Congressional Direction

• ...the need [exists] for design, testing and state-of-the-art equipment for this nation’s... miners, firefighters, healthcare, agricultural and industrial workers...

• ...to carry out research, testing, and related activities aimed at protecting workers, who respond to public health needs in the event of a terrorist incident

• ...to organize and implement a national personal protective equipment laboratory

Senate Rpt. 106-293- Departments of Labor, Health and Human Services, and Education and Related Agencies Appropriation Bill, 2001 Filed, Under Authority of the Order of the Senate of January 6, 1999
Key Partners & Stakeholders
Academia

The Pennsylvania State University
University of Cincinnati
University of Pittsburgh
Vanderbilt
Virginia Tech
Invent the Future
West Virginia University
University of Arkansas
University of Massachusetts
Regents of the University of Minnesota
Key Partners & Stakeholders
Government
Key Partners & Stakeholders International
Key Partners & Stakeholders
Industry

3M
Gerson
Moldex
Avon
Project Heroes
Bullard
Interspiro
Consol Energy
ISEA
North by Honeywell
CSE
Committed to Safety Excellence!
Johnson & Johnson
Dräger
Kimberly-Clark
Lion Apparel
DuPont
Sperian

Ocenco Incorporated
Key Partners & Stakeholders

Labor
Key Partners & Stakeholders
Non-Governmental

[Logos of Key Partners & Stakeholders]
Key Partners & Stakeholders
Professional & Trade
NPPTL’s Early Achievements

- Response to 9/11
- Respirator CBRN standards and certification
- Studies of PPE technology gaps & user needs
- CDC SARS support
- CBRN escape hood guidance
- Workplace end of service life modeling
- Leadership role with ANSI ISO Respiratory Protection
Ground Zero
September 11, 2001

Rand Reports on Protecting Emergency Responders
Respiratory Protective Devices
2006 – IOM report examining issues related to the potential reuse of masks and N95 respirators in the event of an influenza pandemic
2007 – IOM report to assess the NIOSH anthropometric survey
2007 – National Research Council (NRC) report
Measuring Respirator Use in the Workplace
NIOSH PPT Program and NPPTL
Relevance and Impact

**Mine Escape Issues**
- Respirator Certification
- Mine Emergency Respirator Investigations
- New Technology Research
- Escape Respirator Research
- Escape Respirator Standards
- MSHA Collaboration

**CBRN Issues**
- Respirator Standards Development
- CBRN PPT Research
- Respirator Certification
- NFPA/IAFF Collaboration
- TSWG IAA
- OSHA Collaboration

**Nanotechnology Issues**
- Filtration Research
- Protective Clothing Research
- Respirator Research
- Respirator Certification
- Workplace Guidance

**Pandemic Issues**
- N95 Respirator Research
- Standards (Total Inward Leakage)
- Respirator Certification
- FDA Collaboration
- National Academies Activities
- Pandemic Planning and Response
Evidence for the National Academies’ Review of the
NIOSH
Personal Protective Technology Program

2007 – PPT Program Evidence Package for the National Academies’ Review
Self-Contained Self-Rescuer Long Term Field Evaluation Tenth Phase Results

2008 – Self-Contained Self-Rescuer Long Term Field Evaluation Tenth Phase Results / NIOSH Publication No. 2008-138
2008 – IOM report on PPE for healthcare workers
2008 – National Academies’ Review of the PPT Program
### PPT Scores

<table>
<thead>
<tr>
<th>Impact</th>
<th>The program has made some contributions to end outcomes or well-accepted intermediate outcomes.</th>
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<tr>
<td>Relevance</td>
<td>The program’s work is in priority subject areas, and NIOSH is engaged in appropriate transfer activities for completed projects or reported results.</td>
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### Recommendations

1. Implement and Sustain a Comprehensive National PPT Program
2. Establish PPT Research Centers of Excellence and Increase Extramural PPT Research
3. Enhance the Respirator Certification Process
4. Increase Research on the Use and Usability of PPT
5. Assess PPT Use and Effectiveness in the Workplace Using a Life-Cycle Approach

### Emerging Issues

- Continue research in priority areas
- New materials technology, including “no-fit” respirators
- PPT ensembles and seamless integration of multiple PPT components
- Usability, comfort, ergonomics, and human factors which determine whether or not the PPE is worn by the worker
- Enhancing the culture of workplace safety through worker education, training, and understanding of hazardous exposure risk to health

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**PPT Scores**

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Respiratory Protection for Healthcare Workers in the Workplace Against Novel H1N1 Influenza A

A Letter Report (Sep 2009)

Committee on Respiratory Protection for Healthcare Workers in the Workplace Against Novel H1N1 Influenza A

Board on Health Sciences Policy

Catharyn T. Liverman, Tracy A. Harris, M. E. Bonnie Rogers, and Kenneth I. Shine, Editors

INSTITUTE OF MEDICINE
OF THE NATIONAL ACADEMIES

THE NATIONAL ACADEMIES PRESS
Washington, DC
www.nap.edu
2010 – IOM Report on Certifying Personal Protective Technologies