Who is the CDMRP?
CDMRP Partnerships

Advocates
- Demonstrate need
- Participate at all levels
- Passion and perspective

Congress
- Add funds to budget
- Targeted guidance
- Opportunity to leverage

Researchers
- Innovation and gaps
- Risk/Benefit
- Product-oriented

DOD
- Program management
- Regulatory and budget requirements
- Institute of Medicine model

IMPROVE HEALTH (CURE)
Hallmarks of the CDMRP

- Research funds added to DOD budget by Congress
- Vision is adapted yearly, and award mechanisms are changed as needed
- Advocates participate throughout process
- Fund highly innovative, high-impact research
- Fund nationally and internationally
- Two-tier formal review of applications – Institute of Medicine model

US Army Medical Research and Materiel Command
DoD ARP:
History and Background

FY07
$7.5 M

115 awards

$47.4 M
FY14 ARP Integration Panel Members

- Craig Powell, M.D., Ph.D, Chair
  University of Texas Southwestern Medical Center
- David Bellinger, Ph.D.
  Harvard School of Public Health, Children's Hospital Boston
- Daniel Campbell, Ph.D.
  University of Southern California
- Katarzyna Chawarska, Ph.D.
  Yale University
- Diane Chugani, Ph.D.
  Wayne State University; Children's Hospital of Michigan
- Julie Daniels, Ph.D.
  University of North Carolina
- John Davison III, MBA, Ph.D.
  Defense Health Agency
- Ann Gibbons, J.D.
  Autism Speaks
- Nancy Minshew, M.D.
  University of Pittsburgh
- Shelley Reynolds, B.A.
  Unlocking Autism
- Col Cherri Shireman
  US Air Force Medical Support Agency
- Christopher Stodgell, Ph.D.
  University of Rochester
- Robert Vogt, Jr., Ph.D.
  Centers for Disease Control and Prevention
Vision
Improve the lives of individuals with autism spectrum disorder now

Mission
Promote innovative research that advances the understanding of autism spectrum disorder and leads to improved outcomes
Mechanisms toward the ARP Vision

*Improve the lives of individuals with autism spectrum disorder now*

As a research funding agency how do we do this?

- Concept
- EHDA*
- Pilot

- Developing
  - Idea Development

- Clinical/Translational
  - Clinical Trial

*Explanation – Hypothesis Development Award
FY14 Areas of Interest
Clinical Trial Award

- Behavioral and other non-pharmacological therapies

- Pharmacological treatments in autism or well-defined subgroups of autism (e.g., genetic, phenotypic, co-occurring conditions)

- Dissemination/Implementation of established, efficacious behavioral interventions

- Therapies to alleviate conditions co-occurring with ASD (e.g., sleep disturbances, gastrointestinal issues, aggression, depression, anxiety)
FY14 Areas of Interest
Idea Development Award

- Environmental risk factors
- Mechanisms of heterogeneous clinical expression or response to treatment of ASD, excluding new gene discovery
- Mechanisms underlying conditions co-occurring with ASD (e.g., sleep disturbances, gastrointestinal issues, aggression, depression, anxiety)
- Novel therapeutics using valid preclinical models
- Psychosocial factors promoting success in key transitions to independence for individuals living with ASD
# How Does DoD ARP Fit: IACC Strategic Plan Objectives

<table>
<thead>
<tr>
<th>Question 1</th>
<th>When should I be concerned?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Question 2</td>
<td>How can I understand what is happening?</td>
</tr>
<tr>
<td>Question 3</td>
<td>What caused this to happen and can it be prevented?</td>
</tr>
<tr>
<td>Question 4</td>
<td>Which treatments and interventions will help?</td>
</tr>
<tr>
<td>Question 5</td>
<td>Where can I turn for services?</td>
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<tr>
<td>Question 6</td>
<td>What does the future hold, particularly for adults?</td>
</tr>
<tr>
<td>Question 7</td>
<td>What other infrastructure and surveillance needs must be met?</td>
</tr>
</tbody>
</table>
FY07-FY12 ARP Portfolio
Percentage of Funds Invested per IACC Question

- 27.7%
- 20.1%
- 12.2%
- 7.1%
- 0.4%
- 0.3%

Question 1: 32.2%
Question 2: 27.7%
Question 3: 7.1%
Question 4: 0.4%
Question 5: 0.3%
Question 6: 12.2%
Question 7: 20.1%
Wayne Fisher, Ph.D.
University of Nebraska Medical Center

Technology-Enhanced Early Intensive Behavior Intervention Services for Children with ASD in Military Families

Brooke Ingersoll, Ph.D.
Michigan State University

Development of Internet Based Parent Training Intervention for Children with ASD
Technology-Enhanced Early Intensive Behavior Intervention Services for Children with ASD in Military Families

Dr Wayne Fisher
University of Nebraska Medical Center

Early Intervention
Severe Behavior
Feeding Problems
Sleep Problems

Synchronous Feedback
(encrypted via VPN)

Asynchronous Feedback
and
Store
(encrypted via VPN)

Forward

Recorded Video
Advancing Independence

Daniel Cox, Ph.D. and Ronald Reeve, Ph.D.
University of Virginia

Daniel Cox, Ph.D. and Timothy Brown, Ph.D.
University of Virginia and University of Iowa

Evaluating and Enhancing Driving Skills of Individuals with ASD

Virtual Reality Driver Simulator and Eye Tracking
Armin Alaedini, Ph.D.
Columbia University

Systematic Characterization of the Immune Response to Gluten and Casein in ASD

Proteomic Mapping of the Immune Response to Gluten in Children with ASD
### Idea Development Awards – Nourishing the Future

<table>
<thead>
<tr>
<th>Project Title</th>
<th>Principal Investigator(s)</th>
<th>Affiliation(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improving Healthcare <em>Transition Planning and Health-Related Independence for Youth with ASD and Their Families</em></td>
<td>Nancy Cheak-Zamora, University of Missouri, Columbia</td>
<td></td>
</tr>
<tr>
<td>Precursor to the Development of <em>Anxiety Disorders</em> in Young Children with Autism Spectrum Disorder</td>
<td>Geraldine Dawson, Helen Egger, Duke University and Grace Baranek, University of North Carolina, Chapel Hill</td>
<td></td>
</tr>
<tr>
<td>Proteomic Mapping of the <em>Immune Response</em> to Gluten in Children with Autism</td>
<td>Armin Alaedini, Columbia University</td>
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</tr>
<tr>
<td>Brain Mechanisms of <em>Affective Language Comprehension</em> in Autism Spectrum Disorder</td>
<td>Donald Bolder, University of Maryland, College Park</td>
<td></td>
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<tr>
<td>Disruption of <em>Trophic Inhibitory Signaling</em> in Autism Spectrum Disorder</td>
<td>Anis Contractor, Northwestern University</td>
<td></td>
</tr>
<tr>
<td>Genetic and Diagnostic <em>Biomarker Development</em> in ASD Toddlers Using Resting State Functional MRI</td>
<td>Peter Fox, University of Texas, Health Science Center at San Antonio, Eric Courchesne, University of California, San Diego, and David Glahn, Yale University</td>
<td></td>
</tr>
<tr>
<td>Maternal Brain-Reactive Antibodies and Autism Spectrum Disorder</td>
<td>Betty Diamond, Feinstein Institute for Medical Research</td>
<td></td>
</tr>
</tbody>
</table>
### Autism and Obesity: Co-Occurring Conditions or Drug Side Effects?
Zohreh Talebizadeh, Children’s Mercy Hospitals and Clinics

### Mobile Device-Prompted Workplace Culture Analysis, Self-Efficacy, and Anxiety Reduction in the Transition to Independent Employment for Individuals with ASD
David Hagner, University of New Hampshire

### Circadian Rhythms in Children with ASD and Their Infant Siblings
Marc Taylor, Naval Medical Research Center

### Imaging Depression in Adults with ASD
Kenneth Gaddow, State University of New York, Stony Brook

### Implicit Learning Abilities Predict Treatment Response in ASD
Catherine Lord, Cornell University, Weill Medical College

### Placental Identification and Immune Quantification of Acute and/or Chronic Inflammation in Children Diagnosed with ASD in University and Community Hospitals
Carolyn Salafia, Research Foundation for Mental Hygiene, Inc., Staten Island
DoD Defense Health Program
Autism Research Program

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