

# Gene Transfer and Rare Diseases Workshop, NIH

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# Office of Rare Diseases Research (ORDR), NCATS Collaborative Programs

*Stimulates and coordinates research on rare diseases*

- **Rare Diseases Clinical Research Network (RDCRN)**
- Scientific Conferences

# Challenges for Rare Diseases Research

- Diseases often not well characterized or defined
- Rarity means:
  - Recruitment for trials is usually quite difficult
  - Study populations become widely dispersed
  - Few expert centers for diagnosis, management, and research
- Often little high-quality evidence available to guide treatment

# The Rare Diseases Clinical Research Network (RDCRN)



# Rare Diseases Clinical Research Network (RDCRN):

## To facilitate research

- RDCRN established in 2003: by the Office of Rare Diseases Research, six NIH Institutes & Centers (ICs) collaborated: 10 Rare Diseases Clinical Research Consortia (RDCRC) and 1 Data Management and Coordinating Center (DMCC )
- Expanded in 2009: initially to 19 RDCRC and 1 DMCC (eight collaborating ICs)
- Each RDCRC : multiple diseases/ investigators / sites collaborative clinical research Involving PAGs
- U54 awards for 5 years

# Goals of RDCRN (Consortia and DMCC)

- Facilitate clinical research by:
  - Creating Consortia focused on related diseases
  - Cost-sharing research infrastructures
  - Establishing uniform protocols for data collection
  - Making meaningful collaborative clinical research possible  
(Longitudinal studies, pilot projects, and clinical trials  
Natural History studies required in RDCRN)
- Collaborate with Patient Advocacy Groups (PAGs) as research partners
- Train new investigators in rare diseases research
- Provide Website resource for education and research in rare diseases

# RDCRN

Currently involves 225 institutions world-wide

- Collectively studying >200 diseases

- More than 85 PAGs have formed Coalition of PAGs (CPAG)

- RDCRN Contact Registry

- 83 protocols accruing patients

- ~ 14,000 patients enrolled in studies

- ~ Natural History Studies, Clinical Trials, Genotype/Phenotype

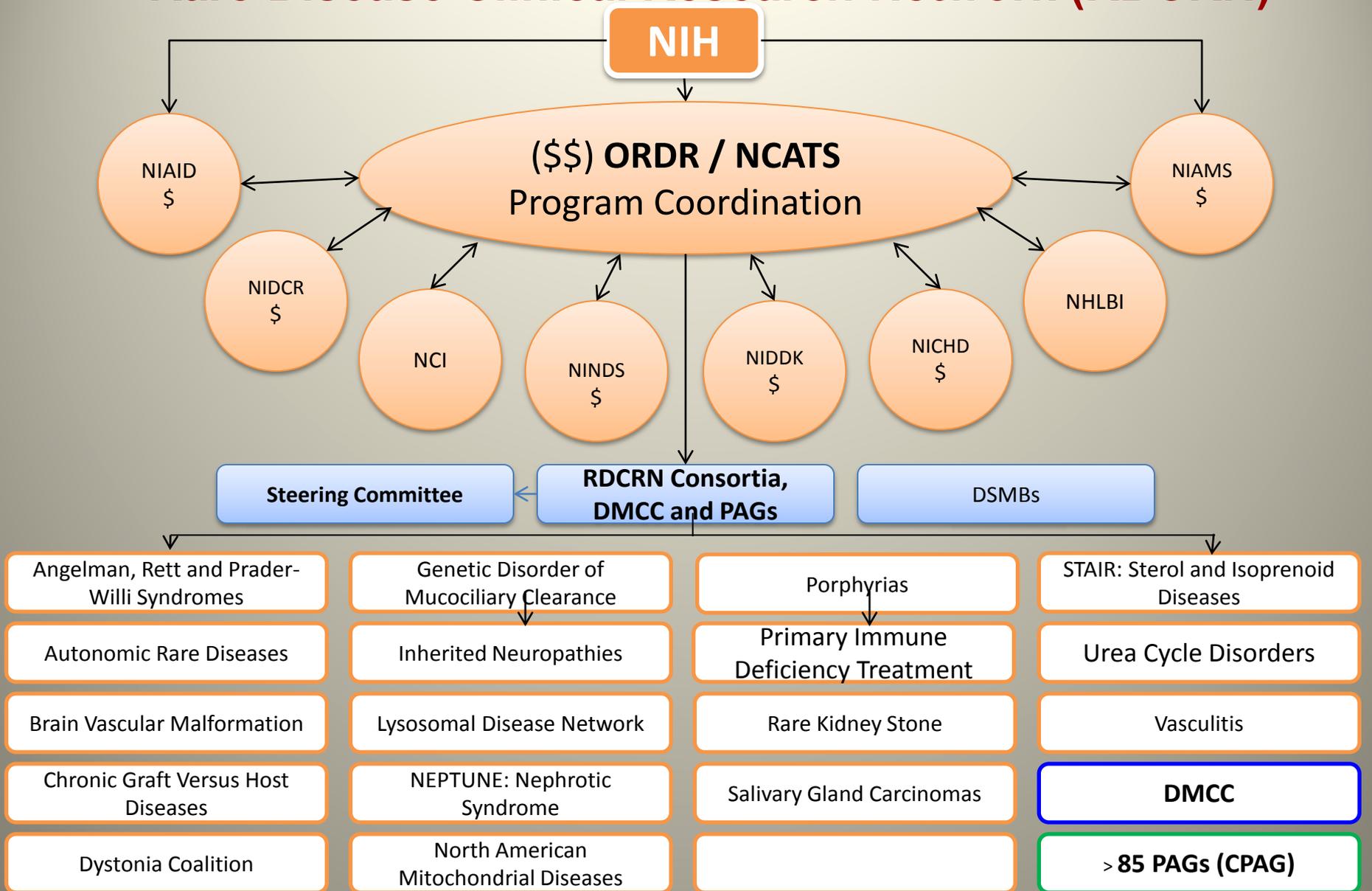
- More than 100 New Investigators trained through Training Program

<http://rarediseasesnetwork.epi.usf.edu/>

# RDCRN is supported by

- ORDR/NCATS
- NINDS
- NICHD
- NIDDK
- NIAID
- NIDCR
- NIAMS
- NHLBI
- NCI

# Rare Disease Clinical Research Network (RDCRN)



***DHHS-NIH***  
***ORDR/NCATS, NINDS, NIAMS,***  
***NICHD, NHLBI, NIDDK, NIDCR,***  
***NIAID, NCI***

**Coalition of Patient  
Advocacy Groups  
(CPAG)**

**Chronic Graft Versus  
Host Disease Consortium**

**Dystonia  
Coalition**

**North America Mitochondrial  
Diseases Consortium**

**Genetic Disorders of Mucociliary  
Clearance Consortium**

**Primary Immune Deficiency  
Treatment Consortium**

**Porphyria Rare Disease  
Clinical Research Consortium**

**The Data Management and  
Coordinating Center**

**Vasculitis Clinical  
Research Consortium**

**Lysosomal  
Disease Network**

**Rare Kidney  
Stone Consortium**



- Collaborative Clinical Research
- Centralized Data Coordination and Technology Development
- Public Resources and Education
- Training

**Nephrotic Syndrome  
Rare Disease Clinical  
Research Network**

**Inherited Neuropathies  
Consortium**

**Angelman, Rett and  
Prader-Willi Syndromes  
Consortium**

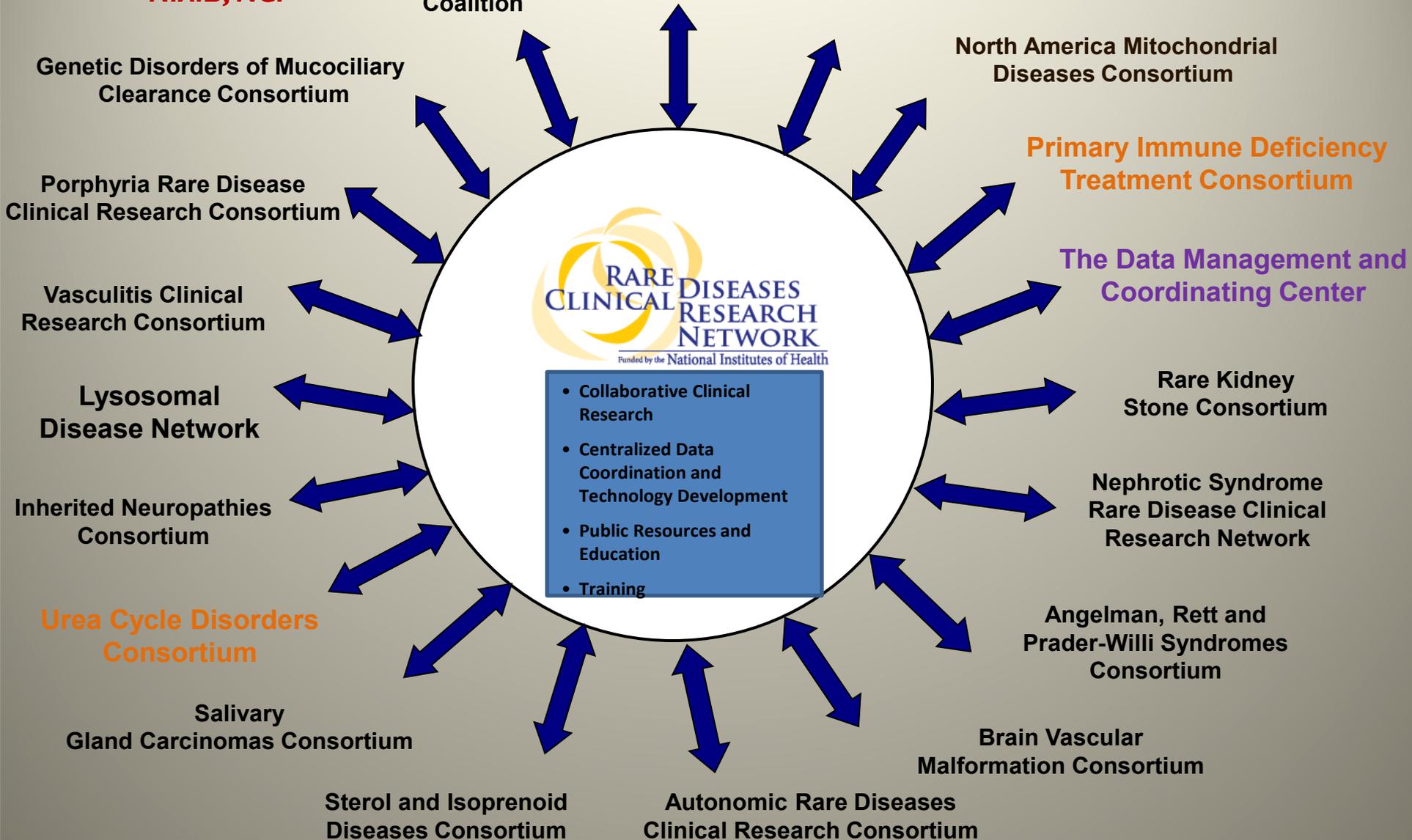
**Urea Cycle Disorders  
Consortium**

**Salivary  
Gland Carcinomas Consortium**

**Brain Vascular  
Malformation Consortium**

**Sterol and Isoprenoid  
Diseases Consortium**

**Autonomic Rare Diseases  
Clinical Research Consortium**



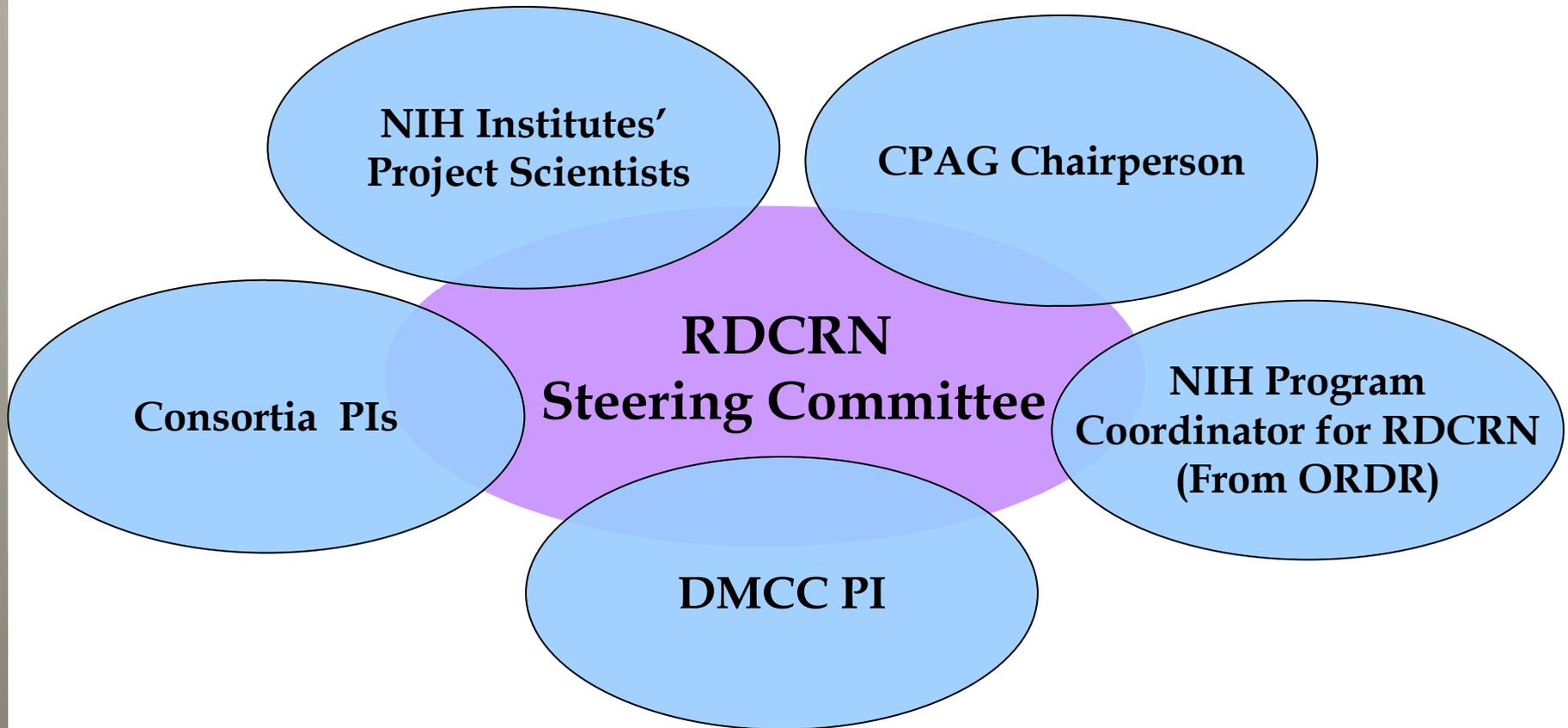
# Value of PAGs as Research Partners

*Since 2004 Many PAGs within RDCRN are involved in more than one of the following expanded roles as research partners-*

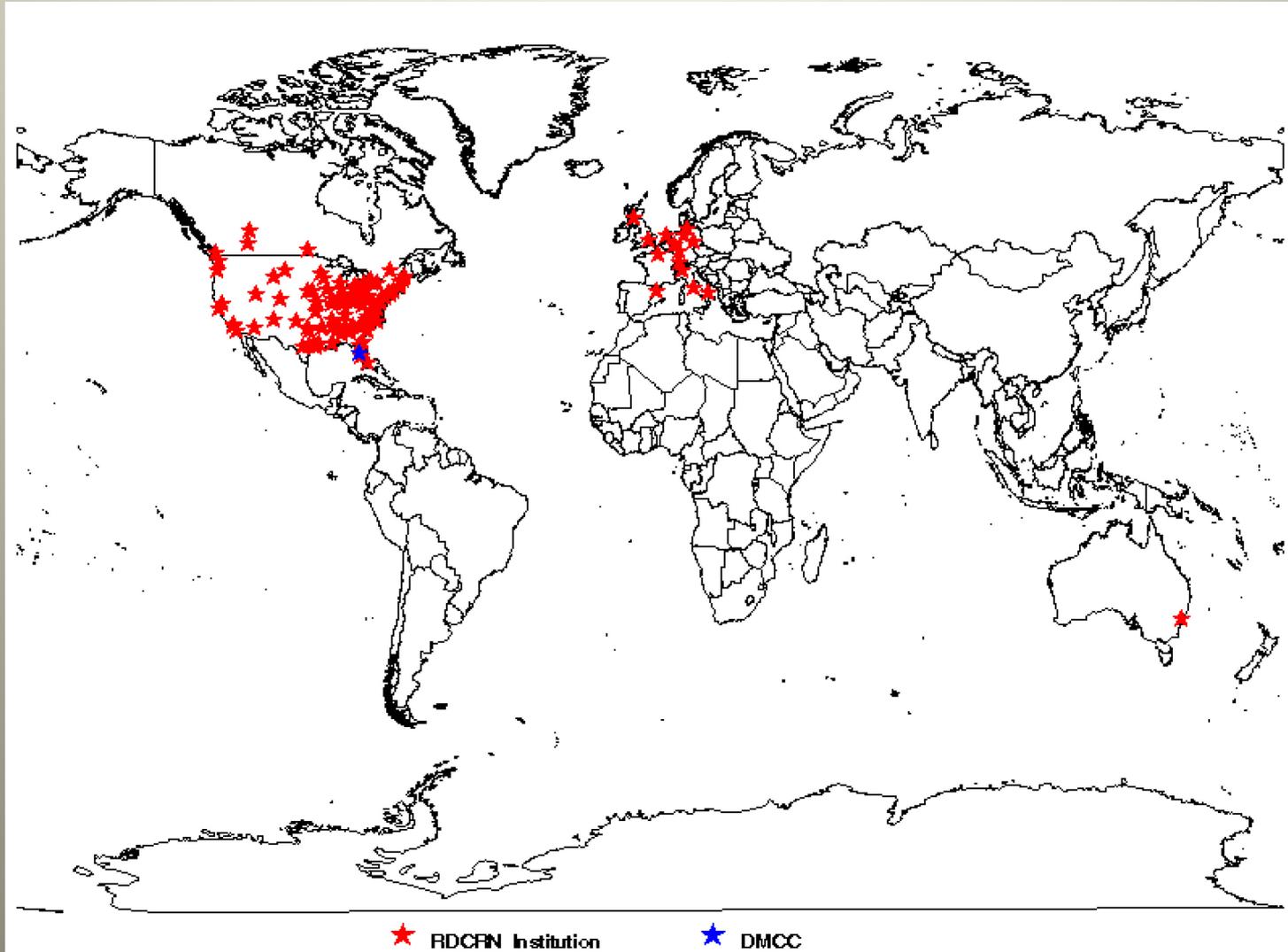
- Recruit patients for clinical studies
- Identify cohorts of patients with range of phenotypic expression
- Provide financial support for research and training programs of RDCRC (consortia) and patient registries
- Educate patients, public, media and health care providers
- Identify research efforts and translate research results to communities
- Organize and fund research based Scientific conferences and meetings for patients/families/caregivers
- Provide financial support for *travel clinics* to facilitate patient access to investigators and studies

# RDCRN Steering Committee Organization

Review, facilitate and establish all Network procedures and functions



# RDCRN World Sites



# Data Management and Coordinating Center (DMCC)

- Supports RDCRN by providing technologies, tools to collect clinical research data and support of study design and data analysis
- On-line protocol management system
  - Web-based patient enrollment (recruitment and referral)
  - Data entry and collection with data standards
  - Adverse event reporting
- Provides protocol training for research staff
- Works with the individual NIH Institutes' Data and Safety Monitoring Boards to establish protocols for Adverse Events notification and reporting

# Responsibilities of DMCC (Cont.)

- Monitor Network protocol adherence, data collection and data submission
- Coordinates site visits for auditing individual consortia sites
- Provides a user-friendly web resource site for the public, research scientists, and clinicians; involvement of PAGs
- Maintain members' website, documentation and database
- Oversees and maintains RDCRN Patient Contact Registry

## Be Involved



### Receive the most current information on:

- open recruitment for clinical studies of your disease
  - opening of new clinical sites doing research on rare diseases
  - activities from affiliated awareness and advocacy groups
- ...and future opportunities to participate in research!

[Register Today!](#)

## RDCRN Clinical Studies

Maintaining the Relationship Between Patients and Researchers is Vital

Participation in Research Makes it Possible for Researchers to:

- provide the best possible care to patients affected by rare diseases
- improve methods in studying your disease
- achieve deeper understanding of your disease and its causes
- find new treatments
- create new studies

The RDCRN has over 150 clinical sites available, and is adding more every day!  
[View All Studies >](#)

## Events

2nd Conference on Clinical Research on Rare Diseases



September 21st 2010

## Network Resources



## Who Are We?

The Rare Diseases Clinical Research Network (RDCRN) is made up of 19 distinctive consortia that are working in concert to improve availability of rare disease information, treatment, clinical studies, and general awareness for both patients and the medical community. The RDCRN also aims to provide up-to-date information for patients and to assist in connecting patients with advocacy groups, expert doctors, and clinical research opportunities.

Click on the Consortium Name to view the diseases or disorders studied by each consortium. Clicking on a disease or disorder name will take you directly to a description of that disease or disorder.

 <a href="#">[+] Angelman, Rett, And Prader-Willi Syndromes Consortium</a> <a href="#">[ Go To Web Site ]</a> <a href="#">[ Study Information ]</a>	 <a href="#">[+] MEPTURE: Mepturotic Syndrome Rare Disease Clinical Research Network</a> <a href="#">[ Go To Web Site ]</a> <a href="#">[ Study Information ]</a>
 <a href="#">[+] Autonomic Rare Diseases Clinical Research Consortium</a> <a href="#">[ Go To Web Site ]</a>	 <a href="#">[+] North American Mitochondrial Diseases Consortium</a> <a href="#">[ Go To Web Site ]</a>
 <a href="#">[+] Brain Vascular Malformation Consortium</a> <a href="#">[ Consortium Information ]</a> <a href="#">[ Study Information ]</a>	 <a href="#">[+] Porphyrias Consortium</a> <a href="#">[ Go To Web Site ]</a>
 <a href="#">[+] CINCH: Clinical Investigation Of Neurologic Channelopathies</a> <a href="#">[ Go To Web Site ]</a> <a href="#">[ En Español ]</a> <a href="#">[ Study Information ]</a>	 <a href="#">[+] Primary Immune Deficiency Treatment Consortium</a> <a href="#">[ Consortium Information ]</a>
 <a href="#">[+] Clinical Research Consortium For Spinocerebellar Ataxias</a> <a href="#">[ Go To Web Site ]</a> <a href="#">[ Study Information ]</a>	 <a href="#">[+] Rare Kidney Stone Consortium</a> <a href="#">[ Consortium Information ]</a>
 <a href="#">[+] Chronic Graft Versus Host Disease Consortium (CGVHD)</a> <a href="#">[ Consortium Information ]</a>	 <a href="#">[+] Salivary Gland Carcinomas Consortium</a> <a href="#">[ Consortium Information ]</a>
 <a href="#">[+] Dystonia Coalition</a> <a href="#">[ Go To Web Site ]</a>	 <a href="#">[+] STAIR: Sterol And Isoprenoid Diseases Consortium</a> <a href="#">[ Consortium Information ]</a>
 <a href="#">[+] Genetic Disorders Of Mucociliary Clearance</a> <a href="#">[ Go To Web Site ]</a> <a href="#">[ Study Information ]</a>	 <a href="#">[+] Urea Cycle Disorders Consortium</a> <a href="#">[ Go To Web Site ]</a> <a href="#">[ En Español ]</a> <a href="#">[ Study Information ]</a>
 <a href="#">[+] Inherited Neuropathies Consortium</a> <a href="#">[ Go To Web Site ]</a> <a href="#">[ Study Information ]</a>	 <a href="#">[+] Vasculitis Clinical Research Consortium</a> <a href="#">[ Go To Web Site ]</a> <a href="#">[ Study Information ]</a>
 <a href="#">[+] Lysosomal Disease Network</a> <a href="#">[ Consortium Information ]</a>	
Former Partners of the Rare Diseases Clinical Research Network	
 <a href="#">[+] Bone Marrow Failure Consortium (BMFC)</a> <a href="#">[ Contact The Consortium ]</a> <a href="#">[ More Information ]</a>	 <a href="#">[+] Rare Lung Diseases Consortium (RLDC)</a> <a href="#">[ Go To Web Site ]</a> <a href="#">[ Contact The Consortium ]</a> <a href="#">[ More Information ]</a>
 <a href="#">[+] Cholestatic Liver Disease Consortium (CLIC)</a> <a href="#">[ Go To Web Site ]</a> <a href="#">[ Contact The Consortium ]</a> <a href="#">[ More Information ]</a>	 <a href="#">[+] Rare Thrombotic Diseases Consortium (RTDC)</a> <a href="#">[ Go To Web Site ]</a> <a href="#">[ Contact The Consortium ]</a> <a href="#">[ More Information ]</a>
 <a href="#">[+] Rare Genetic Steroid Disorders Consortium (RGSDC)</a> <a href="#">[ Contact The Consortium ]</a> <a href="#">[ More Information ]</a>	

## ABOUT THE RDCRN

The Rare Diseases Clinical Research Network (RDCRN) is funded by the National Institute of Health (NIH) and the Office for Rare Diseases Research (ORDR). RDCRN was created to facilitate collaboration among experts in many different types of rare diseases. Our goal is to contribute to the research and treatment of rare diseases by working together to identify biomarkers for disease risk, disease severity and activity, and clinical outcome, while also encouraging development of new approaches to diagnosis, prevention, and treatment. [More About the RDCRN >](#)

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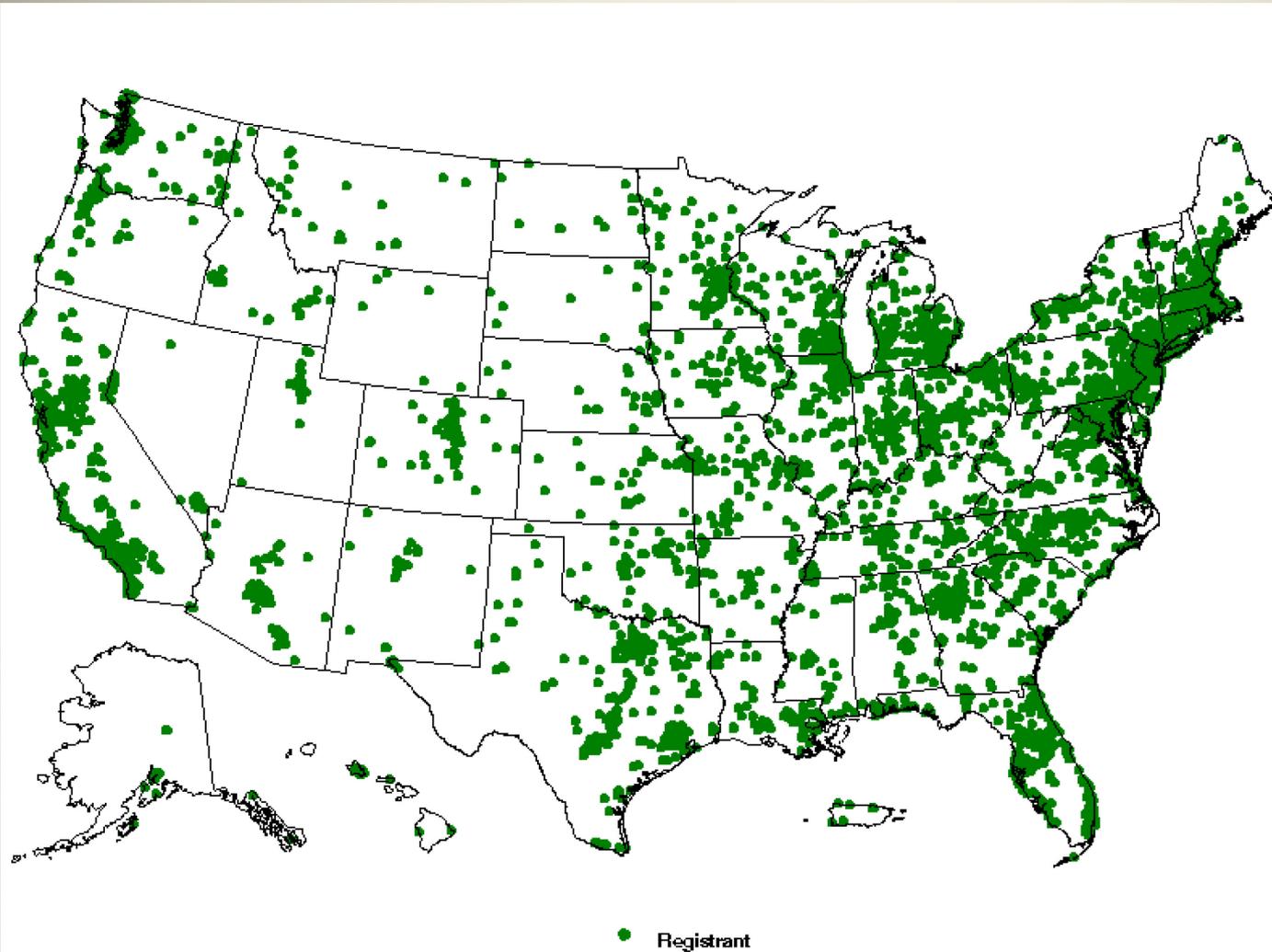
# RDCRN Website

<http://www.rarediseasesnetwork.org>

- Portal to websites for each Consortium
- Portal to members' website
- Portal for patient advocacy groups
- RDCRN Contact Registry
- RDCRN Media Center

# RDCRN Contact Registry (2004)

(U.S. Geographic Distribution of Contact Registrants)



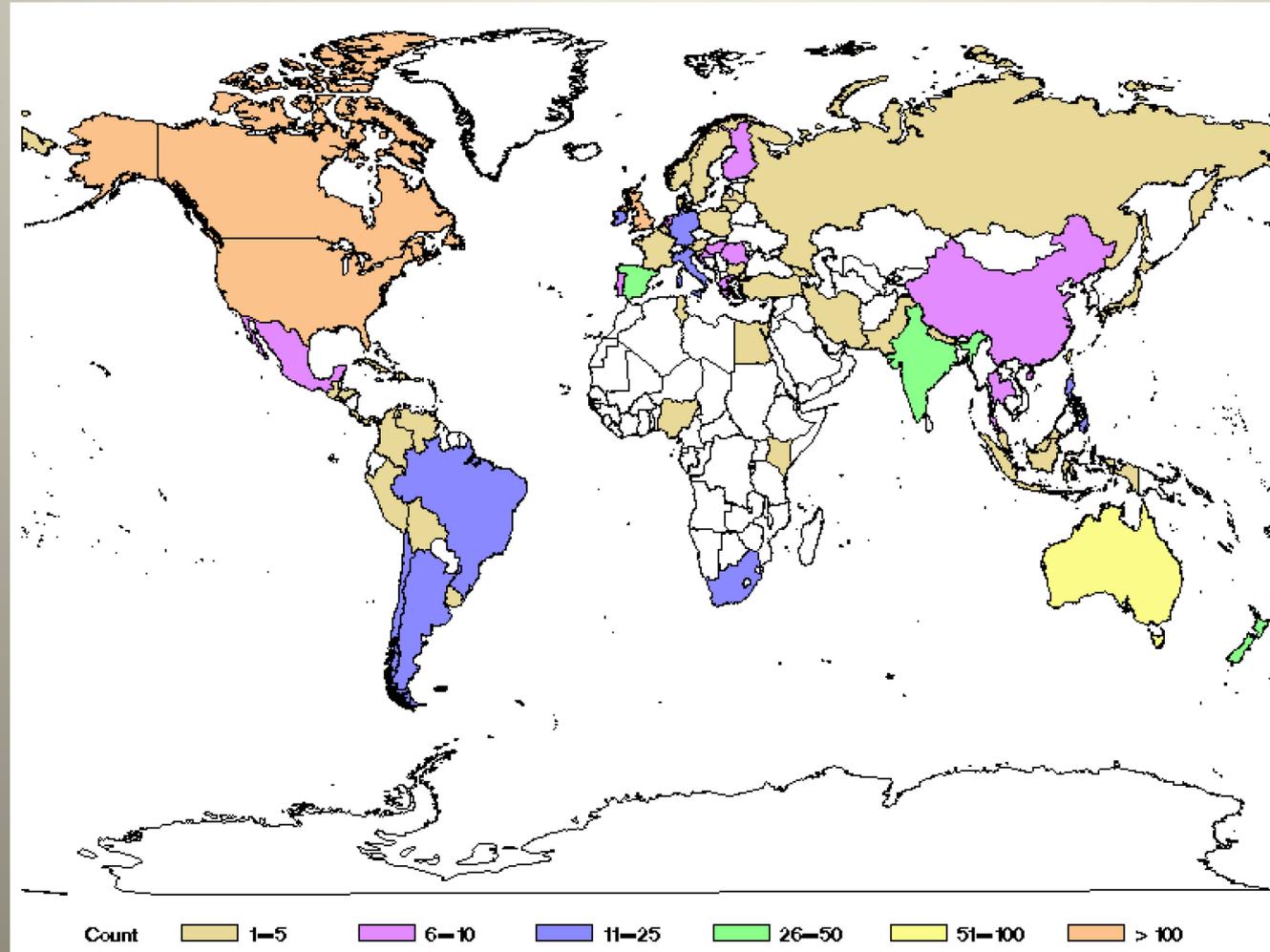
- Enrollment open to patients with diseases under study by Consortia

- Provides international on-line system for communication, recruitment, research

- more than 12000 Registrations

- 166 Diseases represented in 67 countries

# World Geographic Distribution of Contact Registrants



# Urea Cycle Disorders Consortium (PI- Dr. Mark Batshaw)

- They are developing adeno-associated viral gene therapy for *Ornithine Transcarbamylase (OTCD) deficiency* in adults.
- They have a candidate vector and are ready to move into clinical trials.

# Primary Immunodeficiency Treatment Consortium (PI- Mort Cowan)

- 1) Dr. Notarangelo (co-PI of the PIDTC) has an active protocol for gene therapy for XSCID using a lentiviral vector.
  - It's a collaborative study with several other PIDTC institutions in the US as well as in France and the UK.
- 2) The group is getting ready to do pre-clinical studies for Artemis-deficient SCID (SCID A)

# Team Work!

- Clinical Sites
- Principal and co-investigators and The DMCC
- Trainees
- Study Coordinators
- Patient Advocacy Groups (PAGs)
- Industry
- NIH ORDR and ICs staff (program officers and project scientists)
- Patients

**RDCRN consists of ~225 sites, 87 PAGs and conducts research on 200 rare diseases**

# RDCRN Request For Applications (RFA)

- Current U54 awards end in 2014
- Plan to reissue the RDCRN RFA
- Timeline – similar to last RFA
- NIH ICs as collaborators

## Website & Contact:

- RDCRN: <http://www.rarediseasesnetowrk.epi.usf.edu>
- 2008 RFA: <http://www.rarediseases.info.nih.gov>
- Program Contact: Rashmi Gopal-Srivastava, Ph. D.  
[gopalr@mail.nih.gov](mailto:gopalr@mail.nih.gov)

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# NIH...

## Turning Discovery Into Health

