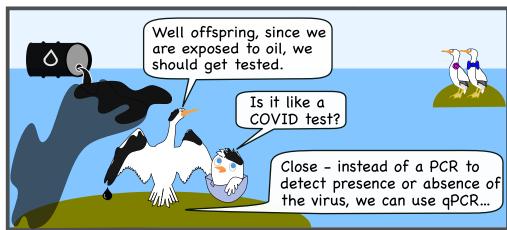
## Riomarkers of exposure: A bird's-eye view

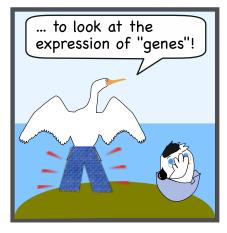


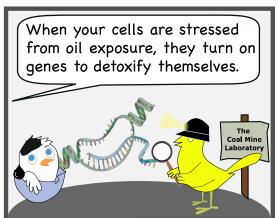
Created by Sarah Wallace in Inkscape

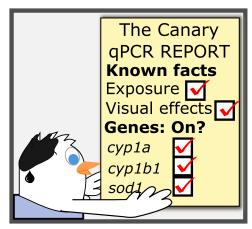
In 2020, humans with or without symptoms get tested for COVID-19 to assess the population's risk of exposure.

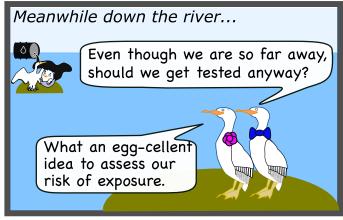
Meanwhile, wild bird populations are assessing their risk of exposure to contaminants in the environment.

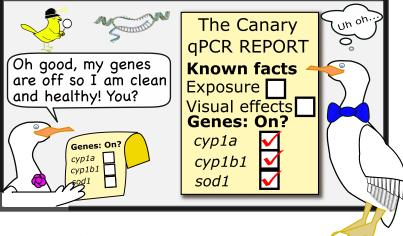


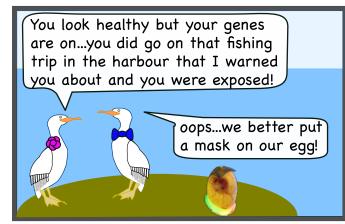
















Like canaries in a coal mine being early warning signs, these genes can be "biomarkers", where their expression indicates oil exposure even in birds who have no visual signs. They can be added to a molecular toolbox for risk assessment scenarios.