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## **Haemophilus influenzae DNA Testing at Micropathology Ltd**

*Haemophilus influenzae* is a small fastidious Gram-negative coccobacilli belonging to the *Pasteurellaceae* family.

It is highly adapted to humans; can be found in the nasopharynx of ~75% of healthy children and adults; and is transmitted by respiratory droplet. Encapsulated strains used to be a common cause of a number of serious diseases especially in infants and young children; including bacteraemia, pneumonia, epiglottitis, septic arthritis and the leading cause of meningitis. However, since the introduction of the Hib conjugate vaccine in 1993 the incidence of invasive disease and carriage of this organism has dropped dramatically.

Invasive disease is mostly caused by capsular type b although types e,f and non-capsulated strains may also cause serious diseases. Infections are most common between 2 months and 2 years of age as babies < 2 months old are protected by maternal antibodies. Non-invasive diseases such as otitis media, sinusitis, endometritis and purulent exacerbations of COPD are typically caused by non-capsulated (non-typable) strains and may be associated with anatomical or physiological abnormalities or viral infections.

Diagnosis of a *H. influenzae* infection is commonly undertaken using culture methods and subsequent identification (use of chocolate agar and X and V factors). However, clients may wish to send us specimens where *H. influenzae* is suspected but has failed to grow, where antibiotics have been administered prior to sample collection or where a *Haemophilus* species identification is sought. The assay detects the most clinically significant *H. influenzae* but also *H. parainfluenzae*, *H. haemolyticus* and *H. quentini* DNA.

At Micropathology Ltd the assay involves a single round of PCR amplification for qualitative detection using ethidium bromide gel electrophoresis. Accredited specimen types are CSF and whole blood though other samples may be tested and reported along with an appropriate caveat stating that the sample is not validated for this assay.