Report to Scientific Guidance Panel:

Environmental Health Laboratory Update

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Laboratory Set up

- **Completed renovations of two laboratories!**
  - LC-MS analytical lab
  - GC-MS analytical lab

- **Installed three new CDC-funded instruments**
  - LC-MS/MS (AP 5500 QTrap) for environmental phenols
  - LC-MS/MS (Agilent 6460) for Organophosphate (OP) specific metabolites and pyrethroid metabolites
  - GC-MS/MS (Agilent 7000) for OP common metabolites- dialkyl phosphate (DAPs)

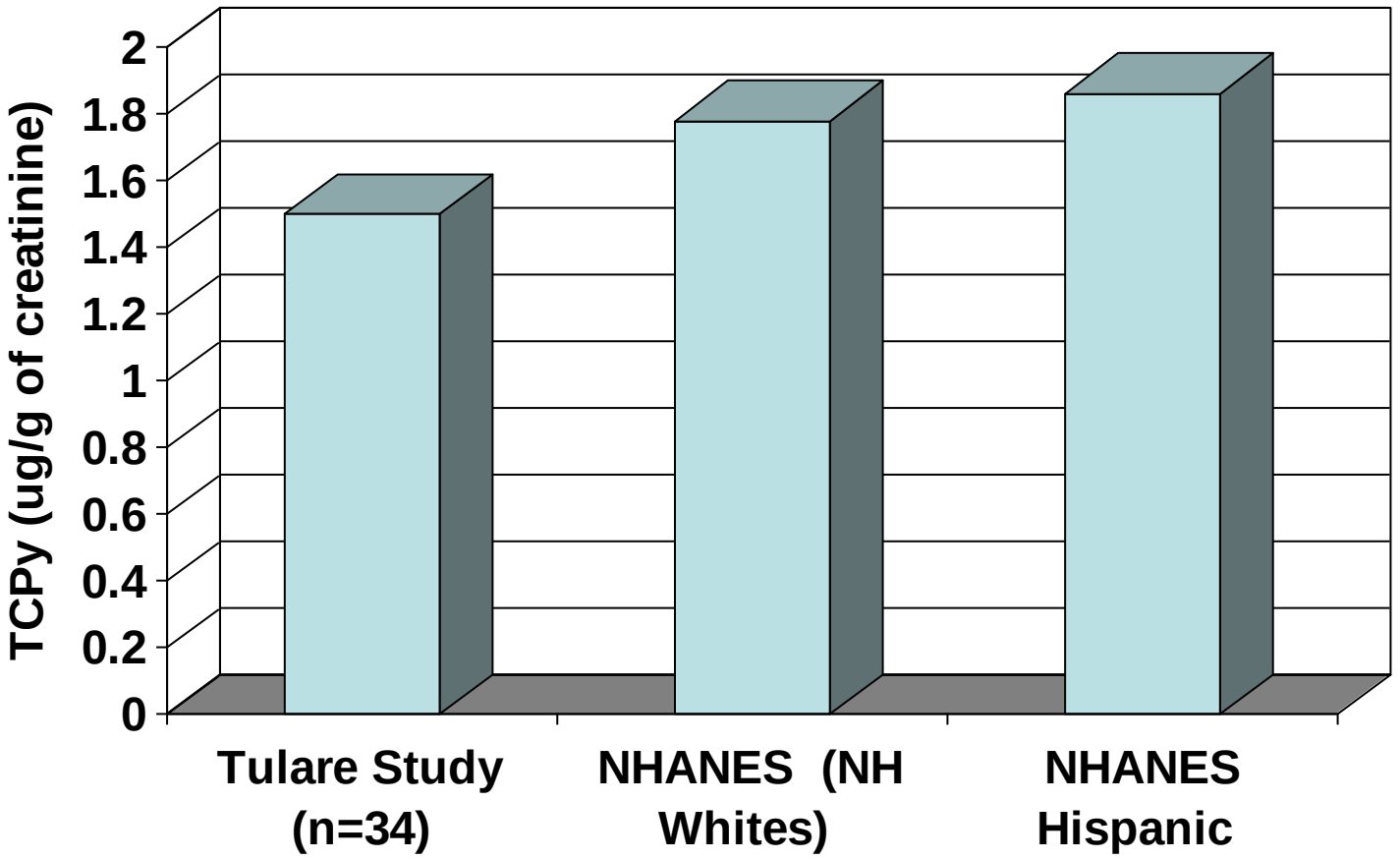
Sample Management, LIMS and QA/QC Activities

- Sample Management: Support MIEEP and FOX field investigation and sample collection activities
- LIMS: Improve ability to store and organize all data (specimen information, analytical results and selected patient information) in a central location
- QA/QC: Conduct stability study of OP and phthalate metabolites

Sample Analysis

- **Finished**
  - Tulare Environmental Health Tracking (77 urine samples; 34 participants for TCPy)
  - CYGNET (500 blood samples for Pb, Cd, Hg)
  - MARBLES (28 urine samples for phthalates)
- **Coming**
  - CHAMACOS (50 urine samples for phthalate metabolites)
  - MIEEP (100 blood and urine samples)
  - FOX (100 blood and urine samples)

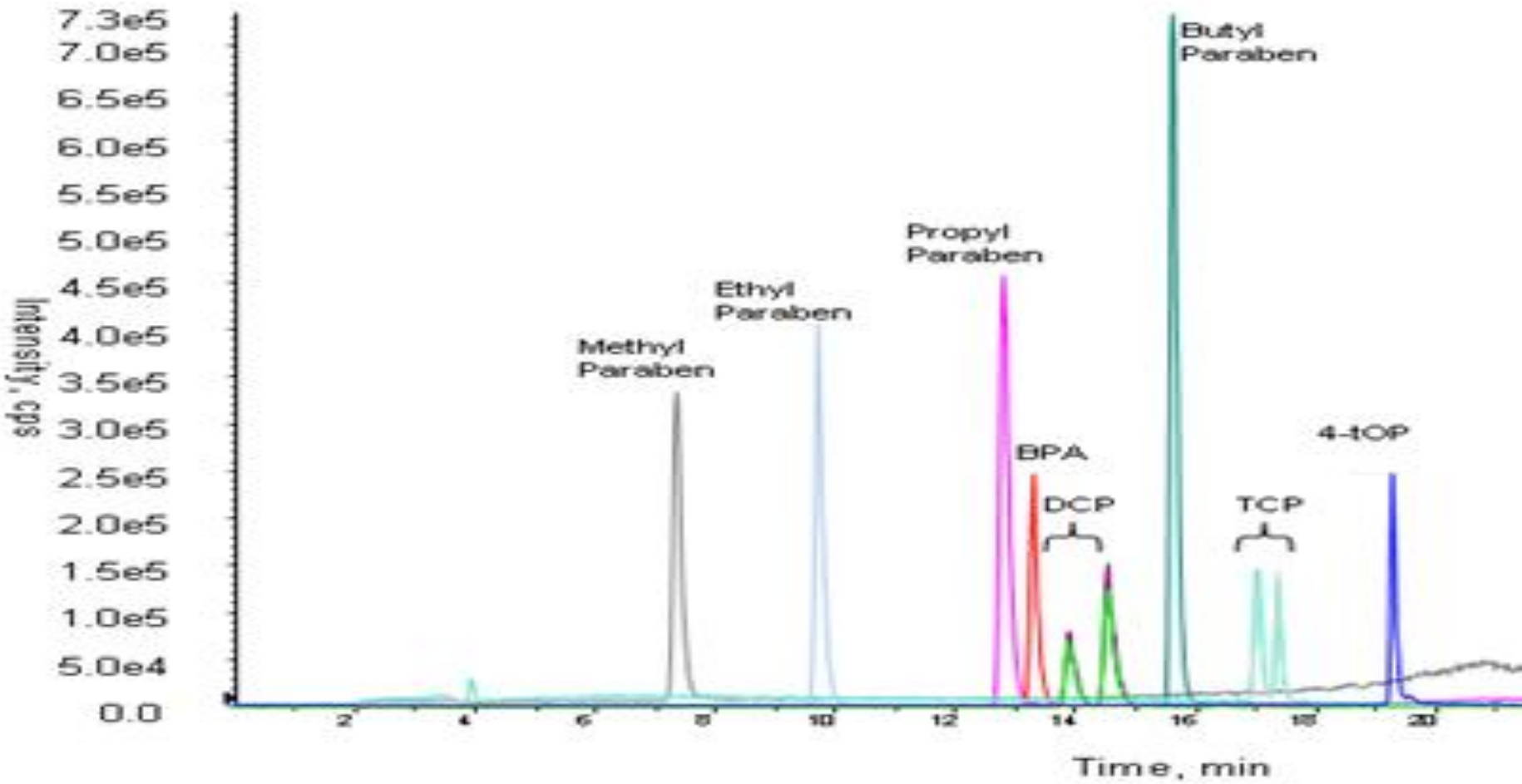
Trichloro-pyridinol (TCPy) in Urine Samples (geometric means)



Validated Methods

- Metals (Pb, Hg, Cd, Mn) in blood
- Phthalate metabolites (mEP, mBP) in urine
- OP pesticides (TCPy, 3-PBA) in urine
- Hydroxy-PAH (3-Phen) in urine
- Creatinine in urine

Environmental Phenols



Year 2 Activities

- **Expand upon existing methods:**
  - Hydroxy PAH (currently 1 analyte; will increase to 8)
  - Phthalate metabolites (currently 2 analytes; will increase to 6)
  - OP specific metabolites (currently 2 analyte; will increase to 9)
- **Continue methods in progress:**
  - DAPs (6 analytes, June 2011)
  - Arsenic speciation (June 2011)
  - Environmental phenols (14 analytes, June 2011)
- **Increase capacity**
  - Procedure automation
  - Enhance through-put