

Complex Biological Networks

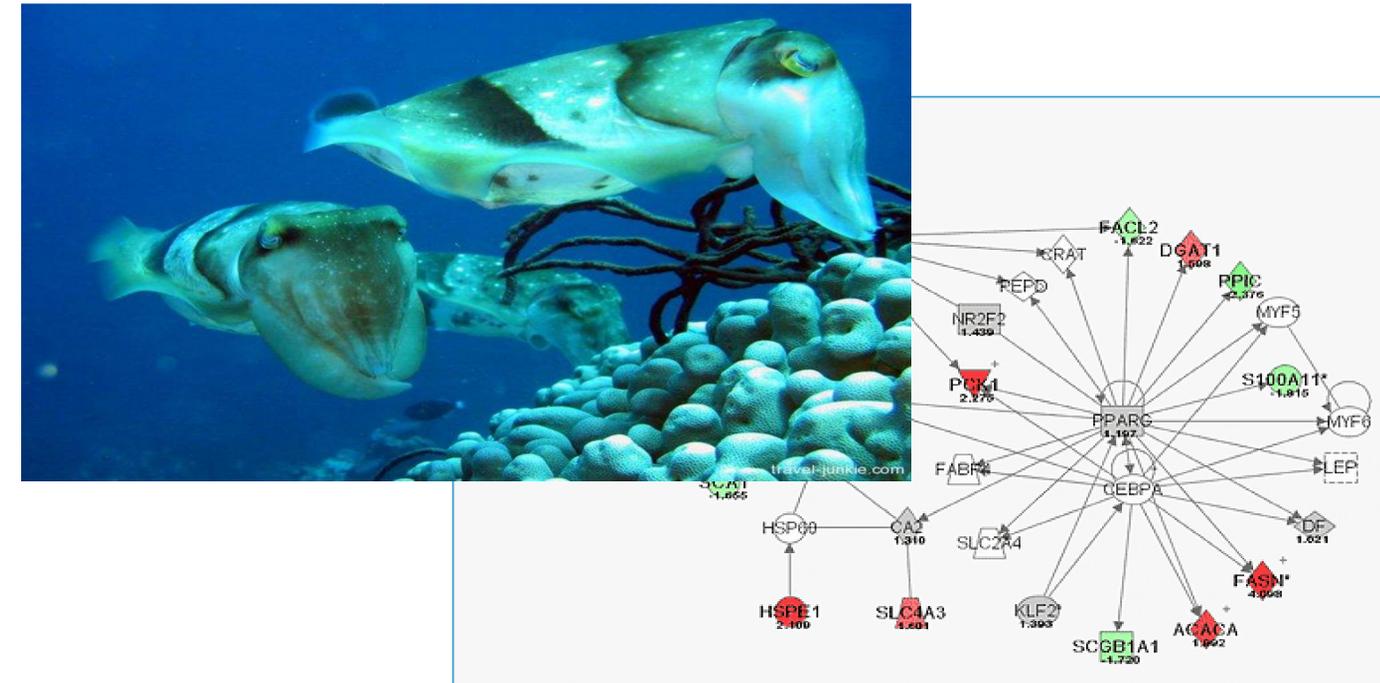
Program Objectives:

The fundamental questions are:

- (1) What individual messenger RNA transcripts and metabolites are up- or down-regulated in response to environmental contaminants?
- (2) What biologics perturbed by the explosives are common among bacteria (*Escherichia coli* and *Bacillus subtilis*), simple eukaryotes (*Dictyostelium discoideum*), and model higher eukaryotes (*Danio rerio*)?
- (3) How are these transcripts and metabolites connected?

Milestones:

- Generation of a list of E coli genes impacted by exposure to RDX.
- Generation of a single RDX-impacted gene and metabolite database in E coli.
- First generation of biological systems analysis tool. Publish the results of the wet lab biological experiments on E coli and RDX.
- Generation of a list of B subtilis genes impacted by exposure to RDX.
- Publish the results of the first generation of biological systems analysis tool.
- Publication of the wet lab biology experiment on B subtilis and RDX



Collaborators:

Sponsor: Army Research Office

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