

IGIB scientists develop a technique for sensing throat infection

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A team of researchers at the CSIR- Institute of Genomics and Integrative Biology (IGIB), New Delhi, have developed a new sensor-based technique for detecting the presence of *Streptococcus pyogenes* bacteria, the most common cause of throat infections. It is claimed to be quick and cost-effective.

The device, a DNA chip-based sensor, consists of a carbon electrode embedded with gold nanoparticles to improve its electronic properties. Many small-sized DNA probes are located on the modified chip. They attach themselves to the target DNA samples of bacteria taken from throat swabs of the patient.

The new sensor has been found to be better than earlier reported sensors due to its ability to pick up bacterial DNA even if present in small numbers, within 30 minutes. The main objective was to develop a rapid, accurate, sensitive, specific and cost-effective method for detection of *S. pyogenes*.

The current methods of detecting *S. pyogenes* infection are culture tests, biochemical assays, polymerase chain reaction and genetic markers. These methods are time consuming, expensive and are unable to pick up the bacteria if present in small numbers and may even wrongly identify other bacteria as *S. pyogenes*.