

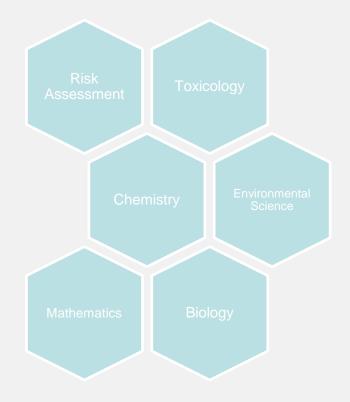
# Opportunities in Government for Students of Green Chemistry

Informing Science and Policy

Dr. Nicholas D. Anastas Senior Advisor for Green Chemistry USEPA/NRMRL (617) 918-1177



## Holistic nature of green chemistry





#### Research at EPA

- Office of Research and Development (ORD)
- Programmatic Research
- Grants



# Other Agencies and Institutes applying GC

- Federal
  - -National Institutes of Health
  - NIEHS
  - -FDA
- States
  - -CA, MI, MN, IL, NY, OR, WA





## **Fundamental and Applied Science**

**Organic Synthesis** 



**Basic Chemistry** 



#### **Toxicology and Risk Assessment**

- Tox 21/ToxCast
- Hazard and Risk Assessment
  - –Alternatives Assessment (Safer Choice)
  - -Programmatic
    - Superfund
    - ODWGW

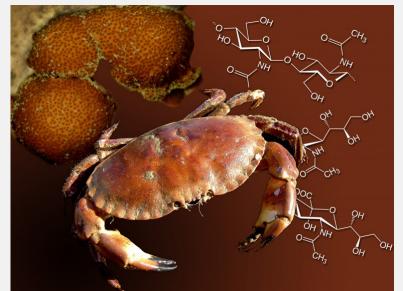






#### **Biomimicry: Nature as the Ultimate Mentor**

- Waste is a human concept-*Nature* knows not this concept
- Some examples:
  - -Mussel byssus
  - -Chitin







#### **Supporting Policy and Regulation**

- Sustainability
- Cross-cutting priorities
  - -ACE
  - -Making a difference in communities
  - -Children's health
  - -Safe and Sustainable waters
- Lifecycle considerations







#### Summary

- Essentially unlimited; innovation is the main driver.
- Science and policy require the skills of a "green and sustainable" chemist

