the rankings would likely change significantly. True scholarship encompasses not only what a scientist achieves individually, but also how we contribute to the collective advancement of knowledge and the betterment of society.

It is important to critically assess the value and impact of purely numerical rankings in the world of science. While it is natural to take pride in being recognized as one of the world's top scientists, we must remember that these rankings are based on algorithms that cannot fully capture the essence of scientific excellence. They may inadvertently discourage innovative and unconventional research, and discourage true scholarship.

As scientists, we should strive for a holistic and inclusive approach for evaluating our work and contributions. Our impact on the advancement of science and society should not be reduced to a number on a list. Instead, let us celebrate the diversity of research and contributions within the scientific community, and acknowledge that true scholarship goes beyond statistics.

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In-house-built isothermal visual assays for rapid detection of African swine fever

African swine fever (ASF) is a highly contagious viral disease that affects both domestic pigs and wild boars, posing substantial danger to the worldwide piggery industry. More than 1,700,000 animals have died as a result of ASF, according to the World Organization for Animal Health (OIE), Paris. ASF is caused by African swine fever virus (ASFV), a member of the *Asfivirus* genus and Asfarviridae family. Since there are no effective vaccines, the present control and eradication techniques rely on early detection and strict stamping-out procedures.

Given the present ASF pandemic in India, which has escalated, rapid pen-side diagnostic assays may aid in the development of efficient biosecurity interventions and the control of infection. OIE and the European Reference Laboratory both strongly recommend ASF laboratory testing using polymerase chain reaction (PCR)/real-time PCR for detection of the ASFV genome, or enzyme-linked immunosorbent assay for confirmation of ASFV antigen or anti-ASFV antibodies.

In the present study, we have developed and compared two in-house-designed isothermal amplification-based visual tests, LAMP (loop mediated isothermal amplification) and PSR (polymerase spiral reaction), for quick and sensitive detection of ASFV viral DNA in porcine clinical samples. A provisional Indian patent application was filed on 24 April 2023, with application number 202311029459.

The analytical sensitivity for LAMP and PSR was 50 pg and 50 fg respectively. Both visual assays were found to be ASFV-specific, but not for other swine viral infections. A total of 165 suspected clinical samples were analysed utilizing the developed visual assays in conjunction with the OIE-recommended conventional PCR-based assay as a reference. The relative accuracy, specificity and sensitivity of LAMP versus PSR were determined to be 95.37% versus 102.48%, 97.46% versus 101.36% and 73.33% versus 113.33% respectively. The Cohen kappa index value was found to be higher (1.15) for PSR-based visual test for detecting ASFV in clinical samples than for LAMP-based visual assay (0.7). In the future, the developed isothermal amplification-based visual assays may be able to replace conventional or quantitative real-time PCR-based assays for rapid testing of ASF viral genetic materials in diagnostic laboratories with limited resources, or for on-the-spot disease diagnosis for improved biosecurity preparedness against ASF.

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