## Apart from malaria

- Mosquito-transmitted viruses
- Yellow fever virus
- Dengue virus
  - 60-100 million cases each year
  - + strand RNA virus
  - Most are transmitted by arthropods (mosquitos or ticks)
- Chikungunya virus
- West nile fever virus
- Zika virus

### Sterile mosquito

- Transgenic male breed with wild-type female mosquito results in;
  - sterile or mosquito offspring die before reaching adulthood
- Sterile insect technique (SIT1) is a method of pest control with a strong record of success against a rant
  of agricultural pest insects
- Genetically engineered mosquitoes

### Malaria resistant mosquito?



Can assisted evolution and synthetic biology be utilized to combat coral bleaching ?

# Marine Toxins Shellfish Poisoning Syndromes

- Diarrhetic shellfish poisoning, DSP
- Neurotoxic shellfish poisoning, NSP
- Paralytic shellfish poisoning, PSP
- Azaspiracid shellfish poisoning, ASP
- Ciguatera fish poisoning, NSP
- Amnesic shellfish poisoning, ASP

#### How is lobster red?

- The orange-red astaxanthin is released when heated, turning the shell of crustaceans bright red

# Astaxanthin

- A naturally occurring carotenoids
- Found in microalgae, yeast, salmont, krill, shrimp, crayfish and the feathers of some birds
- Proved the red colour of salmon meat and cooked shellfish
- A carotenoid in larger family of terpenes
- Is added to fish feed to ensure a good flesh colour