

Assessing aquatic organism health status non-invasively

CRACK IT Solutions

Researchers at University of Naples Federico II seek collaborators to validate their eDNA metabarcoding technology for non-invasive health assessment of aquatic facilities.

What could the Solution be used for?

eDNA metabarcoding is a non-invasive, cost efficient technology to detect and identify potential pathogens (viruses, bacteria, protozoa, metazoa, parasites) in aquatic facilities; preventing the spread of pathogens to healthy animals and reducing the need for sentinel animals in assessing the health status of these facilities.

Need for collaboration

Collaborators are sought in any sector using aquatic animal health monitoring to assess and validate this eDNA metabarcoding technology against current practice. Input from partners who could develop and validate software to contain searchable DNA sequences of pathogens, are also welcomed.



3Rs impact assessment

More accurately assessing the presence of pathogens in aquatic facilities will:

- Avoid the movement of animals with subclinical infections that could become lethal upon stress induced by transport, reducing morbidity and mortality in the new facility caused by the spread of pathogens and infection.
- Reduce the number of sentinel animals required for health status assessment. In the technology developer's zebrafish facility alone, this has reduced the number of sentinels required at each health assessment from 12 to six animals.

Applied globally, this technology has the potential to make a significant impact on the number of animals used within aquatic facilities.

For more information or to contact the Solution provider: <https://crackit.org.uk/assessing-aquatic-organism-health-status-non-invasively>

NC
3Rs



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