

## '*Gabonibacter timonensis*' sp. nov., a new bacterium isolated from the human gut of a Pygmy woman

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### Abstract

This study supports the main characteristics of a new genus '*Gabonibacter timonensis*' strain Marseille-P3388 (CSUR P3388); a new member of the *Gabonibacter* genus and *Porphyromonadaceae* family, that was isolated from a stool sample of a healthy 47-year-old Pygmy woman.

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**Keywords:** Culturomics, emerging bacteria, *Gabonibacter timonensis*, gut microbiota, human microbiota

**Original Submission:** 2 December 2016; **Revised Submission:** 16 December 2016; **Accepted:** 23 December 2016

**Article published online:** 29 December 2016

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As part of the project aiming to describe the human microbiome by culturomics, stool samples were collected in 2015 from Congo and work was initiated after receiving an authorization from the Institut Fédératif de Recherche under the number 09-022 [1].

Phosphate buffered saline was used for stool sample dilution. Then, diluted samples were inoculated in a blood-culture bottle supplemented with 5 ml sheep blood and 5 ml filtered rumen. The culture bottle was incubated at 37°C and follow up was performed for 30 days. A '*Gabonibacter timonensis*' colony was isolated at day 10 on 5% blood-enriched Columbia agar (bio-Mérieux, Marcy l'Etoile, France). The first identification trial of Strain Marseille-P3388 by matrix-assisted laser desorption/ionization time-of-flight mass spectrometry (MALDI-TOF MS) using a Microflex spectrometer (Bruker Daltonics, Leipzig, Germany) was unsuccessful [2]. Hence, 16S rRNA gene sequencing was carried out for strain identification. Briefly, a 3130-XL sequencer (Applied Biosciences, Saint Aubin, France)

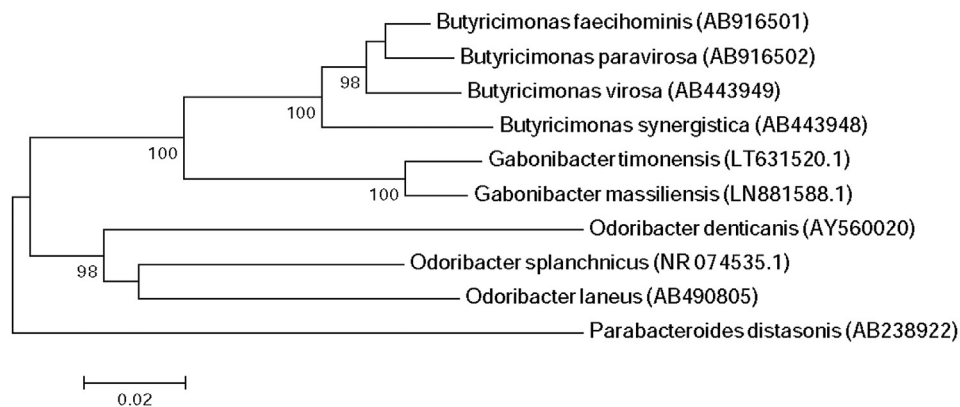
was used along with fD1-rP2 primers (Eurogentec, Seraing, Belgium) as previously described [3]. Strain Marseille-P3388 exhibited a 97% sequence identity with *Gabonibacter massiliensis* strain GM7<sup>T</sup> (LN881588.1), the phylogenetically closest species (Fig. 1). Hence, strain Marseille-P3388 can be classified as a new species within the genus *Gabonibacter* [4]. Colonies were smooth with a mean diameter of 0.8–2.5 mm. Bacterial cells were Gram-positive bacilli, catalase and oxidase negative with a mean diameter of 1.06 µm.

We propose the discovery of the new species '*Gabonibacter massiliensis*' (mas.il.i.en'sis. L. gen. masc. n. *massiliensis* pertaining to *Massilia*, the ancient name of the city of Marseille where strain P3388 was discovered.). Strain Marseille-P3388<sup>T</sup> is the type strain of the new species '*Gabonibacter massiliensis*'.

**MALDI-TOF MS spectrum accession number.** The MALDI-TOF MS spectrum of '*Gabonibacter massiliensis*' is available online (<http://www.mediterranee-infection.com/article.php?laref=256&titre=urms-database>).

**Nucleotide sequence accession number.** The 16S rRNA gene sequence was deposited in GenBank under Accession number LT631520.

**Deposit in a culture collection.** Strain Marseille-P3388<sup>T</sup> was deposited in the Collection de Souches de l'Unité des Rickettsies (CSUR, WDCM 875) under number P3388.



**FIG. 1.** Phylogenetic tree showing the position of '*Gabonibacter timonensis*' strain Marseille-P3388 between the phylogenetically closest species. CLUSTALW tool was used for sequence alignment and phylogenetic inferences were generated using the MEGA software by the maximum-likelihood method. Bootstrap values obtained after 500 repeats are shown on the nodes. Bootstrap scores of at least 90% were kept. The scale bar indicates a 2% nucleotide sequence divergence.

### Transparency declaration

The authors have no conflicts of interest to declare.

### Funding

This work was funded by Méditerranée-Infection Foundation.

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