STRENGTHENING THE PARTNERSHIP BETWEEN THE ATMOSPHERIC AND HEALTH SCIENCES

Joe Mauderly

NATIONAL ENVIRONMENTAL RESPIRATORY CENTER
Because You Never Breathe Only One Pollutant!

Lovelace Respiratory Research Institute
Albuquerque, NM
EXAMPLE: ORGANIC SPECIATION NEEDS
International Workshop on Organic Speciation in Aerosol Research
April 2004 - Las Vegas, NV

Topic 4: Organic Speciation Needs for the Health Community
(Joe Mauderly, Joellen Lewtas, Ron Wyzga)

Analytical Needs:

• More “experiment-friendly” speciation tools
  Faster, cheaper, simpler, more mobile
  For both epidemiology and laboratory studies
• Better mass balance of organics (including UCM)
  Complete exposure characterization
• Better analysis of particle surface composition
  Bulk chemistry not always relevant

Research Strategy, Training, and Communication Needs:

• Better characterization of complex exposures
• Generation/capture of multi-component exposure atmospheres
• Cross-trained researchers
• Better cross-fertilization of ideas and capabilities
OPPORTUNITIES FALL INTO SIX CATEGORIES

1. Thought Leadership
   Regulators, regulated, researchers

2. Education of the Scientific Masses
   Tutorial sessions at disciplinary meetings
   Targeted workshops & retreats

3. Training
   Graduate & post-graduate cross-over training

4. Funding
   RFAs and RFPs placing premium on linkages

5. Technology Development & Deployment
   Make advances analytical methods more accessible
   Establish resource centers

6. Education of the Public
   Pre-college school curricula
   Public media NGOs/advocacy groups
PRIORITIES?

The most pressing need is not the development of more advanced technologies (as important as that is)

The more pressing need is to better use the tools we already have!

- Man is a better tool-maker than he is a thinker
- We already have the tools to do better science than is common
- We need to champion and facilitate more advanced experimental designs