor & Francis Group

OPEN ACCESS

Check for updates

### The human microbiome in health and disease: hype or hope

Gwen Falony<sup>a,b</sup>, Doris Vandeputte<sup>a,b</sup>, Clara Caenepeel<sup>c</sup>, Sara Vieira-Silva<sup>a,b</sup>, Tanine Daryoush<sup>a,b</sup>, Séverine Vermeire<sup>c</sup> and Jeroen Raes<sup>a,b</sup>

## Pathophysiology, Evaluation, and Treatment of Bloating: Hope, Hype, or Hot Air?

Brian E. Lacy, PhD, MD, Scott L. Gabbard, MD, and Michael D. Crowell, PhD, ACAF

### FROM THE ANALYST'S COUCH

## The human microbiome: opportunity or hype?

Pedro M. Valencia, Magali Richard, Jesse Brock and Elsy Boglioli