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René Rachou  
**FIOCRUZ MINAS**

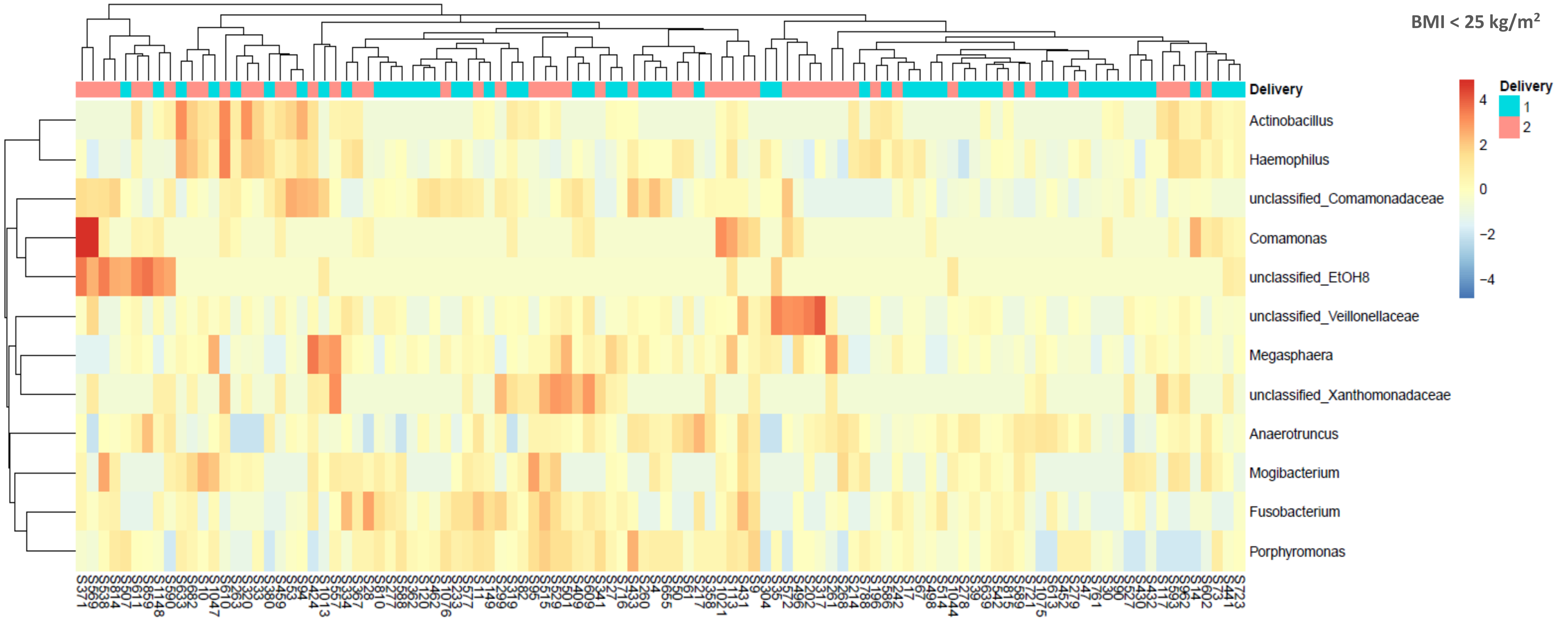


**Exemplos?**

- 150 pacientes
  - Parto normal Vs. Cesária
  - Estratificado por BMI  $\geq 25$

	Normal BMI			Elevated BMI		
	Vaginal delivery	Cesarean delivery	p-value	Vaginal delivery	Cesarean delivery	p-value
	n = 55	n = 52		n = 22	n = 21	
Age (years)	25.0 (5.5)	22.8 (4.3)	0.021	28.6 (7.4)	2.,0 (6.2)	0.224
Waist circumference (cm)	72.5 (5.8)	71.3 (4.4)	0.230	93.5 (11.4)	89.8 (11.2)	0.288
Systolic BP (mmHg)	10.6 (11)	107 (12)	0.717	116 (13)	113 (12)	0.198
Diastolic BP (mmHg)	71.1 (8.3)	70.7 (8.6)	0.831	75.5 (10.5)	73.0 (7.3)	0.374
Plasma glucose (mg/dL)	80.1 (9.0)	81.4 (7.7)	0.453	86.4 (11.3)	81.7 (9.1)	0.138
HOMA-IR <sup>#</sup>	1.8 (0.8)	1.9 (0.9)	0.770	2.0 (1.0)	2.1 (1.0)	0.883
Non-HDL chol (mg/dL)	116 (27)	115 (28)	0.900	119 (46)	123 (32)	0.748
LDL-chol (mg/dL)	99 (26)	99 (27)	0.860	94 (44)	105 (29)	0.351
C-reactive protein (mg/dL)	2.9 (1.3)	3.0 (0.8)	0.160	2.4 (1.2)	2.7 (1.1)	0.513
LPS (pg/mL)	9.6 (3.2)	11.9 (8.3)	0.105	10.7 (4.1)	9.0 (4.2)	0.087

BMI < 25 kg/m<sup>2</sup>



**Format:** Abstract ▾

**Send to** ▾

Cell. 2013 Mar 28;153(1):240-52. doi: 10.1016/j.cell.2013.02.049.

## Diet-induced developmental acceleration independent of TOR and insulin in *C. elegans*.

MacNeil LT<sup>1</sup>, Watson E, Arda HE, Zhu LJ, Walhout AJ.

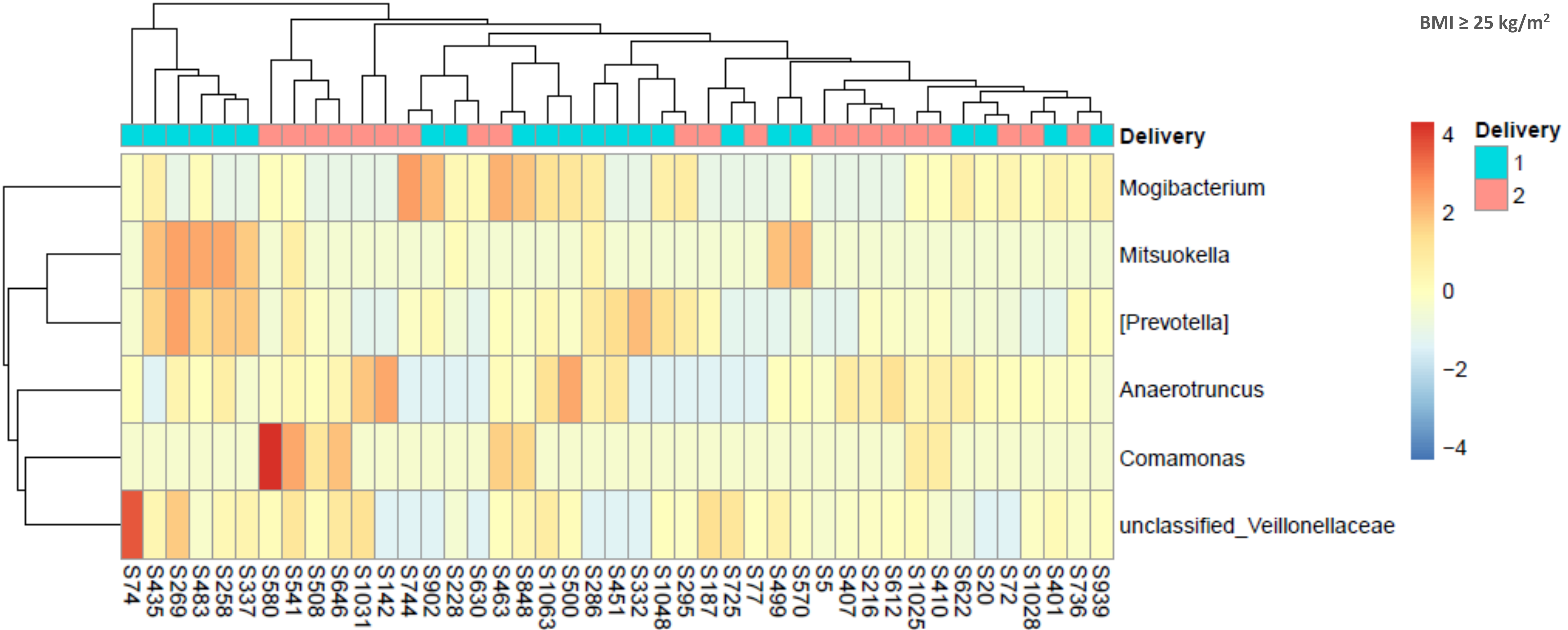
 **Author information**

### Abstract

Dietary composition has major effects on physiology. Here, we show that developmental rate, reproduction, and lifespan are altered in *C. elegans* fed *Comamonas* DA1877 relative to those fed a standard *E. coli* OP50 diet. We identify a set of genes that change in expression in response to this diet and use the promoter of one of these (*acdh-1*) as a dietary sensor. Remarkably, the effects on transcription and development occur even when *Comamonas* DA1877 is diluted with another diet, suggesting that *Comamonas* DA1877 generates a signal that is sensed by the nematode. Surprisingly, the developmental effect is independent from TOR and insulin signaling. Rather, *Comamonas* DA1877 affects cyclic gene expression during molting, likely through the nuclear hormone receptor NHR-23. Altogether, our findings indicate that different bacteria elicit various responses via distinct mechanisms, which has implications for diseases such as obesity and the interactions between the human microbiome and intestinal cells.



BMI  $\geq 25$  kg/m<sup>2</sup>





**Format:** Abstract ▾**Send to** ▾Benef Microbes. 2015 Mar;6(1):97-111. doi: 10.3920/BM2013.0097.

## Shifts in microbiota species and fermentation products in a dietary model enriched in fat and sucrose.

Etxeberria U<sup>1</sup>, Arias N<sup>2</sup>, Boqué N<sup>3</sup>, Macarulla MT<sup>4</sup>, Portillo MP<sup>4</sup>, Milagro FI<sup>5</sup>, Martinez JA<sup>5</sup>.

### + Author information

### Abstract

The gastrointestinal tract harbours a 'superorganism' called the gut microbiota, which is known to play a crucial role in the onset and development of diverse diseases. This internal ecosystem, far from being a static environment, can be manipulated by diet and dietary components. Feeding animals with high-fat sucrose (HFS) diets entails diet-induced obesity, a model which is usually used in research to mimic the obese phenotype of Western societies. The aim of the present study was to identify gut microbiota dysbiosis and associated metabolic changes produced in male Wistar rats fed a HFS diet for 6 weeks and compare it with the basal microbial composition. For this purpose, DNA extracted from faeces at baseline and after treatment was analysed by amplification of the V4-V6 region of the 16S ribosomal DNA (rDNA) gene using 454 pyrosequencing. Short-chain fatty acids, i.e. acetate, propionate and butyrate, were also evaluated by gas chromatography-mass spectrometry. At the end of the treatment, gut microbiota composition significantly differed at phylum level (Firmicutes, Bacteroidetes and Proteobacteria) and class level (Erysipelotrichi, Deltaproteobacteria, Bacteroidia and Bacilli). Interestingly, the class Clostridia showed a significant decrease after HFS diet treatment, which correlated with visceral adipose tissue, and is likely mediated by dietary carbohydrates. Of particular interest, Clostridium cluster XIVa species were significantly reduced and changes were identified in the relative abundance of other specific bacterial species (*Mitsuokella jalaludinii*, *Eubacterium ventriosum*, *Clostridium* sp. FCB90-3, *Prevotella nanceiensis*, *Clostridium fusiformis*, *Clostridium* sp. BNL1100 and *Eubacterium cylindroides*) that, in some cases, showed opposite trends to their relative families. These results highlight the relevance of characterising gut microbial population differences at species level and contribute to understand the plausible link between diet and specific gut bacterial species that are able to influence the inflammatory status, intestinal barrier function and obesity development.

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Format: Abstract

[Benef Microbes](#). 2015 Mar;6(1):97-111. doi: 10.3920/BM2013.0097.

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- JARK effect
    - Justify After Results are Known
  - Qualquer resultado pode ser publicado
    - Vai achar referências que suportem seu desenho experimental errado.
- Too many journals? Towards a theory of repeated rejections and ultimate acceptance**

Jan Oosterhaven

- Muitos trabalhos de microbioma (Science, Nature, PNAS...) não são reprodutíveis.
  - Clustering method
  - Classification method
  - Assembly method

Prediabetes

Association	Organism	Result	Out of Range
Associated	<i>Prevotella</i> [57]	Normal	
	<i>Veillonella</i> [57]	Normal	
Inversely associated	<i>Akkermansia muciniphila</i> [58]	Normal	
	<i>Bifidobacterium</i> [57]	Low	Condition more likely
	<i>Butyricimonas</i> [57]	Normal	
	Microbial Diversity [51]	Normal	

  
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Metabolic disorders (continued)

Type 2 Diabetes

Association	Organism	Result	Out of Range
Associated	<i>Akkermansia muciniphila</i> [59]	Normal	
	<i>Barnesiella</i> [60]	Normal	
	<i>Collinsella</i> [61]	Normal	
	<i>Prevotella</i> [62,63]	Normal	
Inversely associated	<i>Lactobacillus</i> [64,65]	Low	Condition more likely
	<i>Roseburia</i> [59,66]	Normal	