ECS Lunch and Learn Chat Log
May 6, 2021

[1:04 PM] Sharon Lam

Thank you to our speakers from PBI! https://precisionbiomonitoring.com/

[1:10 PM] Sharon Lam

Hi everyone, thank you for joining us! If you have any questions for our speakers, please feel free to type your questions in the Chat throughout the presentation.

[1:36 PM] Rick Portiss

how persistent is eDNA in the environment i.e. Washes from upstream or dropped from elsewhere by predator birds. How can you be sure its not from those sources.

(4 liked)

[1:40 PM] Jan Moryk

Can eDNA samples distinguish between abundance of a particular species or is it just presence and absences

(1 liked)

[1:40 PM] Rick Portiss

How do limit false positives ?

(1 liked)

[1:41 PM] Steve Crookes

eDNA longevity depends on water qualities (low O2 = better preservation, low pH = degradation; water flow can convey it away, etc.), but can last many weeks, potentially. There are many studies from earliest days that used PCR to detect target DNA in mesocosms after the organism had been removed.

(1 liked)

[1:41 PM] Michael Rinaldo

Do your no-template/negative controls include any non-target DNA or just no DNA?

(1 liked)

Is there any sort of regulation/standardization on the validation of primers across the field? Is there any concern with homology of target DNA with unknown microbial/phage DNA? Are there standards in sensitivity for each primer set?

(1 liked)

[1:43 PM] Steve Crookes

You can control for false positive detection via conveyance from elsewhere by employing 1: good study design; 2) an appropriate marker (e.g., eRNA that breaks down much sooner, so if you detected it it came from a local live organism); and most importantly 3) good stats. spatiotemporal sampling and modelling can infer whether detection is sufficiently strong to make good occupancy inference.

(1 liked)

[1:44 PM] Steve Crookes

No template controls (NTC in PCR)= pure water. A negative PCR control would be a non-target species used as template to confirm target specificity

[1:44 PM] Grace Manka'a

does eDNA idnetify the different species right down to genus and species level?

(1 liked)

[1:49 PM] Jessica Fang

What is the range of documented detection efficiency for benthic macro-invertebrates?

(2 liked)

[1:50 PM] Rick Portiss

Thanks

[1:51 PM] Jonathan Ruppert

Thanks!

[2:02 PM] Hyacinth Bouchard

Thanks Jay and Steve, great presentation!

[2:02 PM] Michael Rinaldo

Thanks

[2:02 PM] Katherine Hills Learney

Thank you!

[2:02 PM] Victoria Kramkowski

Thank you!

[2:02 PM] Ashour Rehana
Thank you!

[2:02 PM] Dell Tune
Thanks!

[2:02 PM] Jessica Fang
Thank you!

[2:02 PM] Konain Sajid
Very interesting! Thanks so much for sharing brilliant knowledge!

[2:03 PM] Don Little
Thank you!

[2:09 PM] Bruna Peloso
Thank you!!

[2:10 PM] Lindsay Clapp
thanks!