Description of 'Bacillus dakarensis' sp. nov., 'Bacillus sinesaloumensis' sp. nov., 'Gracilibacillus timonensis' sp. nov., 'Halobacillus massiliensis' sp. nov., 'Lentibacillus massiliensis' sp. nov., 'Oceanobacillus senegalensis' sp. nov., 'Oceanobacillus timonensis' sp. nov., 'Virgibacillus dakarensis' sp. nov. and 'Virgibacillus marseillensis' sp. nov., nine halophilic new species isolated from human stool

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Abstract

We report the main characteristics of 'Bacillus dakarensis' P3515^T sp. nov., 'Bacillus sinesaloumensis' P3516^T sp. nov., 'Gracilibacillus timonensis' P2481^T sp. nov., 'Halobacillus massiliensis' P3554^T sp. nov., 'Lentibacillus massiliensis' P3089^T sp. nov., 'Oceanobacillus senegalensis' P3587^T sp. nov., 'Oceanobacillus timonensis' P3532^T sp. nov., 'Virgibacillus dakarensis' P3469^T sp. nov. and 'Virgibacillus marseillensis' P3610^T sp. nov., that were isolated in 2016 from salty stool samples (≥1.7% NaCl) from healthy Senegalese living at Dielmo and N'diop, two villages in Senegal. © 2017 The Authors. Published by Elsevier Ltd on behalf of European Society of Clinical Microbiology and Infectious Diseases.

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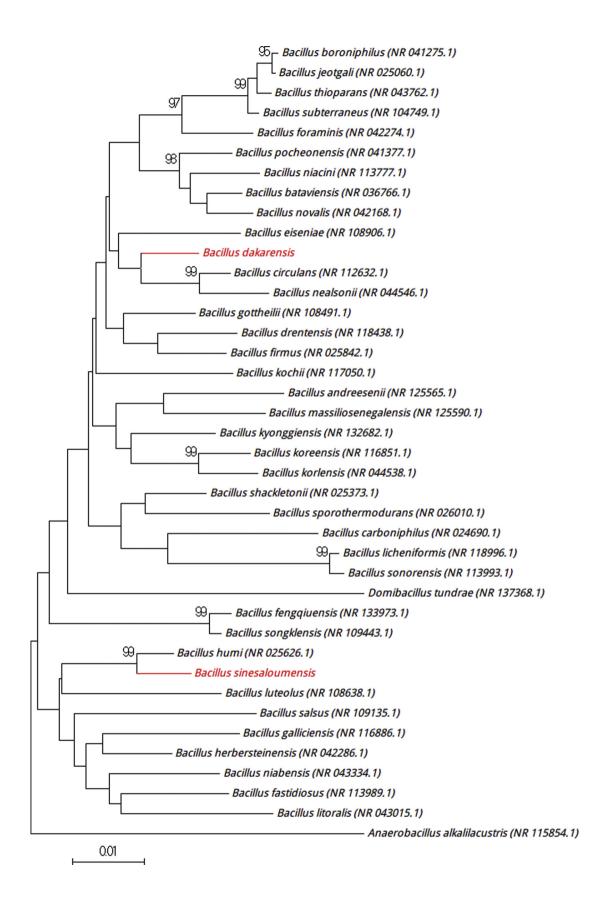
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Culturomics has allowed to culture 247 new bacterial species, greatly increasing our understanding of the human gut repertoire thanks to high-throughput culture conditions with a rapid identification method of grown colonies using matrix-assisted desorption ionization—time of flight mass spectrometry (MALDI-TOF MS) [1]. As a part of the culturomics approach, we isolated in 2016 from stool samples from healthy patients from Senegal nine bacteria that could not be identified by our MALDI-TOF MS screening on a Microflex spectrometer (Bruker Daltonics, Bremen, Germany) [2]. The study was

approved by the ethics committee of the Institut Hospitalo-Universitaire Méditerranée Infection under number 2016-011, and all patients provided written informed consent.

The salinity of the stool specimens was measured by a salinity refractometer (Thermo Scientific, Villebon-sur-Yvette, France). One gram of each stool specimen was diluted in 10 mL of distilled water and centrifuged for 10 minutes at 5000g. Then 100 μ L of supernatant was deposited in the refractometer, and the result were directly displayed on the screen (in ‰) and then reported (in % NaCl).

Stool samples were inoculated in an aerobic blood culture bottles (Becton Dickinson, Le Pont-de-Claix, France) including an halophilic medium prepared in modifying a Columbia broth medium (Sigma-Aldrich, Saint-Quentin-Fallavier, France) by adding (per litre: 1% (w/v) MgSO₄, 0.1% (w/v) MgCl₂, 0.4% (w/v) KCl, 0.1% (w/v) CaCl₂, 0.05% (w/v) NaHCO₃, 0.2% (w/v) of glucose, 0.5% (w/v) of yeast extract (Becton Dickinson), and from 10 to 15% (w/v) NaCl according to the required salinity



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