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Structural characterization of the carbohydrate backbone of the lipopolysaccharide of *Vibrio parahaemolyticus* O-untypeable strain KX-V212 isolated from a patient

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Vibrio parahaemolyticus strain KX-V212 of a novel serotype, which does not belong to any of the known 12 O-seorypes of this vibrio, was isolated from a patient. Its O-antigen harbors a unique strain-specific O-antigenic factor(s), in addition of that shared by the O-antigen of *V. parahaemolyticus* serotype O2. Structural analysis of isolated and deacylated lipid A and a carbohydrate backbone isolated from the lipopolysaccharide (LPS) by dephosphorylaltion, reduction and deacylation revealed that the carbohydrate backbone of the LPS of strain KX-V212 is a decasaccaride as shown below which consist of one residue each of D-galactose (Gal), D-glucose (Glc), 3-deoxy-D-*manno*-oct-2-ulosonic acid (Kdo) and 5-diacetamido-7-(*N*-acetyl-D-alanyl)amino-3,5,7,9-tetradeoxy-D-*glycero*-D-*galacto*-non-2-ulosonic acid (Non5Ac7Alal), and two residues each of D-glucuronic acid (D-GlcA), L-*glycero*-D-*manno*-heptose (L,D-Hep) and 2-amino-2-deoxy-D-glucose (D-glucosamine, GlcN). The initial LPS contains also D-galacturonic acid and phosphoethanolamine at unknown positions. Both similarity and differences are observed between the LPS of *V. parahaemolyticus* O2 and strain KX-V212.