CRITICAL PATH INSTITUTE

Research Update: Public Private Partnerships for Rare Neurodegenerative Diseases

June 5, 2026

Housekeeping

CRITICAL PATH INSTITUTE

Q&A

Place all questions in the Q&A Chat box.

Lines are muted

All participant lines are muted to reduce background noise.

Recording

This presentation is being recorded and will be made available on the C-Path YouTube channel.

Contact Info

Email Cp-rnd@c-path.org for more information or questions following the webinar.

Welcome

Megan Miller, PhD
Director of Outreach, Rare/Orphan and Pediatric Diseases
Critical Path Institute

Agenda in brief

- FDA
- NIH
- FNIH
- Nonprofit organizations
- Lived experience community

Time	Session
9:00-9:10 ET	Welcome & Opening
9:10-9:25 ET	Community Perspectives Panel: Research Partnerships in ALS
9:25-10:30 ET	Updates from FDA & C-Path: Building a Trial Ready System for ALS and other Rare Neurodegenerative Diseases
10:30-10:40 ET	Break
10:40-11:25 ET	Updates from NIH and FINIH: Collaborating to Accelerate Research in ALS
11:25-11:55 ET	Community Perspectives Panel: The Future of RND Research
11:55-12:00 ET	Closing

Opening Remarks

Teresa Buracchio, MD
Director, Office of Neuroscience, CDER
U.S. Food and Drug Administration (FDA)

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Four years of progress in ALS and rare neurodegenerative diseases pursuant to the ACT for ALS and Other Initiatives

Teresa Buracchio, MD
Director, Office of Neuroscience, CDER
U.S. Food and Drug Administration (FDA)

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Community Perspectives: Research Partnerships in ALS

Moderator: Megan Miller, PhD
Director of Outreach
Critical Path Institute

Community Perspective: Research Partnerships in ALS

Cathy Collet

Caregiver and Independent ALS Advocate

Lynn Brielmaier

Person living with ALS

“Scientists investigate that which already is. Engineers create that which has never been.” -- Albert Einstein

"My advice to other disabled people would be, concentrate on things your disability doesn't prevent you doing well, and don't regret the things it interferes with. Don't be disabled in spirit as well as physically." -- Stephen Hawking

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Updates from FDA & C-Path: Building a Trial Ready System for ALS and other Rare Neurodegenerative Diseases

Updates from FDA & C-Path: Building a Trial Ready System for ALS and other Rare Neurodegenerative Diseases

Michelle Campbell, PhD
Associate Director, Stakeholder Engagement and Clinical Outcomes, OND,
U.S. Food and Drug Administration

Katherine Needleman, MS, PhD, RAC
Director, Orphan Products Grants Program
U.S. Food and Drug Administration

Updates from CP-RND: ALS
Collin Hovinga, PharmD, MS, FCCP
Vice President Rare, Orphan and Pediatric Diseases
Critical Path Institute

Updates from CP-RND: Huntington's Disease
Terina Martinez, PhD
Executive Director, Huntington's Disease Regulatory Science Consortium (HD-RSC)
Critical Path Institute

Community Perspective: Research Partnerships in HD
Lauren Holder
Producer and Host of *Help 4 HD Live*

Updates from the FDA

Michelle Campbell, PhD
Associate Director, Stakeholder Engagement and Clinical Outcomes, Office of Neuroscience
U.S. Food and Drug Administration

Katherine Needleman, MS, PhD, RAC
Director, Orphan Products Grants Program
U.S. Food and Drug Administration

U.S. FOOD & DRUG ADMINISTRATION

Update on Accelerating Access to Critical Therapies for ALS Implementation

Michelle Campbell, PhD
Office of Neuroscience
CDER
June 5, 2026

Public Law 117-79: Accelerating Access to Critical Therapies for ALS Act

Signed into law Dec. 23, 2021

Sec. 1: Short Title

Sec. 2: Grants For Research On Therapies for ALS

Sec. 3: HHS Public-Private Partnership for Rare Neurodegenerative Diseases

Sec. 4: ALS and Other Rare Neurodegenerative Disease Action Plan

Sec. 5: FDA Rare Neurodegenerative Disease Grant Program

Sec. 6: GAO Report (published February 2026 https://www.gao.gov/products/gao-26-107691)

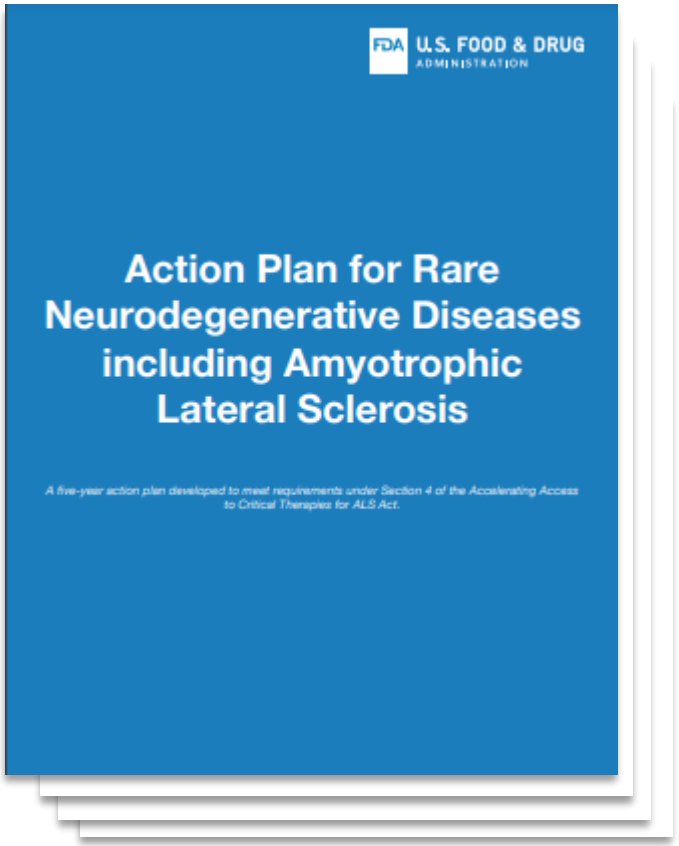
Sec. 7: Authorization of Appropriations

Goals of the Action Plan

As part of its requirements under the ACT for ALS, FDA has published a **five-year action plan to advance innovation that promotes and accelerates medical product development for the treatment of rare neurodegenerative diseases.**

In this plan, FDA describes:

- Activities FDA will engage in over the next five years to address the unmet medical needs of individuals with rare neurodegenerative diseases
- An ALS Science Strategy, providing a multi-year, disease-specific strategic approach to address substantive issues in drug development
- A multipronged approach to implement the Action Plan, including patient engagement, public workshops, research projects, coordination across FDA centers and offices, collaboration with NIH, and public-private partnerships



Advancing Science and Innovation for Rare Neurodegenerative Diseases

Near-term goals (FY 22)

Establish the FDA Rare Neurodegenerative Diseases Task Force

- The task force will ensure a **strategic cross-cutting Agency approach** to advance the development of medical products to address rare neurodegenerative diseases by:
  - Facilitating and expanding ongoing engagement and collaboration with subject matter experts across FDA
- FDA will leverage the Accelerating Rare disease Cures (ARC) Program's infrastructure, expertise, and strategic leadership to establish this task force.

Establish the Public-Private Partnership for Rare Neurodegenerative Diseases

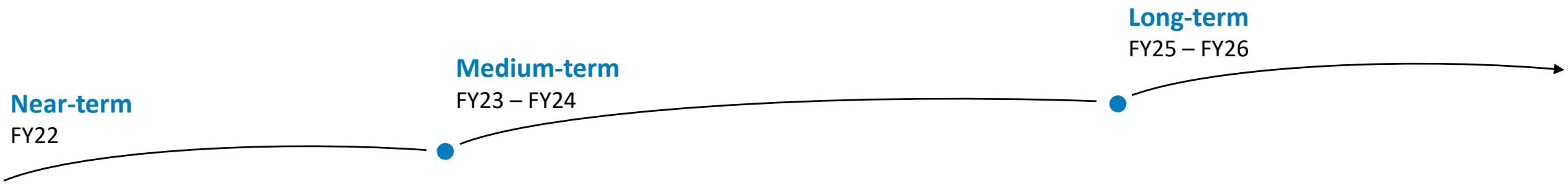
- Public-Private Partnership for Rare Neurodegenerative Diseases between the **NIH, the FDA, and one or more other eligible entities** for the purpose of advancing the understanding of and fostering the development of treatments for rare neurodegenerative diseases including ALS.
- The public-private partnership will facilitate and support research and innovation (e.g., advances in drug development tools) among other activities.
- Fostering external engagement with the rare neurodegenerative disease communities

Medium-term and long-term goal (FY 22 – 26)

Develop Disease-Specific Science Strategies

- FDA will develop multi-year, disease-specific science strategies (strategic plans) to address substantive issues in drug development for rare neurodegenerative diseases.
- FDA published the **ALS Science Strategy** as a part of the action plan.
- Subject to the availability of resources, FDA will conduct a needs assessment to identify other rare neurodegenerative diseases that would benefit from heightened coordination across the Agency and determine whether to systematically develop disease-specific science strategies for these identified disease areas.

ALS Science Strategy



Near-term
FY22

- Establish FDA Rare Neurodegenerative Diseases Task Force's **ALS Working Group**
- Support **translational science research**

Medium-term
FY23 – FY24

- Explore gaps in understanding of **ALS natural history**
- Collect **patient perspectives** on clinical trial participation
- Facilitate and encourage **data sharing**
- Support the development of **study data standards** for ALS
- **Cell and Gene Therapies** Safety Project
- Explore the use of fit-for-purpose **digital health technologies**
- Encourage the incorporation of **expanded access** into clinical development programs
- Promoting successful translation from **bench to bedside**

Long-term
FY25 – FY26

- Explore **innovative trial designs**
- Enhancing **clinical trial infrastructure and agility**

DEVELOPMENT AND ADAPTATION OF THE ALSFRS-R FOR REMOTE-USE: A COMPARABILITY STUDY

Research Objectives

- Determine the acceptable methods for remote-administration of the ALSFRS-R
- Adapt and evaluate remote-use modes of the ALSFRS-R tool to support regulatory decision-making and potential labeling claims
- Create standardized, remote access versions to enable decentralized, patient-centric trials and reduce patient burden
- Compare measurement properties between in-person administration and remote-use administration of the ALSFRS-R tool
- Culturally adapt and translate the remote ALSFRS-R tool to U.S. Spanish, including guidance for administration

Funding: FDA Contract Award: 75F40120A00017 Order 19026 RTI

Literature Review

ScienceDirect

Contents lists available at sciencedirect.com
Journal homepage: www.elsevier.com/locate/jval

Systematic Literature Review

Remote-Use Applications of the Amyotrophic Lateral Sclerosis Functional Rating Scale-Revised Clinical Outcome Assessment Tool: A Scoping Review

Nivedita L. Bhushan, PhD, Carla DeMuro Romano, MS, Julie Gras-Najjar, MHS, Jenna Reno, PhD, Nicholas Rockwood, PhD, Wes Quattrone, MA, Elizabeth Troutman Adams, PhD, Bridget Kelly, PhD, Lori McLeod, PhD, Sanjeev P. Bhavnani, MD, Fraser D. Bocell, PhD, Michelle Campbell, PhD, Kimberly Kontson, PhD, David Reasner, PhD, Caiyan Zhang, PhD, Sandra Retzky, DO, JD

ABSTRACT

Objectives: In 2021, the US Congress passed the Accelerating Access to Critical Therapies for Amyotrophic Lateral Sclerosis Act. The law encourages development of "tools, methods, and processes" to improve clinical trial efficiency for neurodegenerative diseases. The Amyotrophic Lateral Sclerosis Functional Rating Scale-Revised (ALSFRS-R) is an outcome measure administered during in-person clinic visits and used to support investigational studies for persons living with amyotrophic lateral sclerosis. Availability of a standardized, remote-use version of the ALSFRS-R may promote more inclusive, decentralized clinical trials. A scoping literature review was conducted to identify existing remote-use ALSFRS-R tools, synthesize feasibility and comparability of administration modes, and summarize barriers and facilitators to inform development of a standardized remote-use ALSFRS-R tool.

Methods: Included studies reported comparisons between remote and in-person, clinician-reported, ALSFRS-R administration and were published in English (2002-2022). References were identified by searching peer-reviewed and gray literature. Twelve studies met the inclusion criteria and were analyzed to compare findings within and across modes of administration.

Results: Remote modes of ALSFRS-R administration were categorized into 4 nonmutually exclusive categories: telephone (n = 6), videoconferencing (n = 3), computer or online platforms (n = 3), mobile applications and wearables (n = 2), and 1 unspecified telemedicine modality (n = 1). Studies comparing in-person to telephone or videoconferencing administration reported high ALSFRS-R rating correlations and nonsignificant between-mode differences.

Conclusions: There is insufficient information in the ALSFRS-R literature to support remote clinician administration for collecting high quality data. Future research should engage persons living with amyotrophic lateral sclerosis, care partners, and providers to develop a standardized remote-use ALSFRS-R version.

Highlights

- Telephone and videoconferencing modalities have shown promise as platforms for conducting clinical outcome assessments remotely. The Amyotrophic Lateral Sclerosis Functional Rating Scale-Revised (ALSFRS-R) is a commonly used clinical outcome assessments tool in investigative clinical trials for ALS, but no single, standardized, remote administration of the paper ALSFRS-R was identified in this review.
- Limited psychometric data in support of remote modalities are reported in the evaluated literature including some indications of moderate reliability between modalites. Additionally, the ALSFRS-R was administered in non-English languages in almost half of the articles. The strength of the cultural adaptations is unknown making it

› Value Health. 2024 Oct;27(10):1454-1465. doi: 10.1016/j.jval.2024.05.005. Epub 2024 May 23.

Research Implementation

- Engage patients/advocates as research partners to guide planning, conduct, analysis and reporting
- Develop training materials
- Conduct pilot study to facilitate an iterative qualitative modification
- Conduct comparability study
  - Determine the acceptability of a telephone mode and a web-based interactive video-enabled platform mode through assessor interviews and satisfaction surveys with ALSFRS-R assessors, PALS, and CALS
  - Evaluate recruitment, retention, and withdrawal rates as well as barriers and facilitators to using remote methods to administer and score the ALSFRS-R

ALSFRS-R Standardized Training

- Developed a standardized training materials across modalities
- Reviewed by PC, KOLs and FDA SMEs
- Pilot tested
- Well received by raters
- Will be made available publicly

Pilot Testing

- 12 qualitative interviews: four PALS, four CALS, and four clinicians
  - Even gender distribution across both PALS and CALS; most of the clinicians were female (3)
  - Age range of participants was 30-65 years
  - Most-identified as White (~75%)
    - 1 PALS identified as Hispanic, and 2 clinicians identified as Middle Eastern or North African
  - PALS and CALS were based in rural and suburban areas; all clinicians were based in urban settings
- Clinicians reported a wide range in the number of annual ALS patients in their clinic
- All PALS/CALS reported signs and symptoms as measured by ALSFRS-R supporting its content validity
- No strong overall preferences between modalities
  - About half of participants noted the value of a visual component (i.e., video) especially for clinical assessments
  - Apps were valued for their flexibility and potential for increased usability features
  - Telephone was viewed as most accessible

COMPARABILITY STUDY

A randomized, prospective, crossover study to evaluate reliability, validity, and other key measurement properties of **3 standardized ALSFRS-R administration modes (n=74 PALS/CALS dyads)**

7 sites

- Indiana University
- University of Kansas Medical Center
- Sutter Health
- Temple Health
- University of Colorado
- University of Minnesota
- Virginia Commonwealth University

In-person

Telephone

Video (Zoom)

Four Administration Cohorts of the ALSFRS-R

- Randomized, crossover 3-week study
- In-person, Web-based, Telephone

Table 2. Randomized ALSFRS-R Administration Groups

Group	Group abbreviation	Visit 1 mode	Visit 2 mode	Visit 3 mode
Telephone Remote – IPF	TR-IPF	In-person	Telephone	Telephone
Telephone Remote – IPL	TR-IPL	Telephone	Telephone	In-person
Video Remote – IPF	VR-IPF	In-person	Video	Video
Video Remote – IPL	VR-IPL	Video	Video	In-person

IPF = in-person first; IPL = in-person last; TR = telephone remote; VR = video remote.

ALSFRS-R Subscale and Total Score Correlations

Scale	Correlation coefficient (r)				
	1	2	3	4	5
Telephone (n = 39)					
ALSFRS-R Bulbar (1)	**0.92**	0.05	0.16	0.37	0.53
ALSFRS-R Fine Motor (2)	0.09	**0.94**	0.61	0.49	0.74
ALSFRS-R Gross Motor (3)	0.06	0.68	**0.95**	0.55	0.78
ALSFRS-R Respiratory (4)	0.38	0.49	0.53	**0.95**	0.86
ALSFRS-R Total Score (5)	0.53	0.77	0.75	0.86	**0.97**
Video (n = 35)					
ALSFRS-R Bulbar (1)	**0.97**	0.36	0.14	0.47	0.68
ALSFRS-R Fine Motor (2)	0.38	**0.98**	0.66	0.39	0.79
ALSFRS-R Gross Motor (3)	0.13	0.59	**0.95**	0.53	0.75
ALSFRS-R Respiratory (4)	0.46	0.41	0.61	**0.96**	0.79
ALSFRS-R Total Score (5)	0.67	0.79	0.75	0.81	**0.98**

ALSFRS-R = Amyotrophic Lateral Sclerosis Functional Rating Scale-Revised.

Notes: In-person correlations are provided below the diagonal; remote correlations are provided above the diagonal; the correlations between the in-person and remote scores are in bold on the main diagonal.

Comparability Results

- No significant mean difference between ALSFRS total scores administered remote or in-person
- High ICCs ≥ 0.97 for all remote modes compared to in-person
- Similar findings for the subscales
- No evidence for sequence effects was found
  - Order of mode occurrence did not meaningfully impact the obtained scores
- Strong evidence to support all 3 modes of data collection
  - High levels of participant and site staff satisfaction with remote modes

Satisfaction with Remote Administration

- All but 1 PALS and CALS rated the quality of the ALSFRS-R administration in the study as either “good” or “excellent,”
- All PALS and CALS rated the experience within this study as the “same,” “better,” or “much better,” than previous experiences with the ALSFRS-R with the exception of 1 CALS in the VR-IPF group who rated the administration as “worse.”
- Notably, 16 PALS (22.2%) and 14 CALS (19.7%) described in-person ALSFRS-R administration as either inconvenient or very inconvenient compared with only 3 PALS (4.3%) and 1 CALS (1.5%) for remote administration.
- The majority of PALS and CALS noted most of their needs were met for both in-person and remote administration to support their participation with ALSFRS-R data collection.
- If given the option in a future study, all but 3 PALS, and 1 CALS, would choose the remote administration they received in the study
- Raters thoughts remote administration was less burdensome for the families and clinic
  - benefits of remote administration, especially for PALS with physical limitations or those residing in areas distant from clinic
  - ease of scheduling with CALS if onsite participation was not required
- However, assessors indicated a preference for in-person ALSFRS-R administration for the purpose of developing and building upon a rapport with the PALS and CALS
  - Value of in-person contact

Current Next Steps

- Manuscript to be submitted
- All data has been contributed to RDCA-DAP
- Advice can be provided if asked during an IND program

IMPLANTED BRAIN COMPUTER INTERFACE (IBCI) DEVICES

Implanted Brain Computer Interface (iBCI) Devices

- Alignment on COAs to demonstrate clinically meaningful benefit to targeted patient populations including ALS
- Alignment on trial design
  - COAs, sample size, I/E, trial length

Implanted Brain Computer Interface (iBCI) Devices

- Published landscape analysis and literature
- Hosted two workshop on consensus building to support future COA development for use with iBCI
- Engaged with stakeholders though the iBCI Collaborative Community to support COA development

Final Thoughts

- Continue to support the advancement and development of medical products for rare neurogenerative diseases
- Leveraged existing rare disease efforts to support Action Plan
- Hope to be able to expand to more rare neurodegenerative diseases in the future

Thank you

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OOPD's Efforts Relevant to Advancing Development of Medical Products for Rare Neurodegenerative Diseases

Katherine Needleman, MS, PhD, RAC
Director, Orphan Products Grants Program
FDA/OOPD

Outline

- Brief Background
- Clinical Trial Grant Program
- Natural History Grant Program
- Rare Neurodegenerative Grant Program
  - What has been done
  - What FY26 brings

Office of Orphan Products Development

- The Office of Orphan Products Development (OOPD) provides incentives for sponsors to develop products for rare diseases.
- **Mission**: To promote the development of drugs, devices, biologics, and medical foods for patients with rare diseases and special populations.

DESIGNATION PROGRAMS	
1	Orphan Drug Designation & Exclusivity
2	Rare Pediatric Disease (RPD) Designation
3	Humanitarian Use Device Designation (HUD)

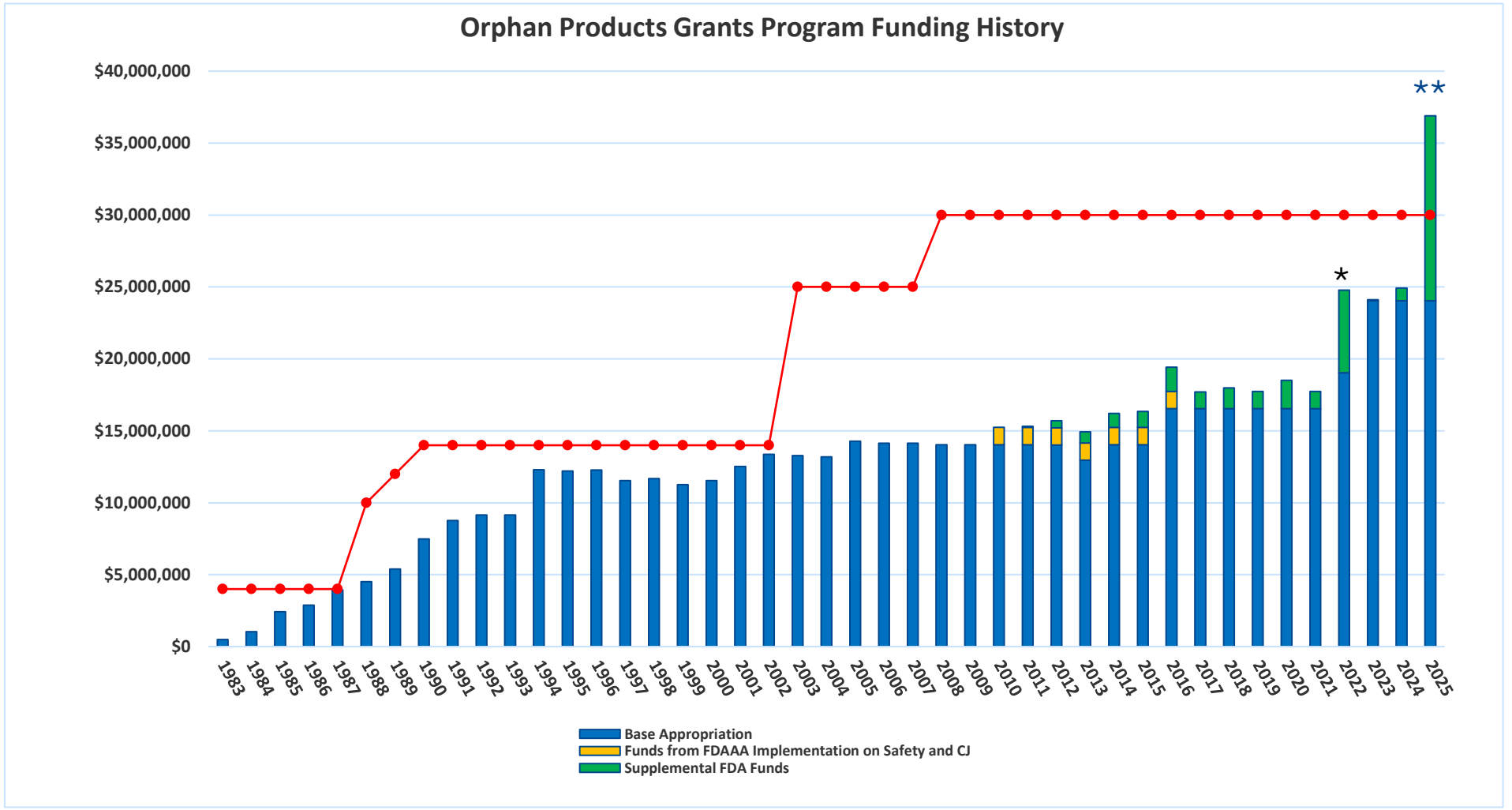
GRANT PROGRAMS	
1	Orphan Products Clinical Trials Grant Program
2	Orphan Products Natural History Grant Program
3	Pediatric Device Consortia Grant Program
4	Rare Neurodegenerative Disease Grant Program

Learn more about OOPD Grants programs:
Office of Orphan Products Development | FDA

Orphan Products Grants Program

- **Established:** 1983
- **Overall Budget**: ~$19M
- **Goal**: To advance the development of orphan products (drugs, biologics, devices, or medical foods) that demonstrate promise for the diagnosis or treatment of rare diseases or conditions
- **Clinical Trial Grants**
  - Funding ~ 75 ongoing studies
  - Focus on efficiency and innovative trial designs
  - Grants have led to over 85 product approvals
  - Publications, impact on field
- **Natural History (NH) Grants**
  - Launched Program in 2016
  - Currently funding 7 grants
  - Had a new receipt date FY26
    - 90 applications submitted/ 11 were for RNDDs (12%)
  - Potential impact for clinical trial development and supporting regulatory decisions
  - Collaborations with industry and patient groups and publications

OOPD Grants Appropriated Budget Still Below Authorization Amount

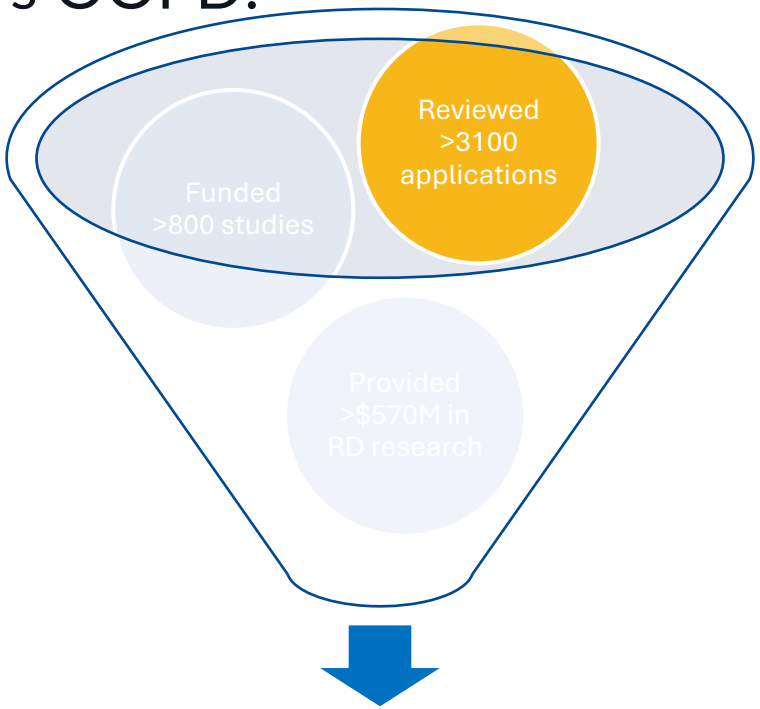


* RNDD Grants Program Funding Began

** Increase in sweep funds at end of FY

Grant Statistics: | Trial Grants

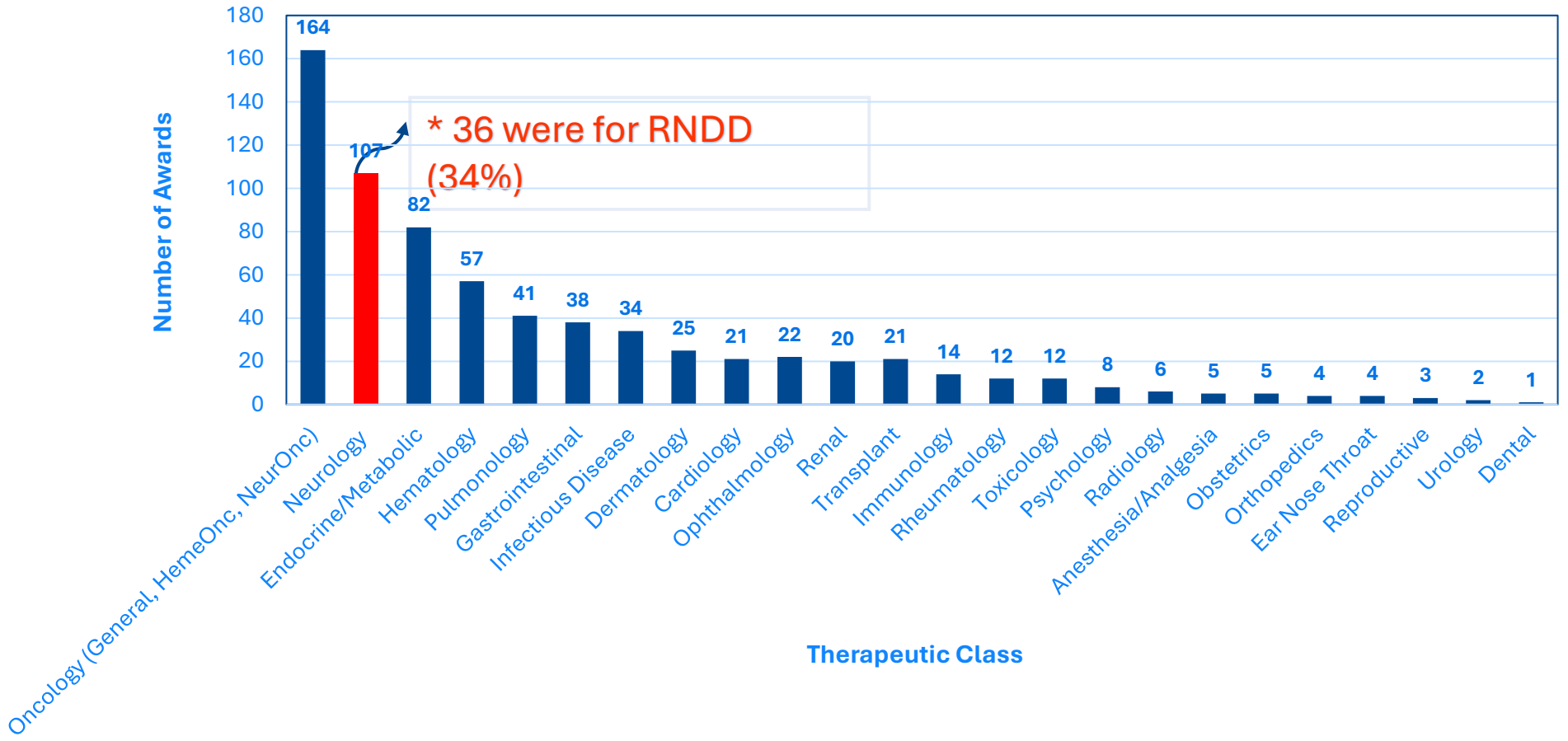
- Since 1983, FDA's OOPD:



>85 FDA approved products were at least partially funded through OOPD Grants Program for >90 indications

~10% of funded-studies have been used towards approval

Therapeutic Classes Represented from Clinical Trials Awarded Grants 1983-2025



RNDD Prior to 2022

Prior to ACT for ALS, OOPD funded:

- 32 clinical trials totaling >$27M for RNDDs (~4%)
  - >$4.5M of that was for ALS trials (6 grants)
- 3 natural history studies totaling >$5.6M (~38%)
- 2 approvals partially supported by Orphan Products Grants Program
  - Tafamidis for familial amyloid polyneuropathy
  - Iduronate-2-Sulfatase for MPS II

Rare Neurodegenerative Disease Grant Program Established

- **Established:** upon enactment of the ACT for ALS in December 2021.

- **Purpose**: Grants and contracts to public and private entities to cover costs of research on, and development of interventions intended to prevent, diagnose, mitigate, treat, or cure ALS and other rare neurodegenerative diseases in adults and children, including costs incurred with respect to the development and **critical evaluation of tools, methods, and processes**

- To learn more about this program, see:
  Rare Neurodegenerative Disease Grant Program | FDA

OPD Natural History Grant Awards

FY2022

1. Autoimmune pulmonary alveolar proteinosis
2. Hypoparathyroidism
3. Ornithine aminotransferase (OAT) gene related ocular and systemic disease
4. Ataxia-telangiectasia
5. Amyotrophic lateral sclerosis
6. Castleman disease
7. Pulmonary arterial hypertension
8. Myotonic dystrophy type-1

FY2023

1. Amyotrophic Lateral Sclerosis
2. Familial Amyotrophic Lateral Sclerosis
3. Myotonic Dystrophy
4. Niemann-Pick Type C
5. Amyotrophic Lateral Sclerosis

9 of 17 (53%) of NH awards were funded for RNDD after ACT for ALS

FY2024

1. Autosomal Recessive Polycystic Kidney Disease
2. Pediatric Intestinal Failure
3. Congenital Central Hypoventilation Syndrome
4. Cerebral Autosomal Dominant Arteriopathy with Subcortical Infarcts and Leukoencephalopathy (CADASIL)

Rare Neurodegenerative Disease FY 22 Awards

Grants:

Institution	PI	Title	Budget
University of Minnesota	David Walk	Retrospective and prospective study in **amyotrophic lateral sclerosis** of clinic-based multicenter data collection	$1.6 million over four years
Johns Hopkins University	Howard Lederman	Prospective study in **ataxia-telangiectasia**	$1.6 million over four years
Virginia Commonwealth University	Nicholas Johnson	Prospective study in **myotonic dystrophy type-1** to establish biomarkers and clinical endpoints	$1.6 million over four years

Contracts:

Institution	Title	Budget
RTI International	ALS Functional Ratings Scale-Revised Clinical Outcome Assessment Remote-Use Equivalency Study	~$1.8 million over two years
RTI International	Landscape Analysis of Brain-Computer Interface Focused Patient Preference Studies in ALS Patients	~$330,000 over one year

Intent to use $2.5M FY22 increase -> Leveraged and collaborated to use $5.8 M for these projects in FY22 with no effect on funding of other rare disease studies within Orphan Products Grants Program

Rare Neurodegenerative Disease Grant Program FY 23 Awards

Institution	PI	Title	Budget
Johns Hopkins University	Wong, Philip	Biomarker Study in **Amyotrophic Lateral Sclerosis (ALS)** to develop a diagnostic test for prodromal phase of ALS	$1.6 million over four years – FUNDING IN FULL
Massachusetts General Hospital	Wheeler, Thurman	Biomarker Study in **Myotonic Dystrophy** to Determine Extracellular RNA Biomarkers	$1.6 million over four years
University Of Illinois At Chicago	Cologna, Stephanie	Biomarker Study in **Niemann-Pick Type C** to determine clinically relevant Biomarkers	$1.6 million over four years
Massachusetts General Hospital	Sherman, Alexander	Prospective Natural History Study and Biomarker study in **Familial Amyotrophic Lateral Sclerosis (ALS)** and ultra-rare MNDs to Create a disease-agnostic scalable platform for decentralized observational and validation of digital biomarkers	$1.6 million over four years
University Of Minnesota	Pisharady, Pramod	Biomarker Study in **Amyotrophic Lateral Sclerosis (ALS)** to Optimize and Validate Multimodal Longitudinal Imaging of Brain and Cervical cord as an ALS disease biomarker using microstructure statistics and morphometry	$1.6 million over four years
Blackrock Microsystems	Melby, Shana	UH2/UH3 COAs for cBCI: Metrics for Brain Controlled Communication through a comprehensive review of clinical outcome assessments for communication brain computer interfaces in **Amyotrophic Lateral Sclerosis (ALS)**	$500,000 over two years
University Of Minnesota	Walk, David	Retrospective and Prospective Study in **Amyotrophic Lateral Sclerosis (ALS)** of Clinic-based Multicenter Data Collection	$5.8 million over four years
New York University School Of Medicine	Gonzalez-Duarte Briseno, Maria Alejandra	Phase 2 Study of Dexmedetomidine Sublingual Film for the Ambulatory Treatment of Hyperadrenergic Autonomic Crisis in Patients with **Familial Dysautonomia**	$2.6 million over four years- Co-funded with OGP
FY 2023 awards announced in FDA Roundup			

Rare Neurodegenerative Disease Grant Program FY 24 Awards

Institution	PI	Title	Budget
University of Wisconsin-Madison (Madison, Wisconsin)	Jane Paulsen	Biomarker Study in **CADASIL** to Evaluate Retinal Imaging Biomarkers	~$5 million over four years

FY 2024 awards announced in FDA Roundup

ODPD RNDD Funding Opportunities for FY25 and 26

- Switch focus to fund clinical trials for RNDDs
- Align with FDA Action Plan
- Put out a new RFA to support more clinical development and learn from natural history work being done

- **Clinical Trials Addressing Unmet Needs of Rare Neurodegenerative Diseases (R01) Clinical Trials Required**
  - **Receipt Dates: October 22, 2024 and October 21, 2025**
  - **FOA Number: RFA-FD-25-001**

Funding opportunities for rare disease research | FDA

RFA-FD-25-001: Clinical Trials for RNDD

The basics:

- **Purpose:**
  - To support clinical trials of products evaluating efficacy and/or safety in support of a new indication or change in labeling to address unmet needs in rare neurodegenerative diseases for children and adults.
- **Eligibility:**
  - Foreign or domestic, public or private, for-profit or nonprofit entities (state and local units of government) are eligible; Federal agencies may not apply
  - The neurodegenerative diseases proposed to be studied meet the definition of a rare disease (prevalence of fewer than 200,000 persons in the US)
- **Budget:**
  - $650,000 in total costs per year for up to 4 years
  - Additional funding of $250,000 total costs per year (to a maximum total award cost of $900,000 per year) for up to 4 years for innovative and efficient trial approaches
    - Innovative trial designs such as seamless and adaptive trial designs, which compress the phases of a trial into one continuous trial, as well as basket, umbrella and platform trials, which allow for testing of multiple drugs and/or multiple diseases using a common infrastructure.
    - Innovative methods using data simulations and modeling toward the study of safety and efficacy of a product.
- **Awards:**
  - Number of awards is contingent upon FDA appropriations and submission of a sufficient number of meritorious applications
  - Expect to fund up to 2 awards
  - Funding dependent on **quality of application** and **availability of Federal funds**

Rare Neurodegenerative Disease Grant Program FY 25 and 26 Awards

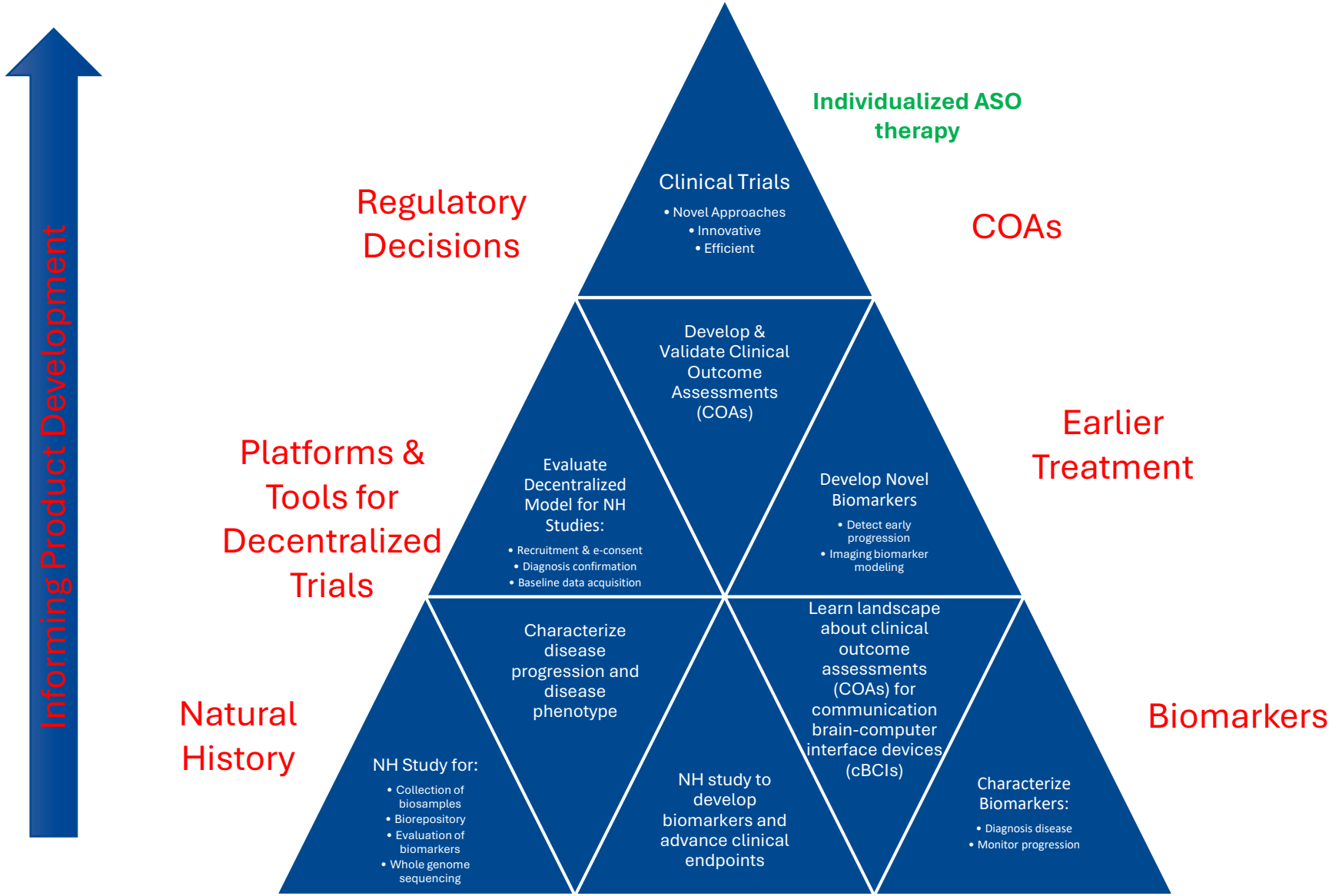
FY 2025

Institution	PI	Title	Budget
Boston Children's Hospital (Boston, MA)	Timothy Yu	Phase 1/2 Clinical Trial of Atipeksen for the Treatment of **Ataxia-Telangiectasia**	$3.6 million over four years

FY 2026

- COMING SOON!

Rare Neurodegenerative Disease Grant Program Awards - Impact



FY26 and Beyond: Planning for RNDD Grants Program

- Used concept ideas obtained from stakeholders to establish a FY 26 RFA to address unmet needs for rare neurodegenerative diseases
- Funding take place by September 30, 2026
- Reauthorization of the Act for ALS
- Future directions to have the most impact in the field of rare neurogenerative diseases and build on the studies we funded

Conclusions

- OOPD has been very successful in contributing to:
  - product approvals
  - publications
  - regulatory decisions
  - standard of care changes
  - increasing collaborations with researchers and industry
  - rare neurodegenerative disease product development
- High need for quality clinical trials and natural history studies for rare diseases
- OOPD continues to make changes to the grants program to increase its impact and continue to meet the Orphan Products Grants and RNDD Grants Programs missions
- Large need remains for funding in rare disease space – work together to bring products to rare disease patients!

OPD Funding Opportunities

- **Clinical Studies of Orphan Products Addressing Unmet Needs of Rare Diseases (R01)**
  - **Receipt Dates: October 21, 2025; October 20, 2026; October 19, 2027**
  - **FOA Number: RFA-FD-25-020**
- **Efficient and Innovative Natural History Studies Addressing Unmet Needs in Rare Diseases**
  - **Receipt Dates: February 10, 2026; February 8, 2028**
  - **FOA Number: RFA-FD-25-017**

Funding opportunities for rare disease research | FDA

OOPD Contact Information

For more information on OOPD programs go to:

- www.fda.gov/orphan

Still have questions?

Email us at orphan@fda.hhs.gov
Email: katherine.needleman@fda.hhs.gov

Call us at 301-796-8660

Updates from CP-RND: ALS

Collin Hovinga, PharmD, MS, FCCP
Vice President Rare, Orphan and Pediatric Diseases
Critical Path Institute

A Brief History

For over 20 years, C-Path has served as a trusted, neutral convener of public private partnerships to speed therapeutic development

December 2021

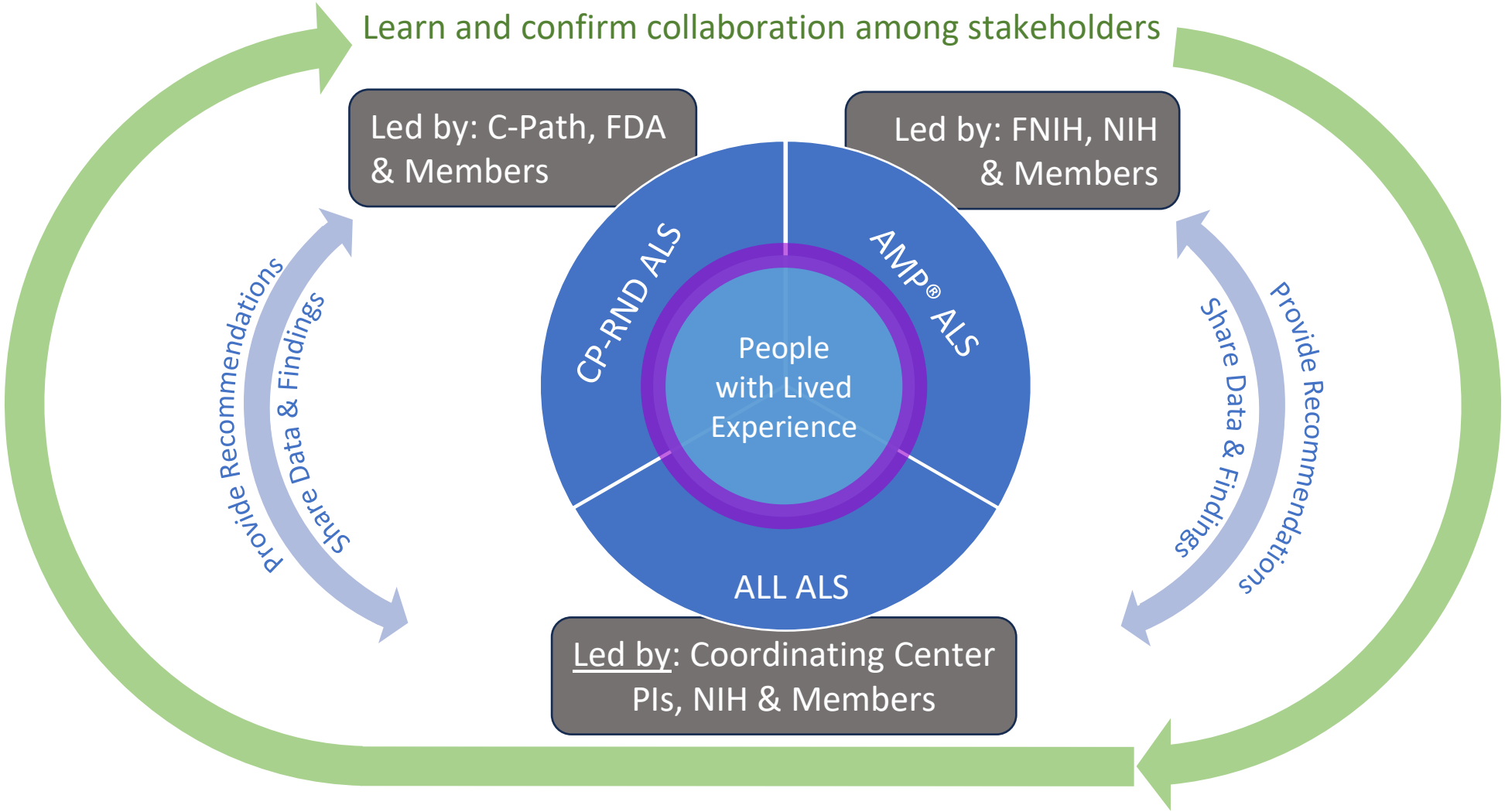
Act for ALS Passed (Public Law 117.79)

September 2022

CP-RND established by FDA in response to Section 3 of ACT for ALS

Accelerating drug development for ALS and other RNDs by collaboratively harmonizing data and creating robust drug development tools

ACT for ALS Collaborations



Identified Priority Unmet Needs-ALS

- Streamlined access to standardized, high-quality data useful for diverse stakeholder needs (including informing clinical trials)
- Improved clinical outcome assessments
- Resources to standardize clinical outcome assessments
- Evidence to support digital health technologies (DHTs) as biomarkers/COAs for use in ALS clinical trials
- Understanding the evidence on how novel biomarkers might inform regulatory decision making*

ALS Data Shared with ALS Knowledge Portal

CRITICAL PATH INSTITUTE

RDCA-DAP®

- Digital & clinical data from ALS natural history studies, registries, and clinical trials

SageBionetworks

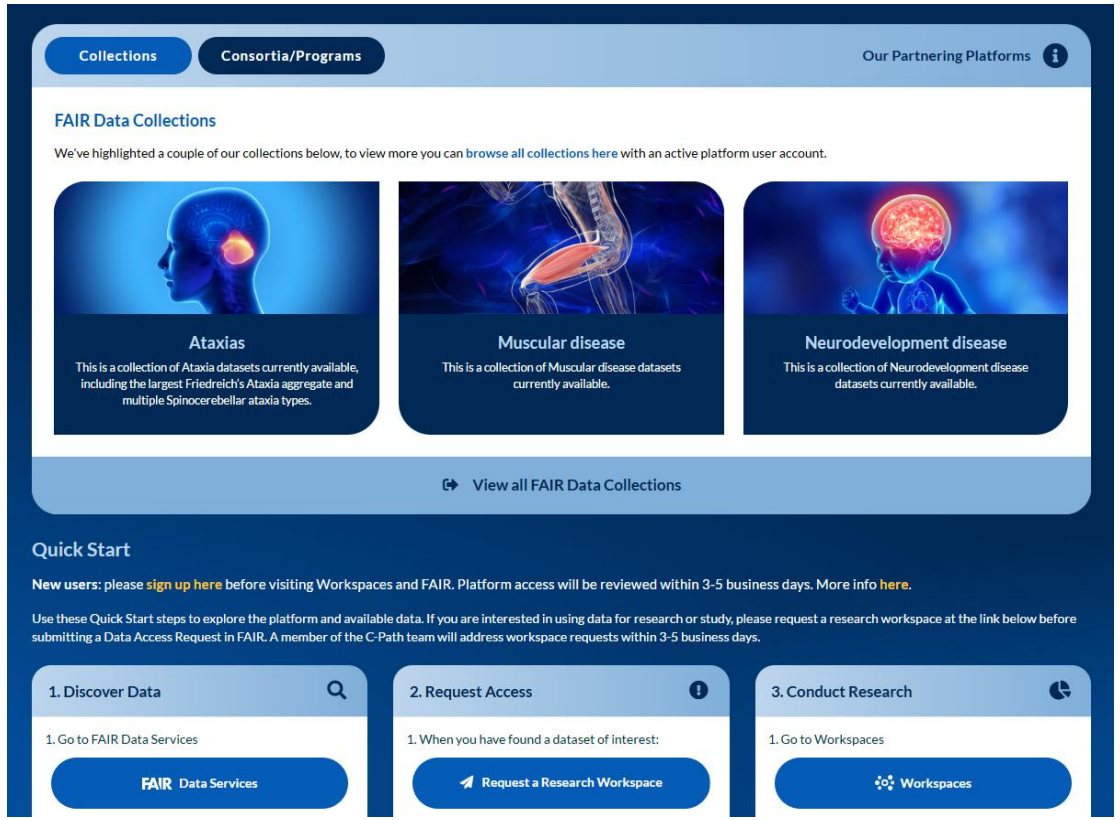
SYNAPSE

- ALS omics data & data from the ALL ALS natural history study

- Launched in 2025
- Centralized hub for ALS data
- Manuscript in progress

https://ampals.synapse.org/

C-Path Rare Disease Cures Accelerator-Data and Analytics Platform



https://portal.rdca.c-path.org/

Harmonizing & Sharing RND Data

- Data collaboration and analytics hub to promote **clinical data** sharing across rare diseases
- A collection of RND datasets available from ALS (14), FTD, PSP, and the ataxias
  - **Clinical trials, natural history studies, digital health technologies, registries.**
- All data are curated, standardized, and accessible by stakeholders

Advancing Measurement Consistency

CRITICAL PATH INSTITUTE

Goal: ensure clinical outcome assessments for ALS are measured and analyzed in a standardized way across research studies so interpretability is improved.

Impact:

- Resources for new researchers and sponsors to help improve scientific evidence collected.
- Ensures results from different studies can be more clearly interpreted, which is critical for determining whether new treatments work.
- Stronger evidence, faster and more reliable clinical trials, and better decisions that can accelerate the development of effective treatments for people with ALS.

ALSFRS-R Statistical Analysis Working Group

Collaborating to standardize analysis and interpretation of ALSFRS-R data

Measures of Respiratory Function Working Group

Collaborating to standardize analysis and interpretation of measures of respiratory function in ALS

Advancing Measurement Consistency

CRITICAL PATH INSTITUTE

Collaborating to standardize analysis and interpretation of ALSFRS-R data

Progress:

- Systematic review of methods and analysis of current approaches for analyzing and interpreting ALSFRS-R data
- Synthesized considerations to help researchers navigate analytical strategies based on key assumptions (publication forthcoming)

Next Steps:

- Collaboratively develop updated, evidence-based approaches for analyzing and interpreting ALSFRS-R data to support stronger study design and evaluation of potential treatments
- Ensure these approaches reflect what matters to people living with and impacted by ALS

Advancing Measurement Consistency

CRITICAL PATH INSTITUTE

Collaborating to standardize measurements of *Respiratory Function* in ALS

Progress:

- Identified key challenges and best practices to improve how respiratory function is measured in ALS
- Defined a prioritized set of respiratory measures to support more consistent and meaningful data collection across studies
- Literature reviewed and supportive evidence summarized with experts

Next Steps:

- Collaboratively develop clear recommendations and standardized approaches to improve how respiratory outcomes are measured and used in future research
- SOP reference library

Refining Clinical Outcome Assessments for ALS

CRITICAL PATH INSTITUTE

Assessed COAs suitability for use in ALS clinical trials*

Progress:

- Identified important areas of health (concepts) impacted by ALS to better understand what should be measured in research
- Reviewed existing outcome measures and identified key gaps

Next steps:

- Gather direct input from persons living with ALS to on areas of the disease that are most important
- Refine or develop outcome measures that better capture meaningful aspects of the disease

Refining Clinical Endpoints for ALS:

Concepts of Interest Identified to Prioritize Endpoints for Clinical Trials Endpoints

CRITICAL PATH INSTITUTE

Activities of daily living	Behavioral	Bulbar	Cognitive	Digestive
Fatigue	Mental health	Mobility	Motor	Nutrition
Pain	Physical symptoms	Respiratory symptoms	Sleep	

This list is based on the concepts identified in the literature as being important to people with lived experience AND that have potential to be impacted by a new therapy.

Refining Clinical Endpoints for ALS:
Evidence Gaps Remain for Key COAS in Clinical Trials

CRITICAL PATH INSTITUTE

Measure	Concept Elicitation	Cognitive Debriefing	Structure	Internal Consistency	Test-retest Reliability	Construct Validity	Ability to Detect Change
ALSAQ-40	?	x	x	✓	x	?	?
ALSAQ-5			x	x	x	?	x
ALS-CBS: Cognitive	?	?	x	x	x	?	⊗
ALS-CBS: Behavioral	x	x	x	x	x	?	⊗
AIMS	x	?	x	⊗	?	x	⊗
ALSSS	x	x	⊗	x	⊗	x	⊗
CNS-BFS	⊗	⊗	⊗	x	x	?	x
CNS-LS	?	x	x	x	x	x	⊗
ECAS	⊗	⊗	⊗	?	x	?	x
MiND-B	⊗	⊗	⊗	x	⊗	x	⊗
ROADS	x	x	x	?	✓	?	?

Note: ✓ = good; ? = adequate; x = weak; ⊗ = none.

Exploring Novel Digital Tools for ALS Trials

CRITICAL PATH INSTITUTE

Developing wearable technology (actigraphy) for use as a biomarker and/or COA

Progress:

- Curated datasets for ALS natural history studies
- Developed visualization and analysis tools to assess how ALS affects motor symptoms (actigraphy)
- Gathered consensus on list of DHT measures to analyze and determine their suitability as biomarker or COAs
- Performed analysis of lower limb actigraphy measures

Next Steps:

- Expand the analysis to include upper limb actigraphy and further review the evidence supporting their use as biomarkers/COAs
- Refine these digital measures and make recommendations on in regulatory clinical trials for ALS

CP-RND Partners

Federal & PPP Partners

FDA U.S. FOOD & DRUG ADMINISTRATION

NIH National Institute of Neurological Disorders and Stroke

FNIH AMP®ALS

Working Group Chairs

- Stephanie Fradette (Biogen)
- Michelle Campbell (FDA)
- Srikanth Ranganathan (NIH)
- Ruben van Eijk (UMC Utrecht)
- Angela Genge (McGill)
- Jessica Shoaff (Biogen)
- Fernando Vieira (ALS TDI)

The ALS & RND Communities

Other RND Programs at C-Path

HD-RSC

Huntington's Disease Regulatory Science Consortium

CPTA

Critical Path to Therapeutics for the Ataxias

RDCA-DAP®

- Progressive Supranuclear Palsy (PSP)
- Frontotemporal Dementia (FTD)
- Friedreich's Ataxia Integrated Clinical Database (FA-ICD)
- Hereditary Spastic Paraplegia (HSP) and Primary Lateral Sclerosis (PLS)

https://c-path.org/area-of-focus/rare-and-orphan-diseases/

Opportunities to Participate

- Join a Working Group
- Support PWLE recruitment efforts
- Reach out to Megan: mmiller@c-path.org

For all other inquiries, reach out to the CP-RND team at CP-RND@c-path.org

Collin Hovinga, Vice President, Rare/Orphan and Pediatric Disease Programs

Katie O'Keefe, Scientific Director, CP-RND

Tanya Williams, Sr. Project Manager, CP-RND

Stephanie Irvin, Project Coordinator II, CP-RND

Laura Hopkins, Director, Rare/Orphan and Pediatric Disease Programs

Megan Miller, Director of Outreach, Rare/Orphan and Pediatric Disease Programs

Updates from CP-RND: Huntington's Disease (HD)

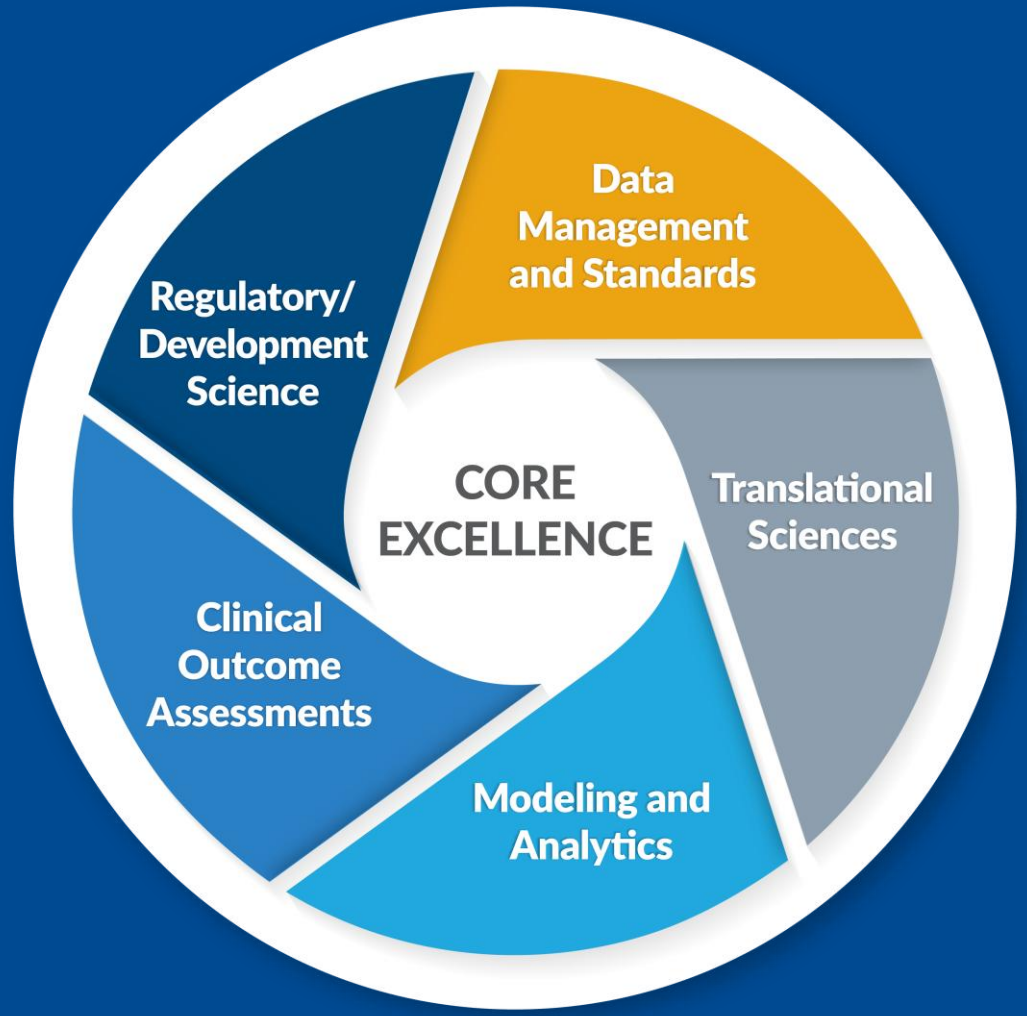
Terina Martinez, PhD

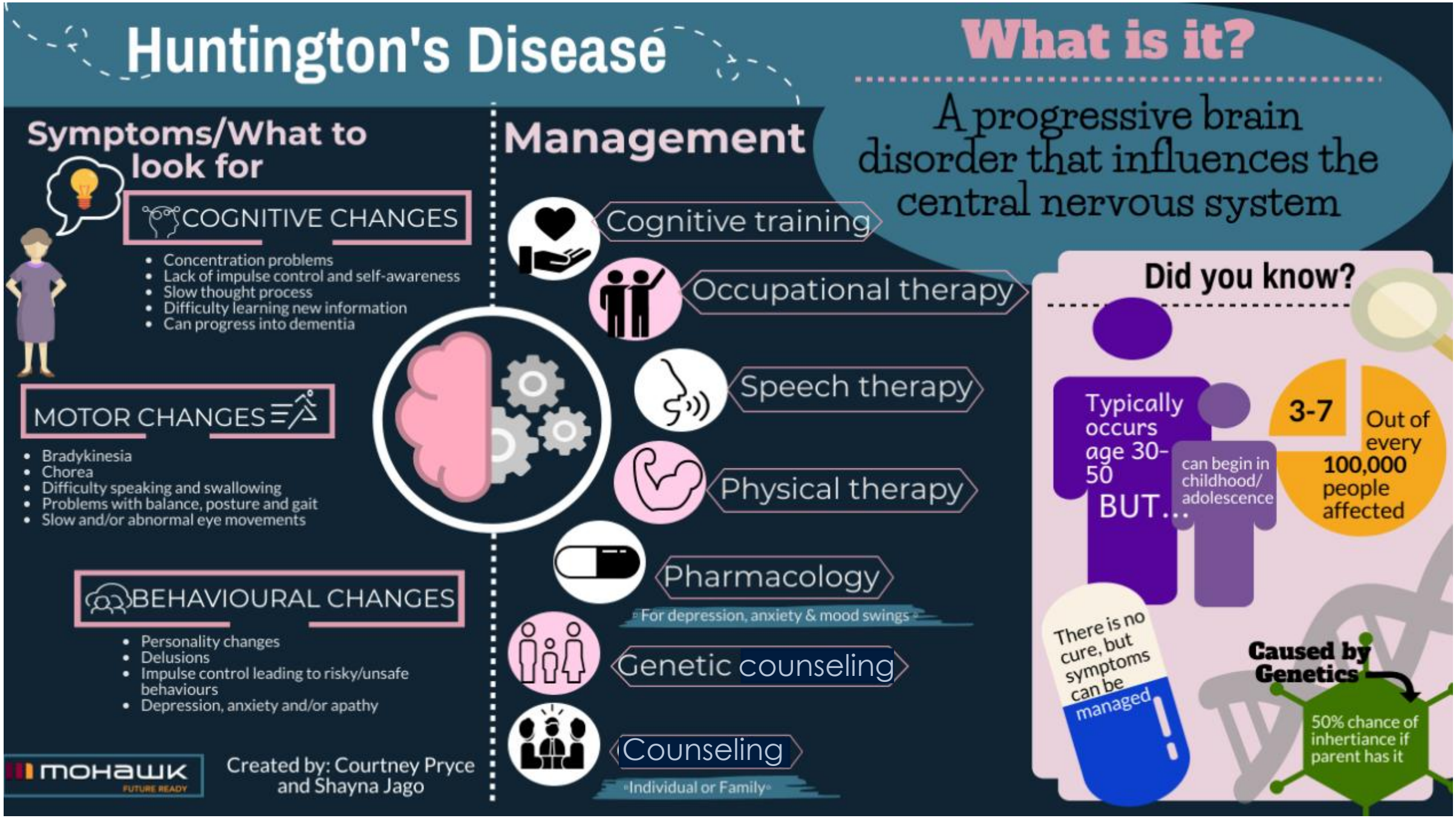
Executive Director, Huntington's Disease Regulatory Science Consortium (HD-RSC) and Critical Path to Therapeutics for the Ataxias (CPTA)

Critical Path Institute

Thematic Outline

- **The problem** – Need better tools for HD clinical trials
- **The solution** – Scientifically rigorous, regulatory-grade drug development tools to de-risk and accelerate therapeutic development in Huntington's disease
- **How** – The Huntington's Disease Regulatory Science Consortium
- **Why** – To address the urgent unmet need to deliver novel therapies that are scientifically robust, feasible, and meaningful to people with HD





Infographic credit: https://knowledgetranslation.mohawkcollege.ca/wp-content/uploads/2021/04/CPryce-SJago-Huntingtons-infographic.png

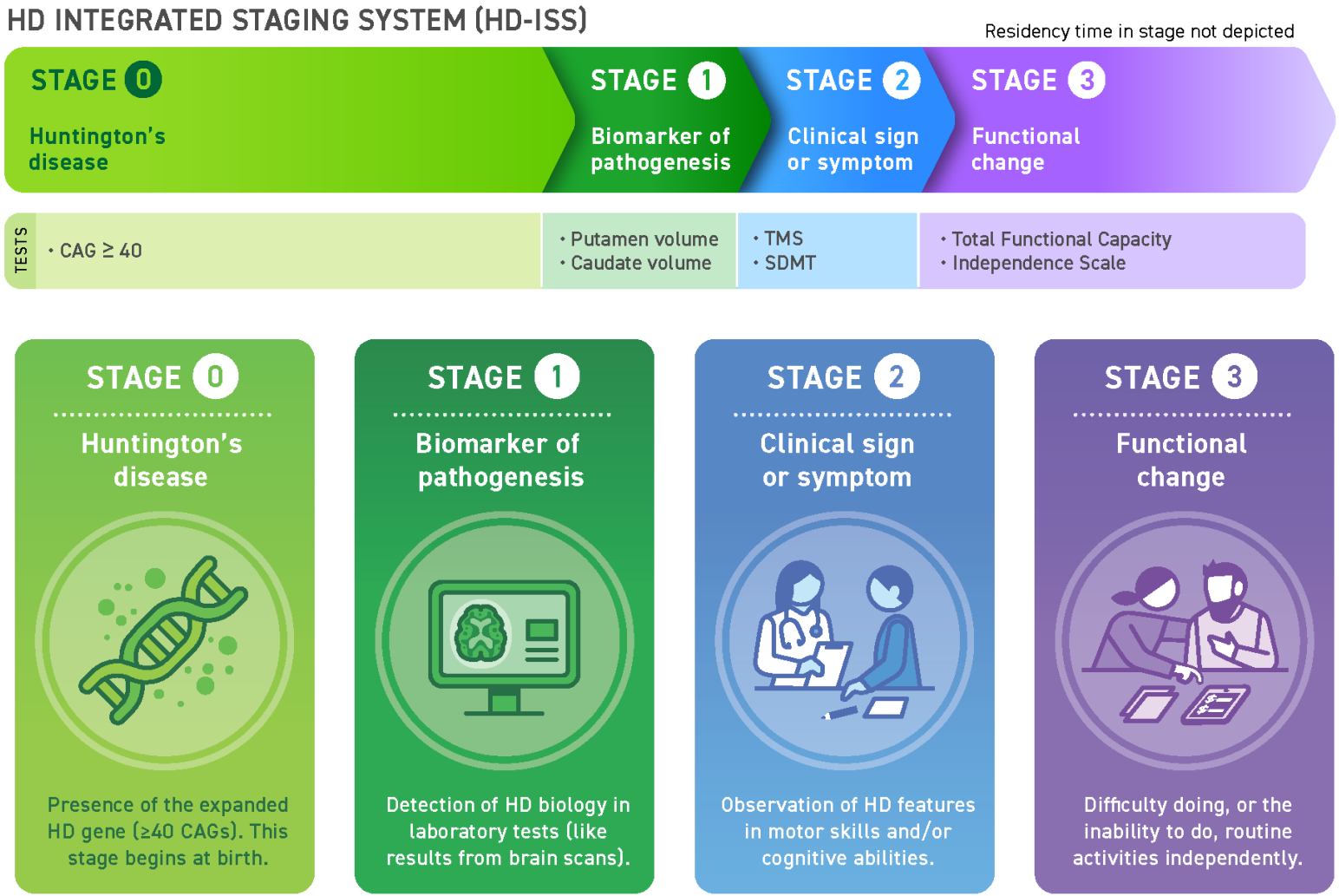
HD-RSC provides a neutral forum and collaborative framework to bring together diverse participants from the HD community to develop regulatory-grade solutions to address unmet need, thus derisking and incentivizing HD therapeutics development.

HD-RSC has embarked on the **next stage of its evolution** by focusing our strategy on **optimizing drug development tools for earlier stages of the disease continuum.**

Leveraging the **Huntington's Disease Integrated Staging System (HD-ISS) as a foundation**, the HD-RSC Research Plan utilizes a data-driven strategic framework to evaluate regulatory rigor, clinical relevance/meaningfulness and what matters most to people living with HD, their families, and caregivers.

The HD-ISS as a conceptual framework that incorporates genetic, biomarker, clinical, and functional endpoints

CRITICAL PATH INSTITUTE



About the HD-ISS Framework:

- The HD-ISS is a staging system built on biological markers and supported by a wide body of published research
- It can strengthen clinical trials by using measurable biological changes to identify where someone is in the course of Huntington's disease
- Slowing the move from one stage to the next could help reduce long-term illness and extend lives

Ref.: Modified from Tabrizi *et. al.*, 2022, *Lancet Neurology;* PMID: 35716693

Endpoints for HD Clinical Trials

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Clinical endpoints are specific outcomes or events that are measured objectively and quantitatively in clinical trials to determine the safety and effectiveness of a treatment.

In rare diseases like HD, ideal endpoints are challenging because small, heterogeneous patient populations and a relatively slow progressing disease require highly sensitive, meaningful, objective metrics to prove clinical benefit, secure regulatory approval and prevent clinical trial failure.

Patient-Centric, Regulatory-Acceptable Endpoints for Early Huntington's Disease

New HD strategic framework launched in 2026 to optimize HD endpoints

Following FDA's Patient Focused Drug Development (PFDD) Guidance

Leveraging the deep expertise and diverse perspectives of HD-RSC members

Rigorous evaluation of the data/evidence for sensitivity, validity, and meaningfulness

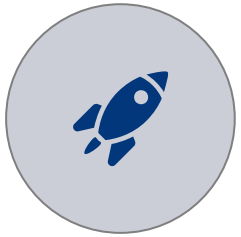
Engagement with regulators for advice and alignment

Feedback from the HD lived experience community

IMPACT

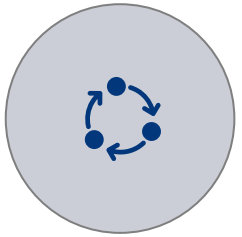
- Improving the ability to detect onset and changes in meaningful symptoms.
- Consensus alignment amongst drug developers, regulators, researchers, and people with HD on the suitability of an HD clinical scale (cUHDRS) as a meaningful endpoint in earlier stage HD, thus reducing uncertainty, informing regulatory decision making, and derisking HD clinical trials.

HD-RSC Lived Experience Working Group



Launched on May 15 (International HD Awareness Day)

Forum for the HD lived experience community and advocates



Bidirectional information & perspective sharing

Understand what matters to people with HD

Integrate & amplify patient voice in HD-RSC initiatives

Communicate broadly to the HD community

IMPACT

- Bridging the gap between the scientific and regulatory communities with people impacted by HD.
- Implementing the principles of FDA's PFDD, increasing transparency and trust.

Thank You to HD-RSC Members!

Industry Members:

- Alnylam Pharmaceuticals
- Novartis
- Prilenia Neurotherapeutics
- PTC Therapeutics
- uniQure
- Wave Life Sciences

Advisory Member Institutions:

- Cardiff University
- Columbia University
- George-Huntington Institute
- Georgetown University
- Johns Hopkins University
- Monash University
- Rush University
- Ulm University
- University of Birmingham
- University of Bonn
- University of Wisconsin Madison
- University of British Columbia
- University of Central Florida
- University College London
- University of Iowa
- University of Rochester
- Western Washington University

Nonprofit Members:

- CHDI Foundation
- Help 4 HD International
- Huntington's Disease Society of America
- Huntington's Disease Youth Organization
- Huntington Study Group
- International Parkinson and Movement Disorder Society

FDA CDER Liaisons:

- Michelle Campbell, FDA

Advancing Drug Development. Improving Lives. Together

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Community Perspective: Research Partnerships in HD

Community Perspective: Research Partnerships in HD

Lauren Holder
Producer and Host of *Help 4 HD Live*

CRITICAL PATH INSTITUTE

Q&A

CRITICAL PATH INSTITUTE

BREAK

CRITICAL PATH INSTITUTE

Updates from NIH and FNIH: Collaborating to Accelerate Research in ALS

NIH Update: Advancing Research for ALS and other Rare Neurodegenerative Diseases

Amelie Gubitz, Ph.D.
Program Director, Division of Neuroscience
National Institutes of Health

NIH Update: Advancing Research for ALS and other Rare Neurodegenerative Diseases

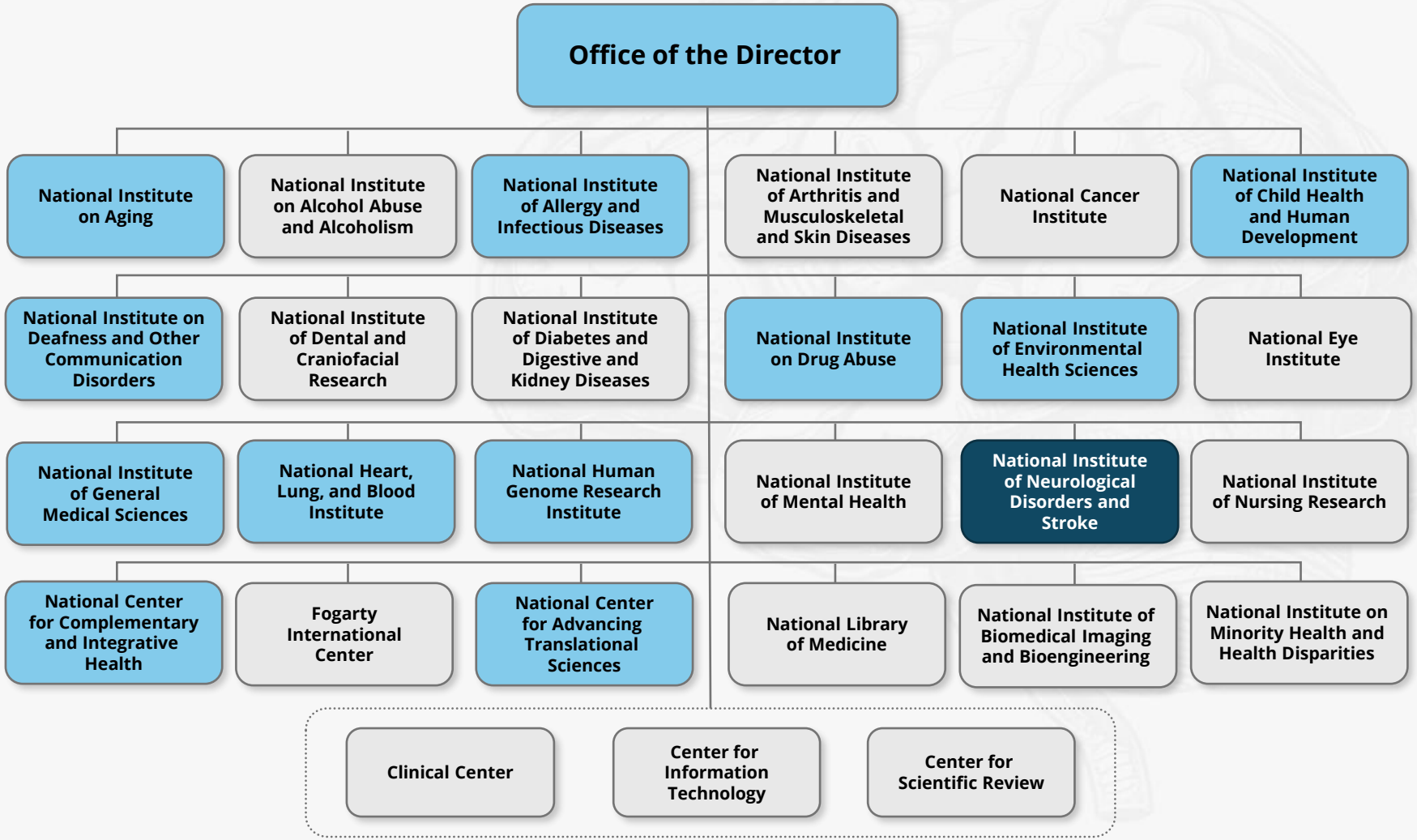
Amelie Gubitz, PhD
Program Director, ALS Research
Division of Neuroscience, NINDS

June 5, 2026

NIH National Institute of Neurological Disorders and Stroke
NINDS 75 YEARS 1950 2025 IMAGINING THE FUTURE OF NEUROSCIENCE

The National Institutes of Health

Turning Discovery into Health



"to seek fundamental knowledge about the brain and nervous system and to use that knowledge to reduce the burden of neurological disease for all people."

Funded ALS Research in FY24

Administered the most ALS research funding in FY24

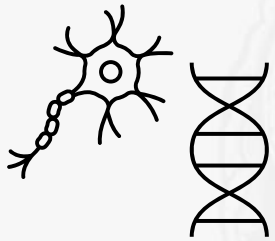
NIH National Institute of Neurological Disorders and Stroke

NINDS 75 YEARS 1950 2025 IMAGINING THE FUTURE OF NEUROSCIENCE

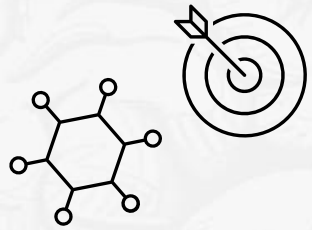
How research enables treatments

Pipeline of Neurological Discovery at NIH

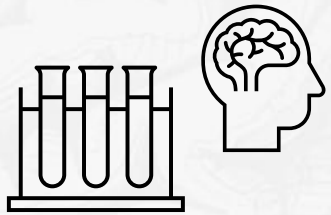
Workforce development
Training the next generation of scientists



Fundamental Discovery
What is the biological basis of a disease?

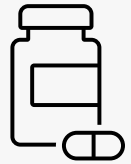


Translational Science
Developing potential therapeutics or diagnostics



Clinical Studies
How do patients experience a disease? What biological markers indicate disease?

Clinical Trials
Testing an investigational therapy or diagnostic for safety and efficacy



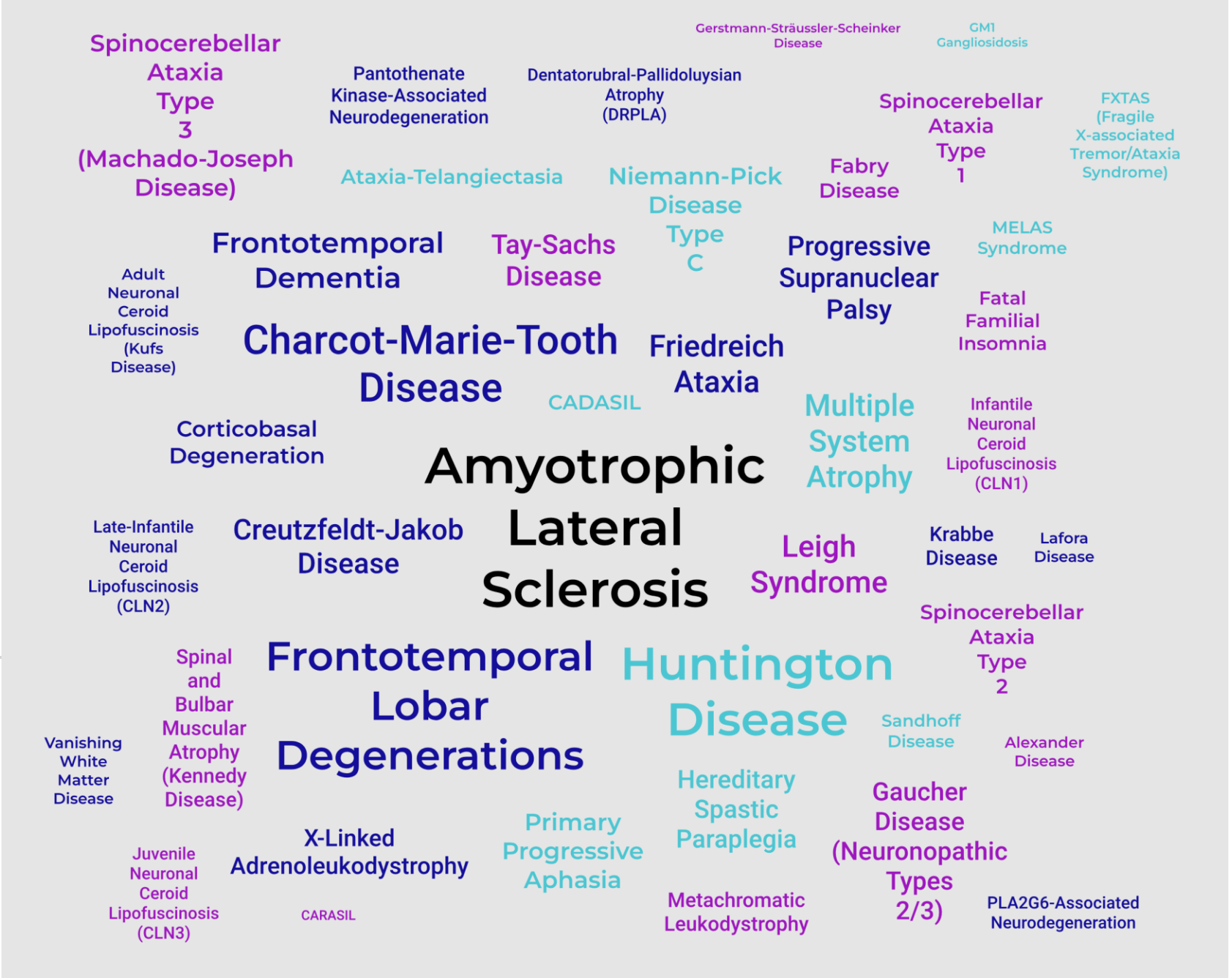
FDA Regulatory Review

CMS/VA/Private Insurance Pricing Decisions

NIH National Institute of Neurological Disorders and Stroke

NINDS 75 YEARS 1950 2025 IMAGINING THE FUTURE OF NEUROSCIENCE

NINDS Supports Research Across a Broad Spectrum of Rare Neurodegenerative Diseases*



**Illustrative examples across neurological disease portfolios at NINDS (not exhaustive)*
Courtesy of Dr. Gabe Gonzales, NINDS

RARE DISEASES
CLINICAL RESEARCH NETWORK

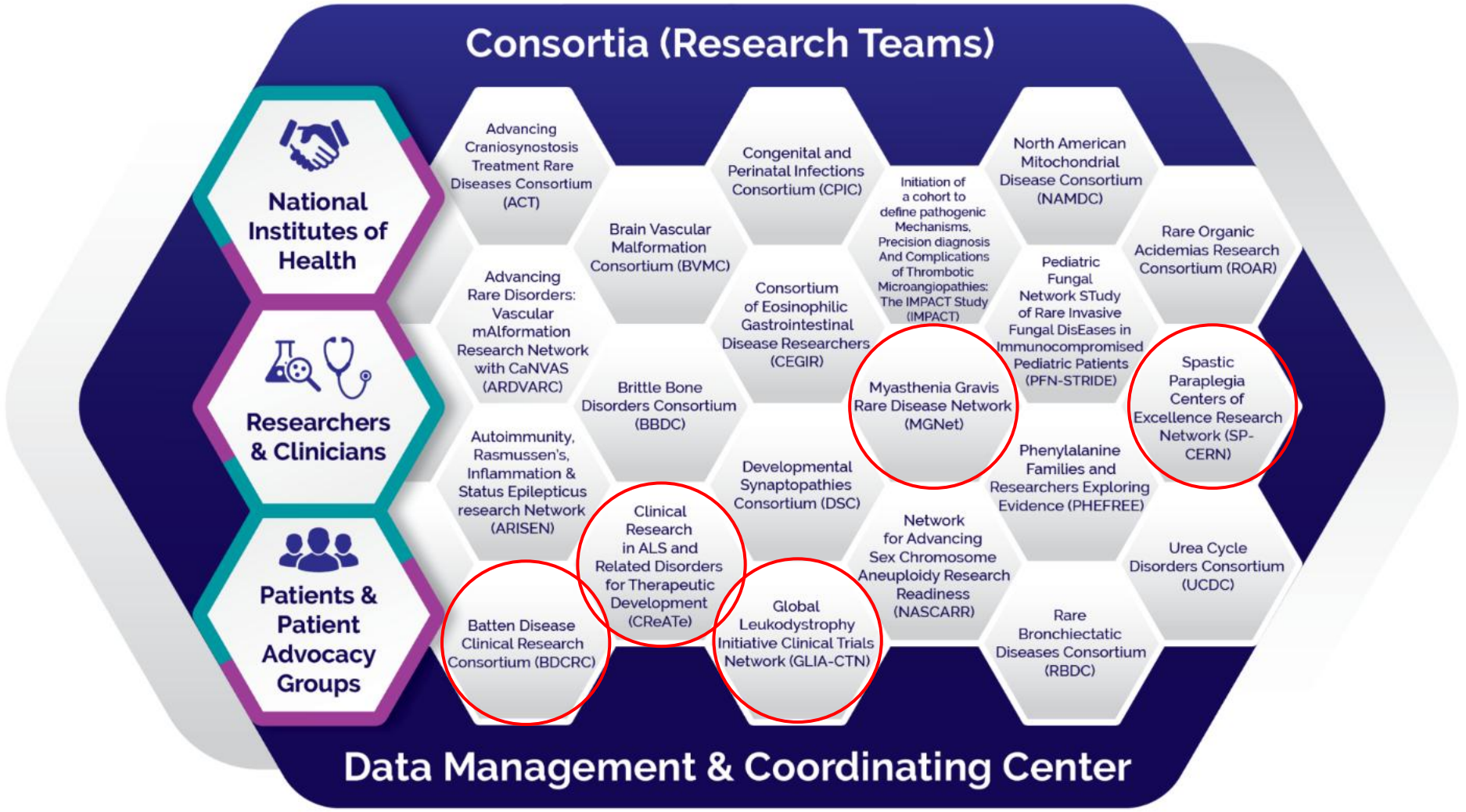
A network of 21 research teams collaborating to achieve faster diagnosis & better treatments for people with rare diseases

Shared goals:

Advancing clinical trial readiness

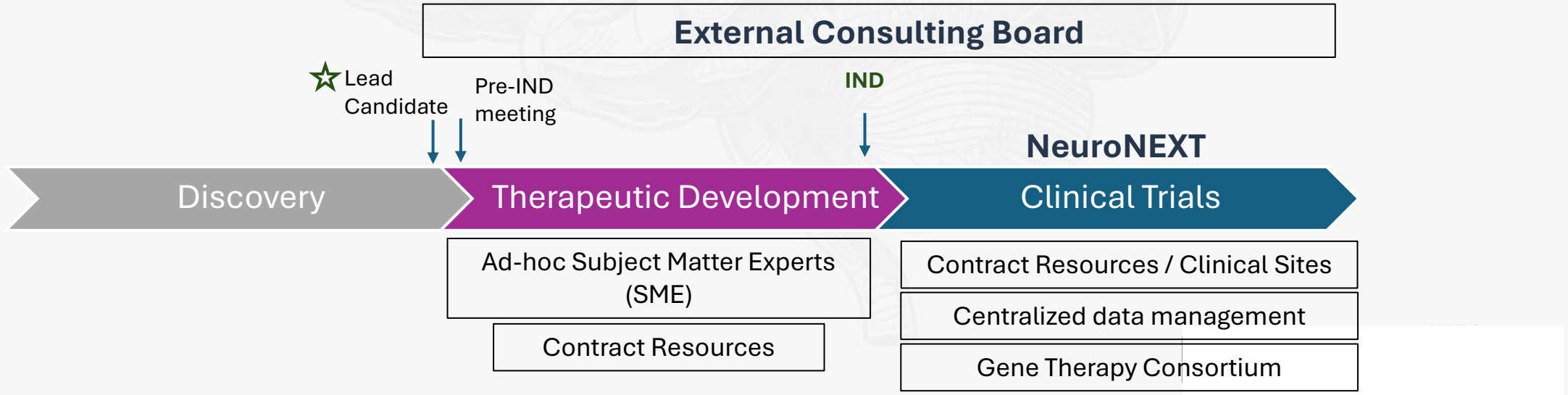
Training the next generation of rare disease clinician-scientists

To learn more about the RDCRN consortia follow the QR code

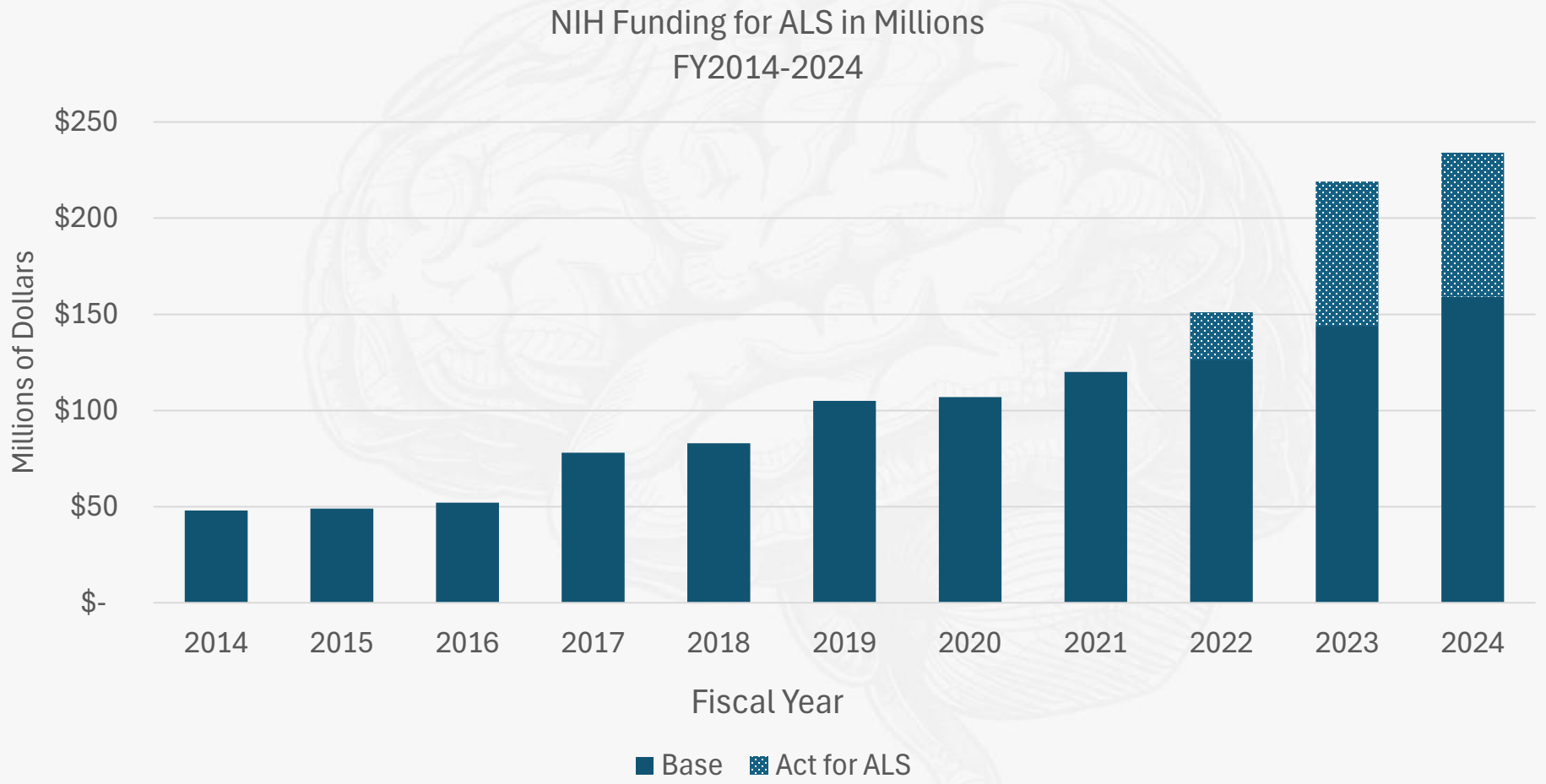


Ultra-Rare Gene Therapy (URGenT) Network

- ✓ Accelerate advancement of discoveries into the clinic in order to deliver therapeutics to patients with ultra-rare neurological diseases
- ✓ Provide resources and expertise not readily available to grant applicants
- ✓ Standardize and harmonize best practices and protocols for the development of gene-based therapies for ultra-rare diseases
- ✓ Active projects: Aspartylglucosaminuria, ALS, Menkes Disease, Prion Disease, Duchenne Muscular Dystrophy, Multisystemic Smooth Muscle Dysfunction Syndrome, GM1 gangliosidosis



NIH funding for ALS has quadrupled since 2014



Funding information can be found at: https://report.nih.gov/funding/categorical-spending#/

Search: “Amyotrophic Lateral Sclerosis”

NIH National Institute of Neurological Disorders and Stroke

NINDS 75 YEARS 1950 2025 IMAGINING THE FUTURE OF NEUROSCIENCE

Accelerating Access to Critical Therapies for ALS (ACT for ALS)

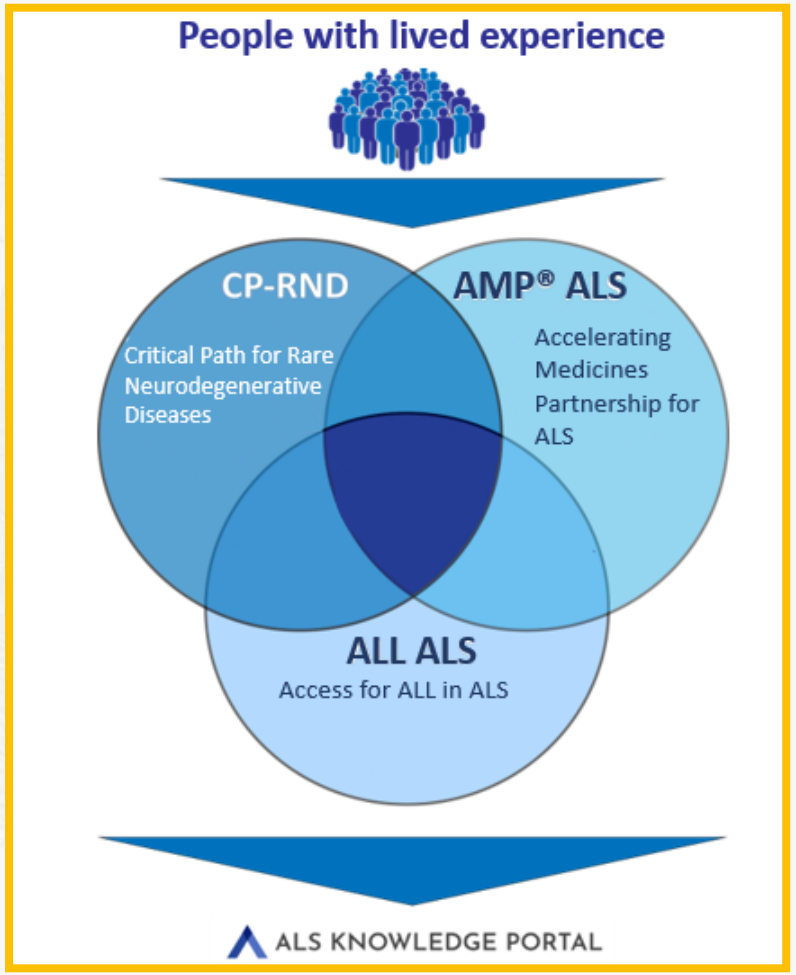
NIH Provisions

Section 2: Grants for Research on Therapies for ALS:

- Fund scientific research utilizing data from expanded access studies for individuals not otherwise eligible for clinical trials in ALS
- Applicants must be phase 2/3 or 3 clinical trial sites sponsored by a small business

Section 3: HHS Public-Private Partnership for Rare Neurodegenerative Diseases

- NIH, FDA, one or more eligible private entities
- Focus on advancing regulatory science and scientific research that will support and accelerate the development and review of drugs for ALS



National Institute of Neurological Disorders and Stroke

NINDS 75 YEARS 1950 2025 IMAGINING THE FUTURE OF NEUROSCIENCE

Access for ALL in ALS (ALL ALS)

A combined longitudinal natural history study and biomarker collection study for ALS

James Berry, MD, MPH
Mass. General Hospital
East Coordinating Center

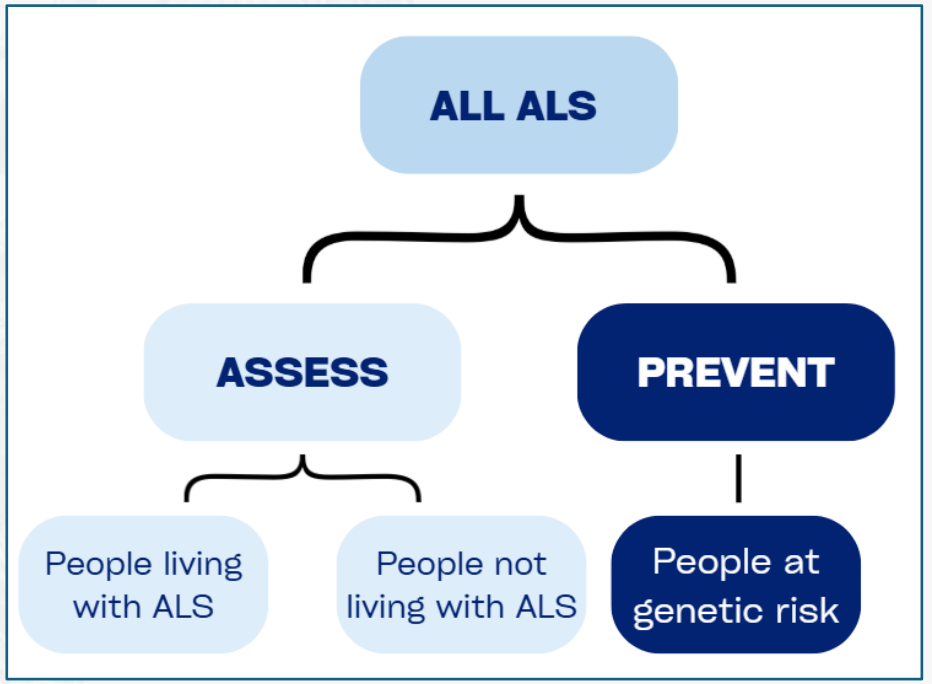
Robert Bowser, PhD
Barrow Neurological Institute
West Coordinating Center

NIH-funded, observational study, consisting of **36 Clinical Sites across the U.S. and Puerto Rico** (enrollment started 8/2024)

Collects and shares data and biological samples with researchers around the world to improve ALS clinical care, advance research, and develop more effective drugs and treatments

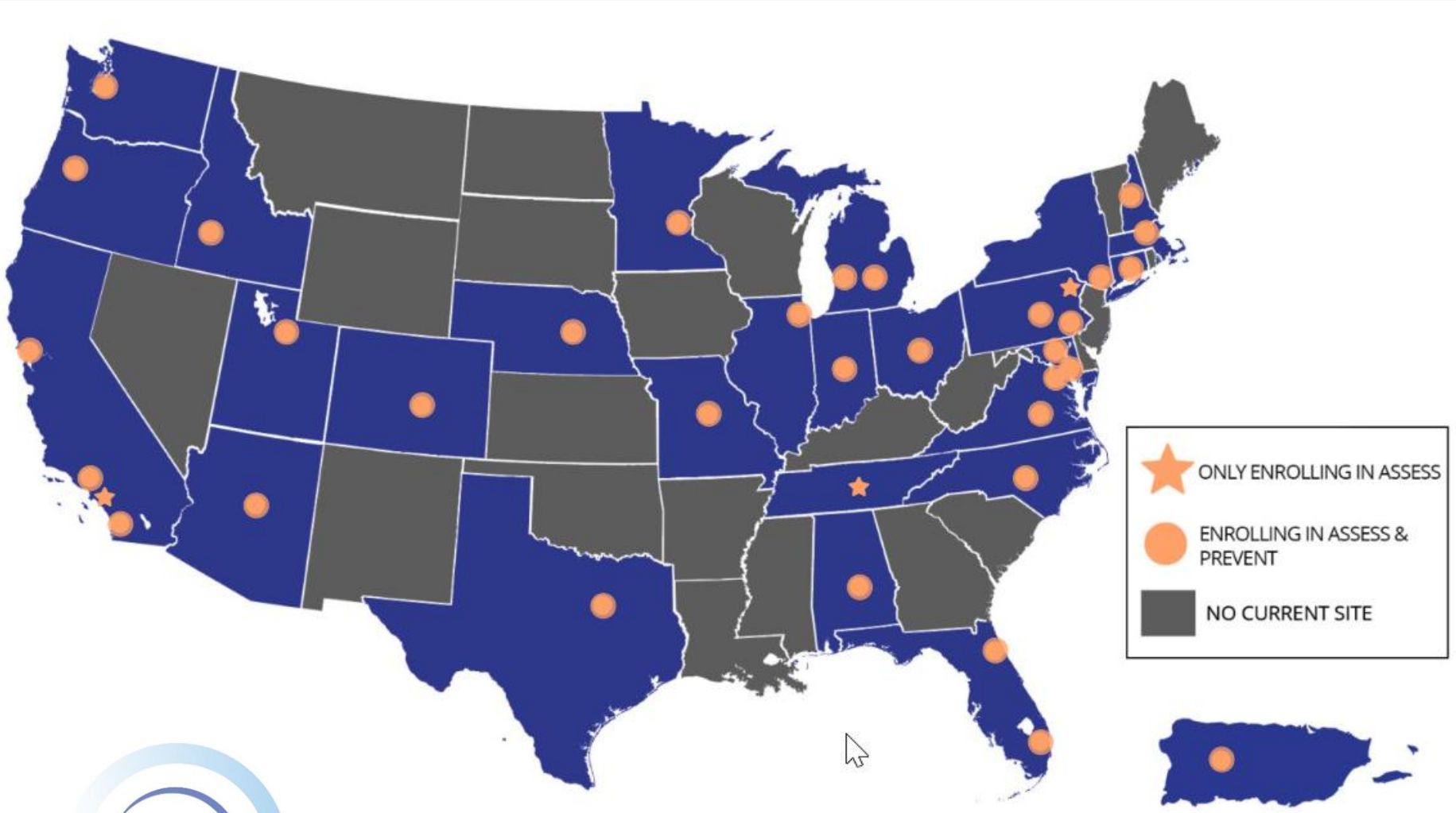
Designed to **make ALS research more accessible** to everyone impacted by the disease

Currently enrolling into 2 clinical studies: **ASSESS** and **PREVENT**



Courtesy of the ALL ALS team

ALL ALS Sites



WEST Coordinating Center

- **Barrow Neurological Institute**
- Columbia University
- Washington University
- Georgetown University
- University of Washington
- University of California, San Diego
- Northwestern University
- Mayo Clinic
- University of Colorado Denver
- Ohio State University
- Universidad de Puerto Rico
- Saint Alphonsus Regional Medical
- Henry Ford Health
- University of Michigan
- University of Minnesota
- University of California, Irvine
- Providence Brain and Spine
- University of Utah

EAST Coordinating Center

- **Massachusetts General Hospital**
- Texas Neurology
- Virginia Commonwealth University
- Temple University
- Pennsylvania State Medical Center
- Duke University
- Dartmouth Hitchcock
- University of Nebraska Medicine ALS Center
- Indiana University ALS Center
- Nova Southeastern University
- Hospital for Special Care
- University of California, San Francisco
- University of Alabama, Birmingham
- Johns Hopkins University
- NIH/NINDS (Intramural Program)
- University of Pennsylvania
- Vanderbilt University
- UCLA

ALLALS
Access for ALL in ALS

Study visits are conducted during routine clinical visits or as stand-alone research visits, with either a combination of in-person and remote visits or entirely remote visits.

ALL ALS collects key data & biosamples for ACT for ALS PPP

Who is in the study?

- Individuals with ALS
- Genetic carriers at risk for developing ALS
- Controls

What is being collected?

- Blood, spinal fluid
- Clinical data
- Environmental exposures
- Digital health technology data

36	1,655	372	109,519	11,890
Total Number of Active Sites	Total Participants Enrolled	Fully Remote Participants Enrolled	Number of Blood Sample vials*	Number of CSF Sample vials*

As of 5/26/26

>30 sites across the United States & Puerto Rico

Nationwide catchment with 11% Veteran representation

Fully virtual arm enables entirely remote (from home) study participation

Active collaboration with other ongoing studies

Participants now enrolled from all 50 states, D.C., and Puerto Rico

Enrollment Goal: >2,000 participants

Status: **Currently enrolling**

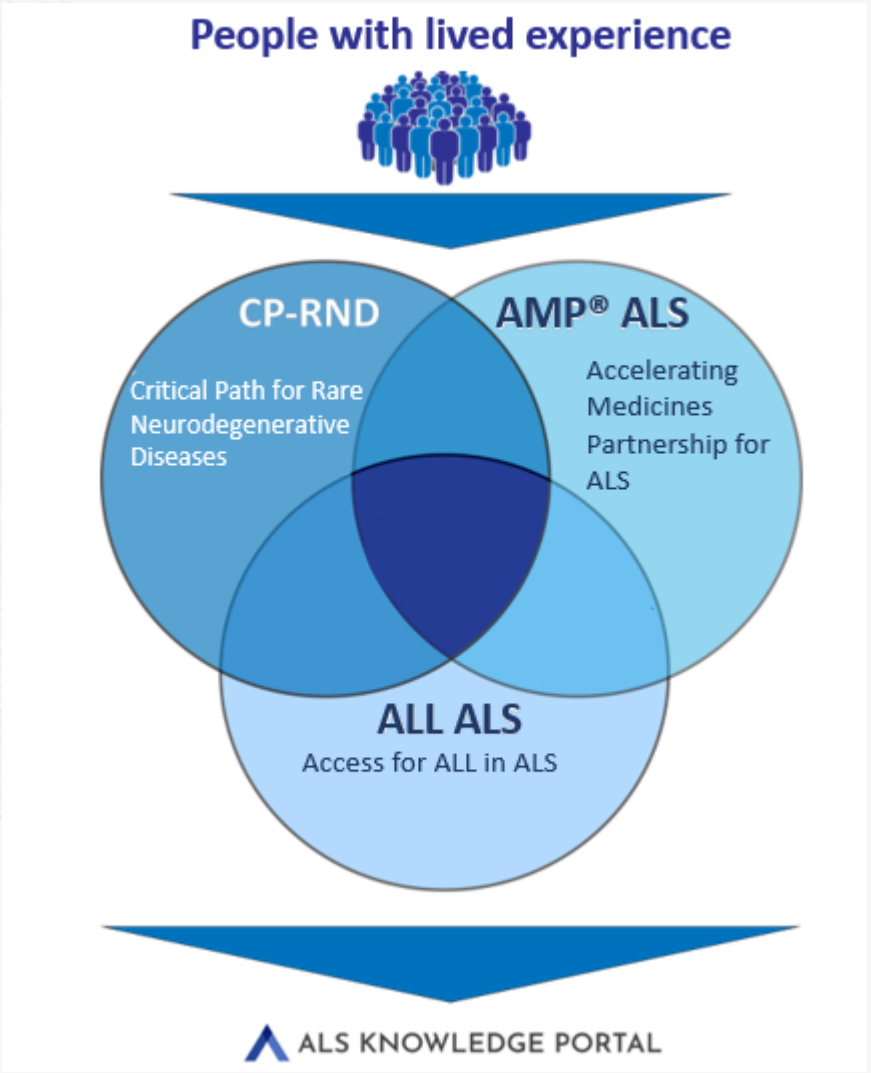
The ALL ALS Natural History Study and AMP® ALS are synergistic research efforts.

- ALL ALS is critical for the implementation of the research priorities of AMP® ALS and provides key scientific input
- Infrastructure to enable large scale collection of clinical data and biospecimens (e.g., biofluids, tissue)
- ALL ALS biospecimens can be requested from the BioSEND Repository

BioSEND
Biospecimen Exchange for Neurological Disorders

- ALL ALS data are publicly available at the ALS Knowledge Portal through responsible data sharing processes

ALS KNOWLEDGE PORTAL



ALS Program Contacts at NINDS

Amelie Gubitz, PhD, *Program Director*
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Thank You!

Visit the **NINDS Focus on ALS** webpage to learn more about ALS and join the **NINDS ALS Listserv** for ALS-related updates on current activities, research opportunities, and NIH-funded science advances

NIH National Institute of Neurological Disorders and Stroke

NINDS 75 YEARS 1950 2025 IMAGINING THE FUTURE OF NEUROSCIENCE

Updates from the Foundation for the National Institutes of Health (FNIH)

Shubhangi Lal, B. Pharm, MS, MBA
Senior Project Manager, Translational Science Neuroscience
Foundation for the National Institutes of Health

FNIH
Foundation for the National Institutes of Health

Accelerating Medicines Partnership®
Amyotrophic Lateral Sclerosis
AMP® ALS

A Collaborative Approach to Advance ALS Research

Shubhangi Lal, Senior Project Manager, Neuroscience

Building Bridges to Breakthroughs

Science has the power to cure, but no single organization can do it alone.

The Foundation for the National Institutes of Health (FNIH) is a non-profit organization chartered by the U.S. Congress and launched in 1996 to support the mission of NIH.

We connect world-leading NIH researchers with the ingenuity and expertise of public and private sector leaders to accelerate medical breakthroughs.

FNIH

Biomedical innovation to improve health

The FNIH creates and leads alliances and public-private partnerships that advance breakthrough discoveries and improve the quality of people's lives.

With the best global minds at the table, significant financial resources, and a proven track record of navigating complex problems, the FNIH builds bridges to medical breakthroughs.

$1.59B
private funds raised

122
active partnerships

$.90
of every dollar directly supports programs

We accelerate prevention, new therapies, diagnostics & potential cures

- ACCELERATING MEDICINES PARTNERSHIP® (AMP®)
- AMP® BESPOKE GENE THERAPY CONSORTIUM (BGTC)
- BIOMARKERS CONSORTIUM
- PARTNERSHIP FOR ACCELERATING CANCER THERAPIES (PACT)
- ACCELERATING COVID-19 THERAPEUTIC INTERVENTIONS & VACCINES (ACTIV)

We advance global health & seek equity in care

- MATERNAL & CHILD HEALTH
- GENECONVENE GLOBAL COLLABORATIVE
- GRAND CHALLENGES IN GLOBAL HEALTH

We power science by celebrating & training the next generation of scientists

- LURIE PRIZE IN BIOMEDICAL SCIENCES
- TRAILBLAZER PRIZE FOR CLINICIAN-SCIENTISTS
- CHARLES A. SANDERS, MD PARTNERSHIP AWARD

FNIH

Accelerating Medicines Partnership (AMP)

AMP By the Numbers

12
Projects

$1B
Total Investment

11
Years

36
Industry Partners

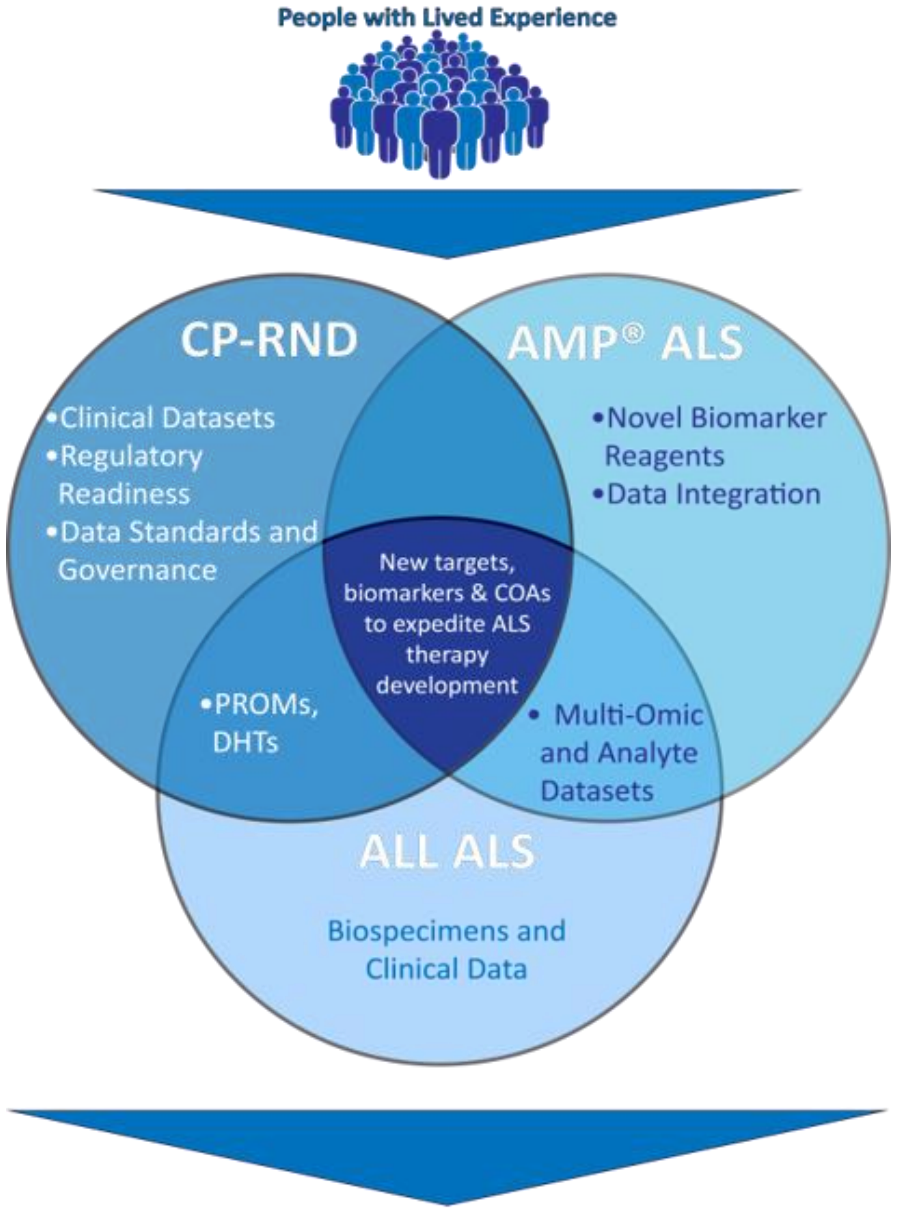
16
NIH Institutes and cross-institute program

35
Non-profits

A PRECOMPETITIVE PUBLIC-PRIVATE COLLABORATION started in 2014, the program unites the resources of the NIH and private partners to improve our understanding of disease pathways and transform current models for developing new treatments by:

- Identifying new targets, biomarkers and development paradigms
- Developing leading-edge tools and technologies
- Collecting large scale datasets and supporting analytics for open analysis by the public
- Generating consensus platforms and procedures

ACT for ALS Public Private Partnership



AMP ALS: Driving Measurable Impact

Large harmonized, longitudinal ALS clinical dataset comprising all stages of ALS, including pre-symptomatic in familial ALS

Comprehensive multimodal molecular analyses of longitudinal biofluid samples and post-mortem tissue

New biofluid-based & digital biomarkers to aid in early diagnosis, monitor disease progression, as well as response to treatment

Improved patient-informed Clinical Outcome Assessments (COAs) to optimize clinical trials and clinical care; best practices for COAs that are currently in use

Comprehensive strategy to expedite the development of effective treatments for people living with ALS or at risk for developing ALS

FNIH

Participation of People with Lived Experiences

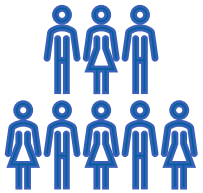
- ✓ **Integral partners**: Central to every stage of AMP® ALS, from research design to implementation and outreach
- ✓ **Shaping priorities**: Help identify research priorities, ensuring that real-world needs and patient-centered outcomes are addressed
- ✓ **Driving outreach**: Strengthen program communications and community engagement
- ✓ **ALL ALS Engagement**: PWLE participate in the ALL ALS Recruitment & Retention and Steering Committee

>20

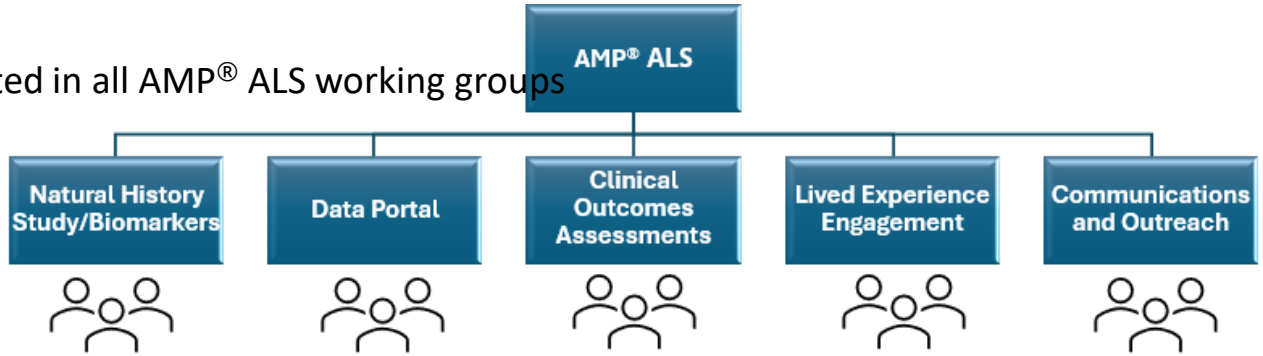
AMP®ALS Lived Experience meetings since Design phase

30+

PWLE have directly helped shape the trajectory of AMP®ALS



PWLE integrated in all AMP® ALS working groups



AMP ALS Impact

➤ **Knowledge Portal & Data Harmonization:**

- Development and launch of the ALS Knowledge Portal(August 2025) as the centralized hub for multi-omic and clinical data
- Integration of high-priority extant datasets(>20) and ALL ALS clinical data into a unified, accessible ecosystem

➤ **ALL ALS Natural History Study:**

- Comprehensive natural history study: people living with ALS, at genetic risk for ALS
- In-clinic and remote collection of longitudinal clinical data and biospecimens (CSF, plasma)
- Rapid enrollment with over 1520 active participants as of April, 2026

➤ **Biomarker Discovery & Validation:**

- Completed biomarker assays utilizing extant samples to identify novel disease signatures. Theses studies will inform subsequent longitudinal studies within the ALL ALS natural history cohort
- Evaluation and validation of ALS biomarkers—including analyte and digital heath technology (DHT)-based biomarkers—using longitudinal ALL ALS biofluid samples and DHT data

➤ **Advancing Clinical Outcome Assessments (COAs**

- Advanced ALSFRS-R statistical standardization through the COAs working group, including manuscript submission on alternative analytical methods and statistical frameworks
- Standardization of advanced respiratory outcome measures(forced and slow vital capacity assessments)
- Established the DHT working group to evaluate digitally derived biomarkers for regulatory readiness

ALS KNOWLEDGE PORTAL

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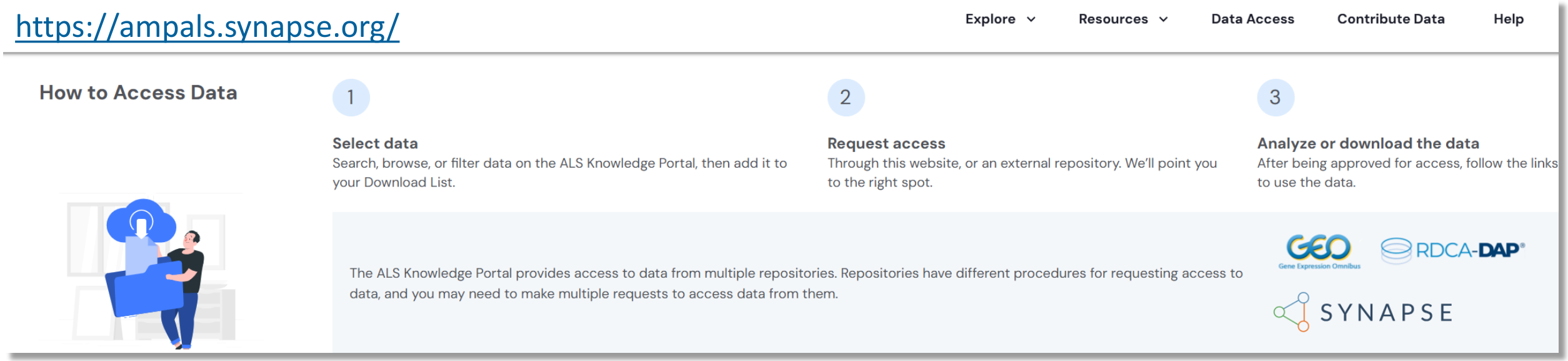
Sage Bionetworks

https://ampals.synapse.org/



- ✓ Launched in August 2025
- ✓ Currently has 25 datasets
- ✓ Uses globally unique identifiers (GUIDS) to support interoperability and linkage of studies
- ✓ ALL ALS data transfers to portal ongoing

ALS Knowledge Portal Website

ALS Knowledge Portal Data Overview

Data Types Available

- Data Types Available
- Transcriptomics (RNA-seq, snRNA-seq)
- Epigenomics (ChIP-seq, ATAC-seq)
- Genomics (Whole Genome Sequencing)
- Clinical Trial Data & Patient Registries
- Biomarker Data (Proteomics, Metabolomics)

Research Focus

- Amyotrophic Lateral Sclerosis (ALS)
- Frontotemporal Dementia (FTD)
- C9orf72, SOD1, FUS, and other genetic variants
- Brain and spinal cord tissue analysis
- Therapeutic intervention studies

Key Data Contributors

University of Michigan

Neuro-CEB

New York Genome Center

Perelman School of Medicine, University of Pennsylvania

ALLALS Access for ALL in ALS

TARGET ALS

Cytokinetics

Massachusetts General Hospital, Founding Member, Mass General Brigham

ANSWER ALS

ALS COMPUTE

CRITICAL PATH INSTITUTE

AMP ALS Newsletter

- Showcases new data resources, consortium progress, and collaborative research advances aimed at accelerating biomarker and therapeutic development in ALS.

- First edition released in January 2026
- Next edition to be released end of June 2026

- Subscribe at www.fnih.org/newsletter/

FNIH
Foundation for the National Institutes of Health

AMP ALS Newsletter: January 2026

Dear Colleagues, Partners, and Members of the ALS Community,

Happy New Year! As we step into 2026, we are filled with renewed hope and excitement for the progress we will make together in the fight against ALS.

The Accelerating Medicines Partnership® in Amyotrophic Lateral Sclerosis (AMP® ALS) represents a critical and collaborative effort to change the pace of discovery in the fight against ALS. By uniting the resources and expertise of government, life science companies, nonprofits, and, most importantly, the people with lived experience, AMP ALS is creating an essential data ecosystem needed to drive the next generation of therapeutic targets and biomarkers. This is not simply a research project but a vital foundation for the future of ALS research.

We are immensely proud and excited to share the significant progress we have made across all facets of the program through this inaugural newsletter. From the launch of the ALS Knowledge Portal, a central hub for data integration, to the accelerated enrollment in the Access for ALL in ALS (ALL ALS) natural history study and our targeted biomarker development efforts, the momentum is undeniable.

We look forward to providing you with regular updates through this newsletter, ensuring transparency and continuous communication regarding our milestones, strategic directions, and opportunities for engagement.

Thank you for your ongoing commitment to this transformative effort.

Sincerely,

Steering Committee Co-Chairs

Dan Doctoroff, Founder and Chairman, Target ALS
Stephanie Fradette, VP, Head of Neuromuscular Development Unit, Biogen
Amelie Gubitz, Program Director, National Institute of Neurological Disorders and Stroke (NINDS)

AMP ALS Partners and Leadership

Public Sector

National Institute of Neurological Disorders and Stroke

U.S. FOOD & DRUG ADMINISTRATION

Ex-Officio

CRITICAL PATH INSTITUTE
collaborate · innovate · accelerate

FNIH

Dan Doctoroff
Target ALS

Private Sector

abbvie

ALS ASSOCIATION

ALS THERAPY DEVELOPMENT INSTITUTE

ALS United

ANSWER ALS

Stephanie Fradette
Biogen

ALS SLA CANADA

AFTD The Association for Frontotemporal Degeneration
FIND HELP·SHARE HOPE

Biogen

EMD SERONO

GSK

Amelie Gubitz
NINDS

Lilly

Mitsubishi Tanabe Pharma

QurAlis™

REGENERON

TARGET ALS

Thank You!

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Q&A

CRITICAL PATH INSTITUTE

Community Perspectives: The Future of RND Research

Moderator: Michelle Campbell, PhD

Fernando Vieira, MD
CEO and Chief Science Officer
ALS TDI

Andrew Rosen, MBA
CEO
National Ataxia Foundation

Brian Lin, PhD
Research Portfolio Director
Muscular Dystrophy Association, USA

Penny Dacks PhD
Chief Scientific Officer
Association for Frontotemporal Degeneration

PANEL DISCUSSION

CRITICAL PATH INSTITUTE

Closing Remarks

C-PATH 2026

GLOBAL IMPACT CONFERENCE

WASHINGTON, DC | SEPT 15-16

Early-bird pricing available!

REGISTER NOW! *https://bit.ly/CGIC2026*

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FDA Acknowledgement

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Last updated on 11/20/2025 and based on C-Path FY2025 annual audit.


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