

## '*Metaprevotella massiliensis*' gen. nov., sp. nov., isolated from human ileum

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### Abstract

We report here the main characteristics of '*Metaprevotella massiliensis*' strain Marseille-P-3114<sup>T</sup> (CSURP3114) that was isolated from a human ileum sample.

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**Keywords:** Culturomics, human gut, *Metaprevotella massiliensis*, microbiota, taxonogenomics

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In 2016, as a part of culturomics study [1] targeted at the study of the modifications of the human microbiome along the whole gastrointestinal tract, we isolated from the ileum of a 25-year-old patient with Crohn disease a bacterial strain that escaped identification by our systematic matrix-assisted desorption ionization–time of flight mass spectrometry (MALDI-TOF MS) screening on a Microflex spectrometer (Bruker Daltonics, Bremen, Germany) [2]. The patient provided signed informed consent, and the study was validated by the ethics committee of the Institut Fédératif de Recherche IFR48 under number 09-022.

Strain Marseille P-3114<sup>T</sup> growth was obtained on 5% sheep's blood–enriched Columbia agar medium (bioMérieux, Marcy l'Etoile, France) in an anaerobic atmosphere (anaeroGEN, Oxoid, Dardilly, France) after a 30-day enrichment of the fresh ileal sample in an anaerobic haemoculture bottle (Becton Dickinson, Pont de Claix, France) added with 5 mL of sterile sheep's blood (bioMérieux) and 5 mL of 0.2 µm filtered (Thermo Fisher Scientific, Villebon-sur-Yvette, France) rumen at 37°C.

After 96 hours' anaerobic incubation on 5% sheep's blood–enriched agar (bioMérieux) at 37°C, colonies were circular, convex with entire edges and translucent. Mean diameter was 0.5 to 2 mm. After 3 weeks' incubation under the same conditions, dark pigment production was observed. Bacterial cells were Gram-negative rods 0.3 to 0.5 µm wide by 1 to 2 µm long. Strain Marseille-P-3114<sup>T</sup> tested catalase and oxidase negative. Different temperatures (20, 28, 37, 45 and 55°C) and atmospheres (anaerobic, microaerophilic and aerobic conditions) were tested on 5% sheep's blood–enriched Columbia agar (bioMérieux). Growth was achieved only under anaerobic atmosphere at 37°C. Sporulation test (20 minutes at 80°C) was negative.

The 16S rRNA gene was sequenced using fD1-rP2 primers as previously described [3], using a 3130-XL sequencer (Applied Biosciences, Saint Aubin, France). Strain Marseille-P-3114<sup>T</sup> exhibited a 89.39% sequence identity with *Prevotella buccae* strain ATCC 33574<sup>T</sup> (GenBank accession no. L16477), the phylogenetically closest species with standing in nomenclature (Fig. 1), which putatively classified strain Marseille-P-3114<sup>T</sup> as a member of a new genus within the family *Prevotellaceae* in the phylum *Bacteroidetes*. The Family *Prevotellaceae* was proposed by Krieg in 2012 and was validated the same year [4]; it actually comprises four genera with validly published names: *Prevotella*, *Alloprevotella*, *Hallella* and *Paraprevotella* [5]. The genus *Prevotella* was created in 1990 to accommodate those *Bacteroides* that were only moderately



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## Conflict of Interest

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None declared.

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