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Characterization of *Prevotella intermedia* and *Prevotella nigrescens* isolates from periodontic and endodontic infections.

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The occurrence and surface properties of *Prevotella intermedia* and *P. nigrescens* in healthy sites and in periodontic and endodontic infections were studied among 73 strains, tentatively identified as *P. intermedia*. Fifteen strains were from necrotic root canal infections, 41 were from periodontal samples, and 17 isolates were obtained from healthy gingival sites. Identification of isolates as either *P. intermedia* or *P. nigrescens* was based on differences in malate and glutamate dehydrogenase electrophoretic mobilities which allowed unambiguous separation of *P. intermedia* and *P. nigrescens*. The majority of strains from periodontal samples were *P. intermedia* (29 of 41 strains). In endodontic samples only 4 out of 15 isolates were *P. intermedia*, while all except 1 of 17 strains from healthy gingival sites were identified as *P. nigrescens*. SDS-PAGE of whole cell proteins revealed 31 and 38 kDa proteins in *P. nigrescens* which were not detected in *P. intermedia*. Surface biotinylation of cells, followed by Western blotting and detection by alkaline phosphatase conjugated extravidin, showed strong staining of the 31 kDa protein in *P. nigrescens* indicating that this protein is located on the surface of the cell. Corresponding staining was not seen in *P. intermedia*. Fimbria-like projections were observed using electron microscopy of negatively-stained cells of *P. nigrescens*. The results show that *P. intermedia* and *P. nigrescens* may have different site specificities and surface properties and thus emphasize the need for accurate identification of these two species for the evaluation of their role in the pathogenesis of oral infections.

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