Project Update
May 2 2011

Enrique Aviles
Director, Data Standards and Management

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Critical Path Initiative - 2004

Memorandum of Understanding Between the United States Food and Drug Administration and the C–Path Institute

AGENCY: Food and Drug Administration, HHS.

BILLING CODE 4160–01–S

scroll down to NDAC or EMDAC).

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Food and Drug Administration

[FDA 225–05–8000]

Memorandum of Understanding Between the United States Food and Drug Administration and the C–Path Institute

AGENCY: Food and Drug Administration, HHS.

ACTION: Notice.

"purpose… to foster development of new evaluation tools to inform medical product development"

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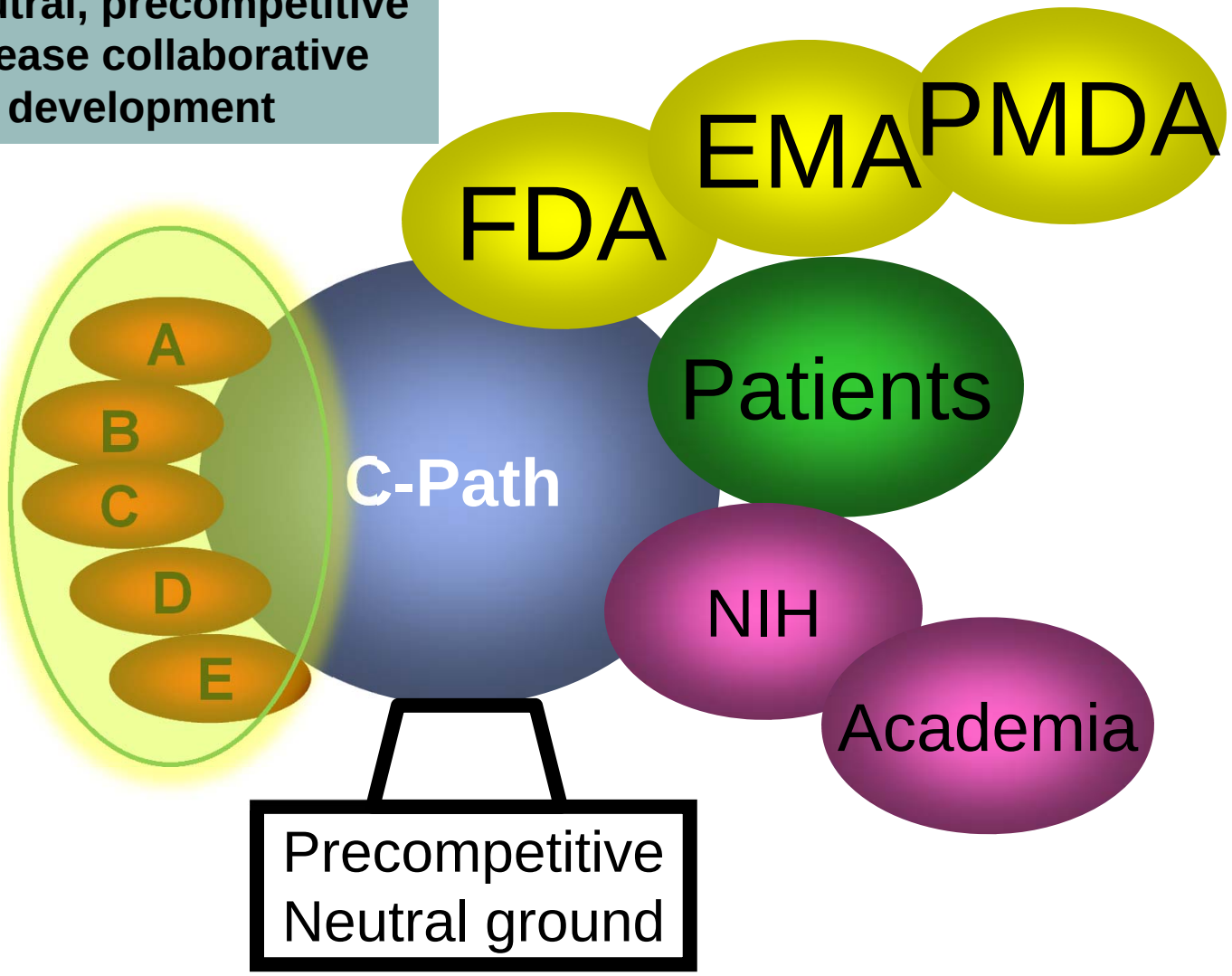
Consortia Model

Critical Path Institute (C-Path) has developed a consortium structure that provides a unique neutral, precompetitive environment to increase collaborative efforts for drug development

Multiple Companies

Formal Legal Agreement



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Consortia Participants

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Industry

Government

Patients

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Creating Consensus

Predictive Safety Testing Consortium (PSTC)

DRUG SAFETY

Patient-Reported Outcome (PRO) Consortium

DRUG EFFECTIVENESS

Coalition Against Major Diseases (CAMD)

UNDERSTANDING DISEASES OF THE BRAIN

Polycystic Kidney Disease Consortium (PKD)

IMAGING BIOMARKERS

Critical Path to TB Drug Regimens (CPTR)

TESTING DRUG COMBINATIONS

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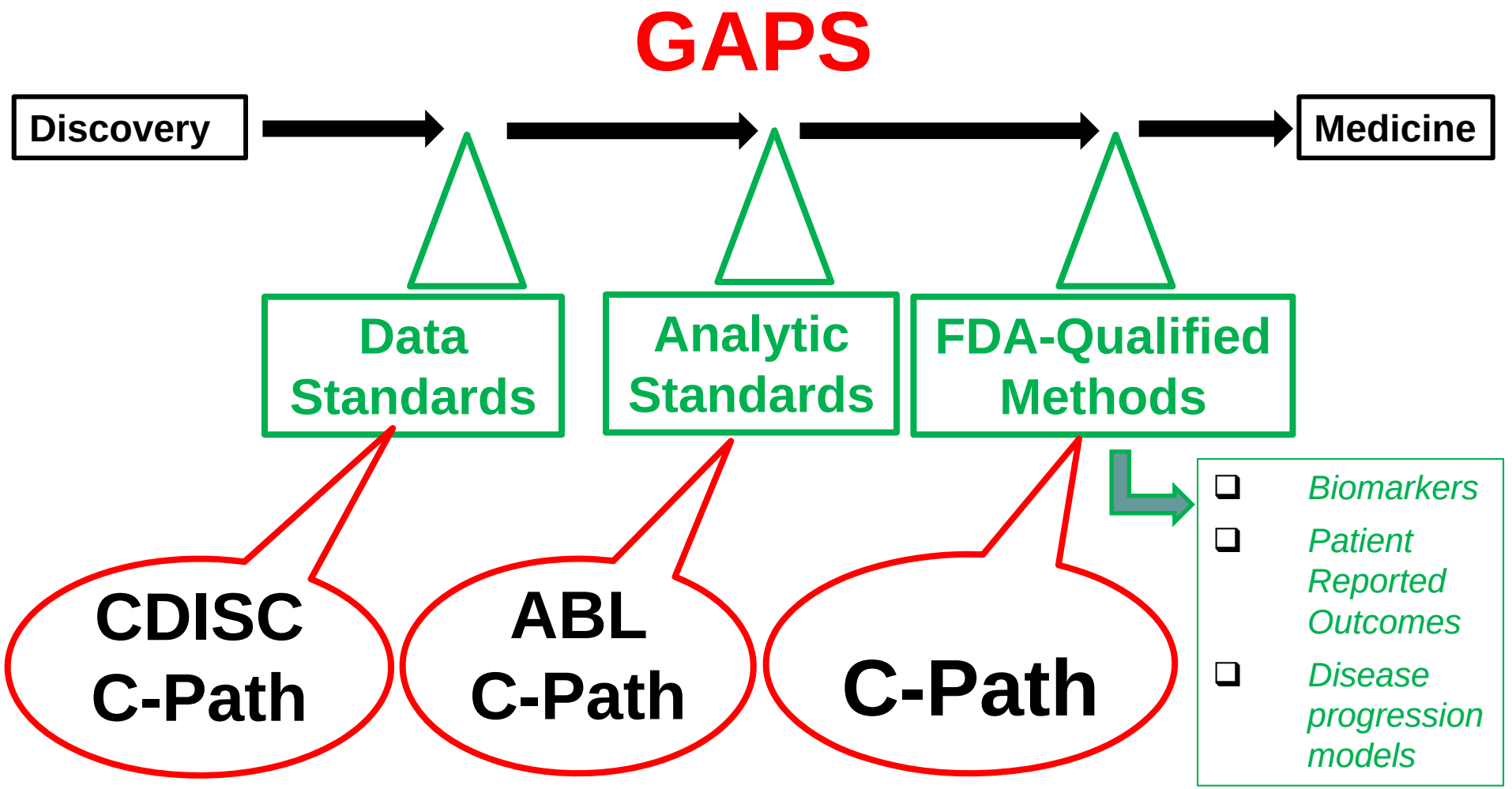
Structural Gaps Filled by C-Path



ABL: Arizona Biosignatures Lab

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C-Path and CDISC Collaborations

C-Path – FDA Qualification

Collaborations

CAMD – Alzheimer's
CAMD – Parkinson's
PKD – Polycystic Kidney Disease
PSTC – Safety Testing
CPTR – Tuberculosis

CDISC – Data Standards

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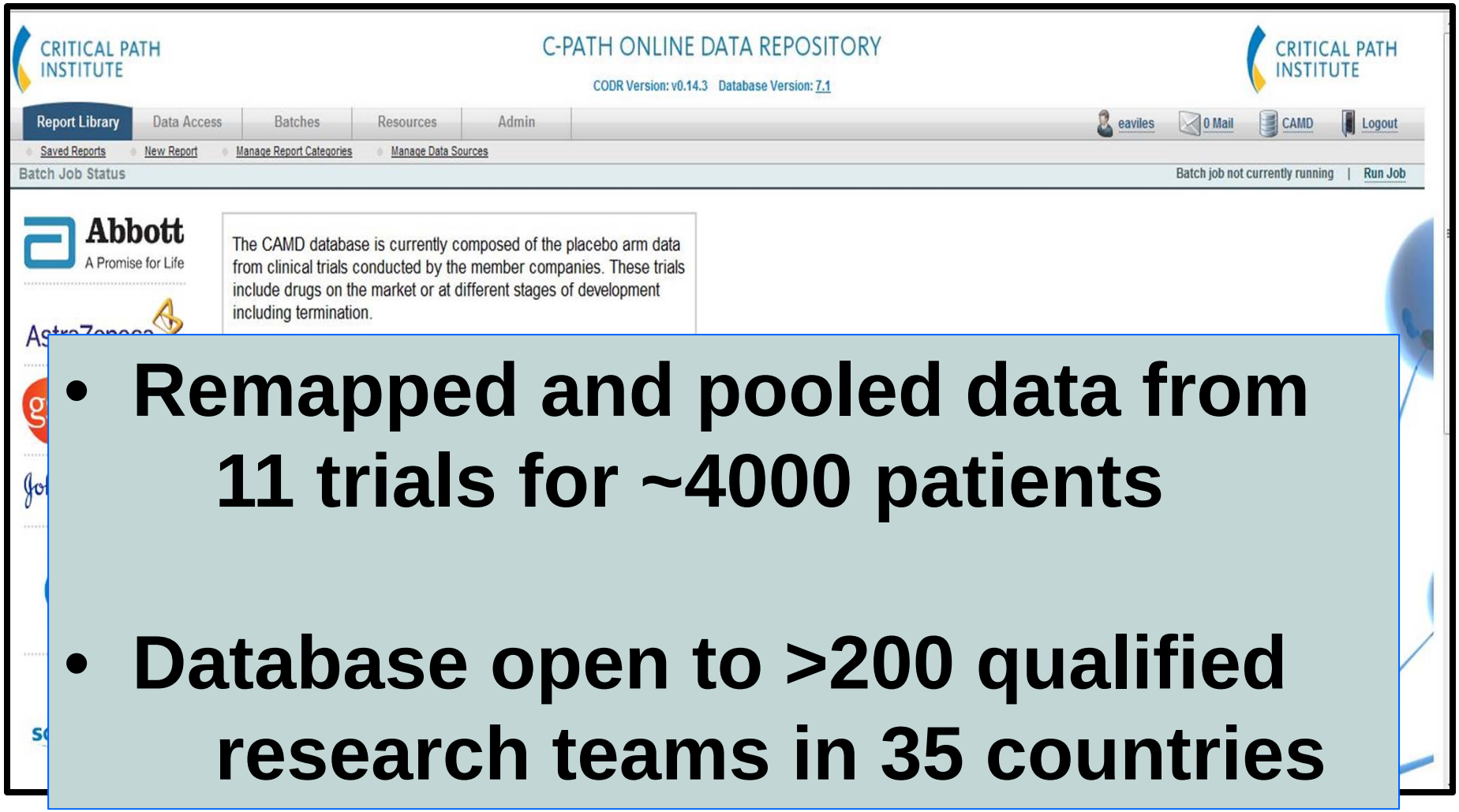
C-Path's Data Repository for Alzheimer's Disease



- **Remapped and pooled data from 11 trials for ~4000 patients**
- **Database open to >200 qualified research teams in 35 countries**

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Autosomal Dominant Polycystic Kidney Disease (ADPKD)

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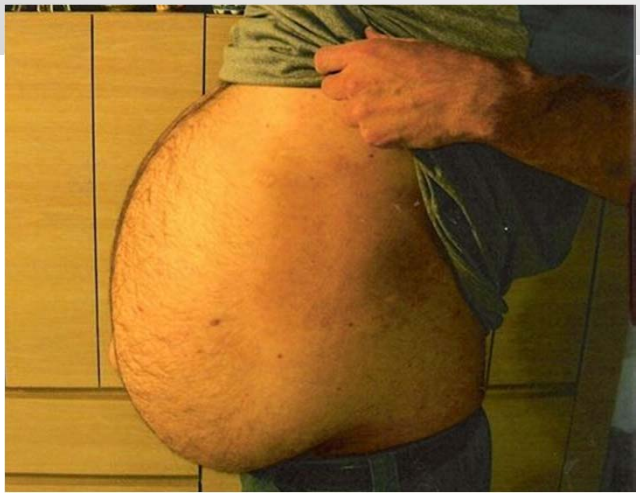
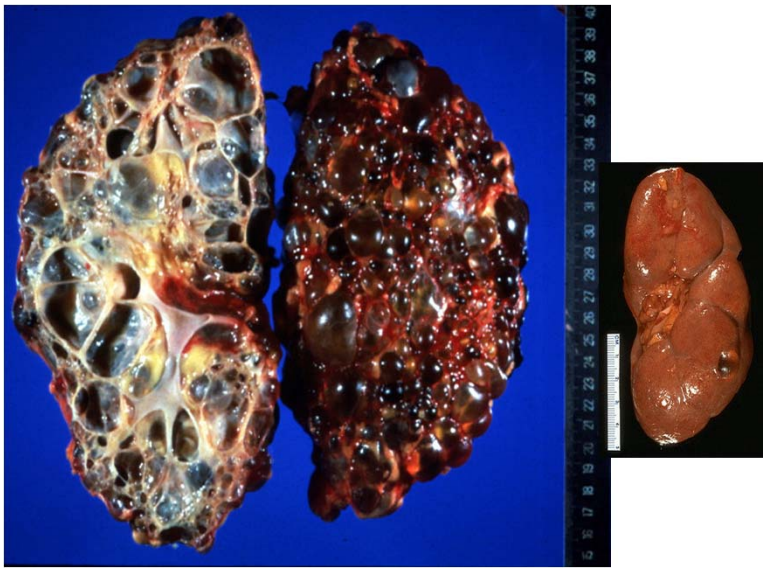
- Hereditary systemic disorder
- Bilateral kidney cysts leading to marked expansion of total kidney volume (TKV)
- Progressive reduction in kidney function
  - Accounts for 8-10% patients on dialysis
- Direct medical costs exceed $1.5 billion/year

NO CURE OR SPECIFIC TREATMENT





Courtesy J. Grantham

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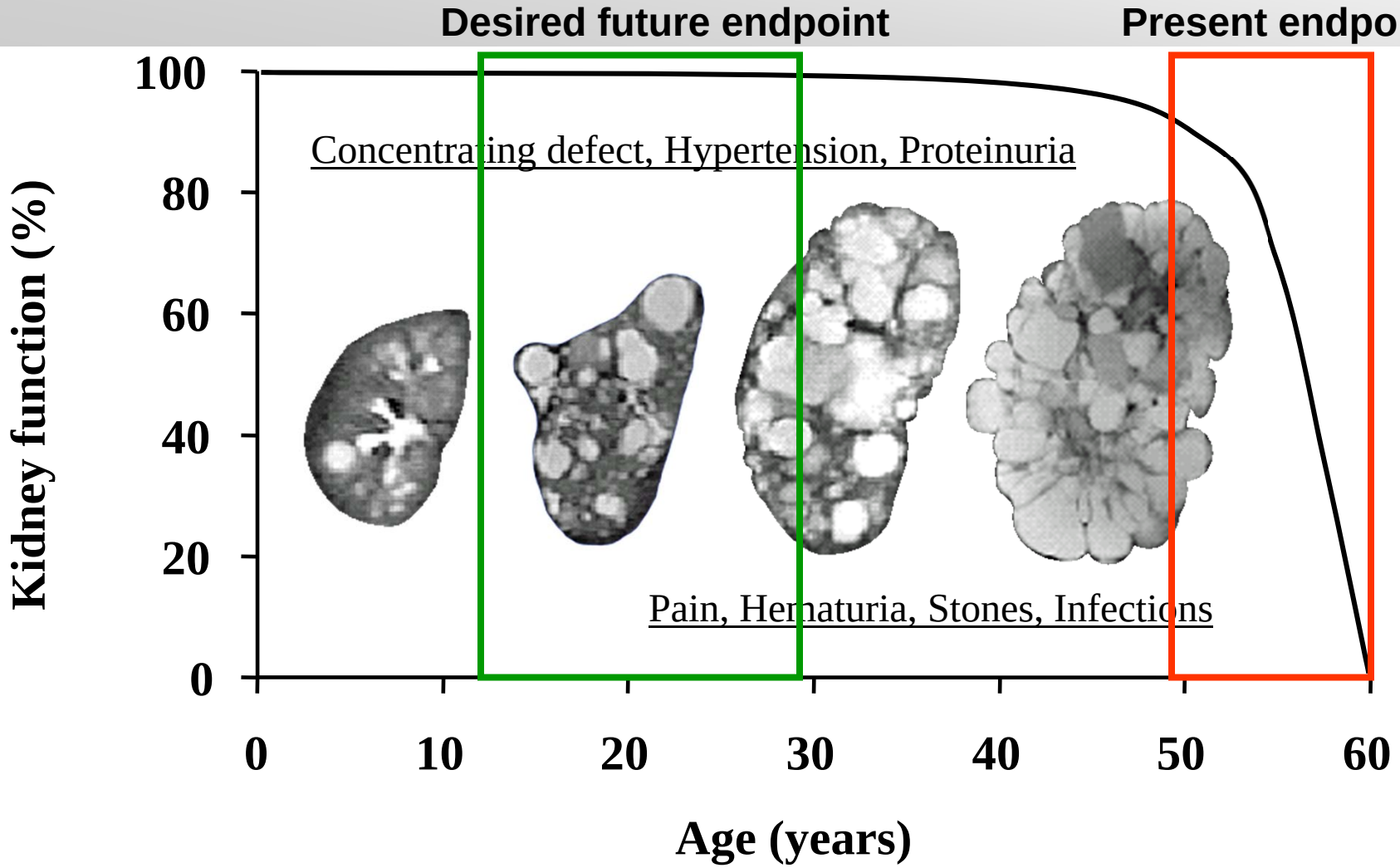
Changing The Paradigm For Measuring Disease Progression



Courtesy V. Torres

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Project Mission and Timeline

- To evaluate TKV as a biomarker to predict progression of ADPKD
- To qualify TKV as a biomarker for use as a clinical endpoint in clinical trials for adult patients with ADPKD
- To accelerate the pace of clinical research and introduction of new therapies

	2009	2010	2011	2012
Develop standard common data elements				
•Public review				
Develop database				
Map data and load database				
Analyze data				
•Develop Disease Progression Model				
Prepare and submit TKV Qualification Packages to FDA and EMA				

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FDA Decision:
"New Testing Methods Approved"

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DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Food and Drug Administration
Silver Spring, MD 20993

April 14, 2008

RE: Review Submission of the Qualification of Seven Biomarkers of Drug-Induced Nephrotoxicity in rats.

Dear Drs. Dieterle, Mattes, and Sistare:

This letter provides the conclusions from our review of your submission supporting the qualification of seven biomarkers of drug-induced nephrotoxicity in rats. We conclude that:

The urinary kidney biomarkers (KIM-1, Albumin, Total Protein, β2-Microglobulin, Cystatin C, Clusterin and Trefoil factor-3) are acceptable biomarkers for the detection of acute drug-induced nephrotoxicity in rats and can be included along with traditional clinical chemistry markers and histopathology in toxicology studies.

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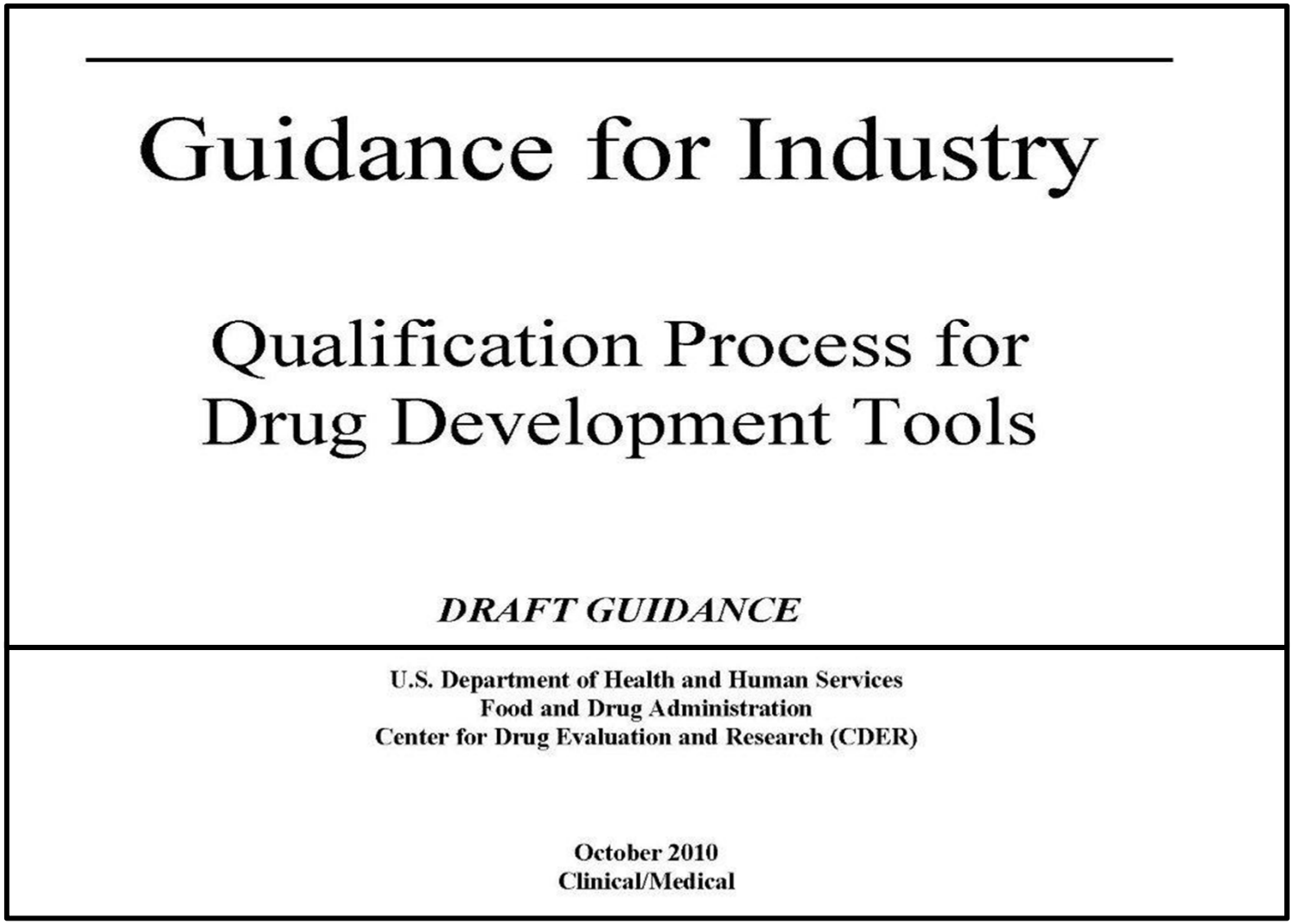
October 2010 – FDA's Draft Guidance for Qualification



Guidance for Industry

Qualification Process for Drug Development Tools

DRAFT GUIDANCE

U.S. Department of Health and Human Services
Food and Drug Administration
Center for Drug Evaluation and Research (CDER)

October 2010
Clinical/Medical

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Qualification of New Testing Methods

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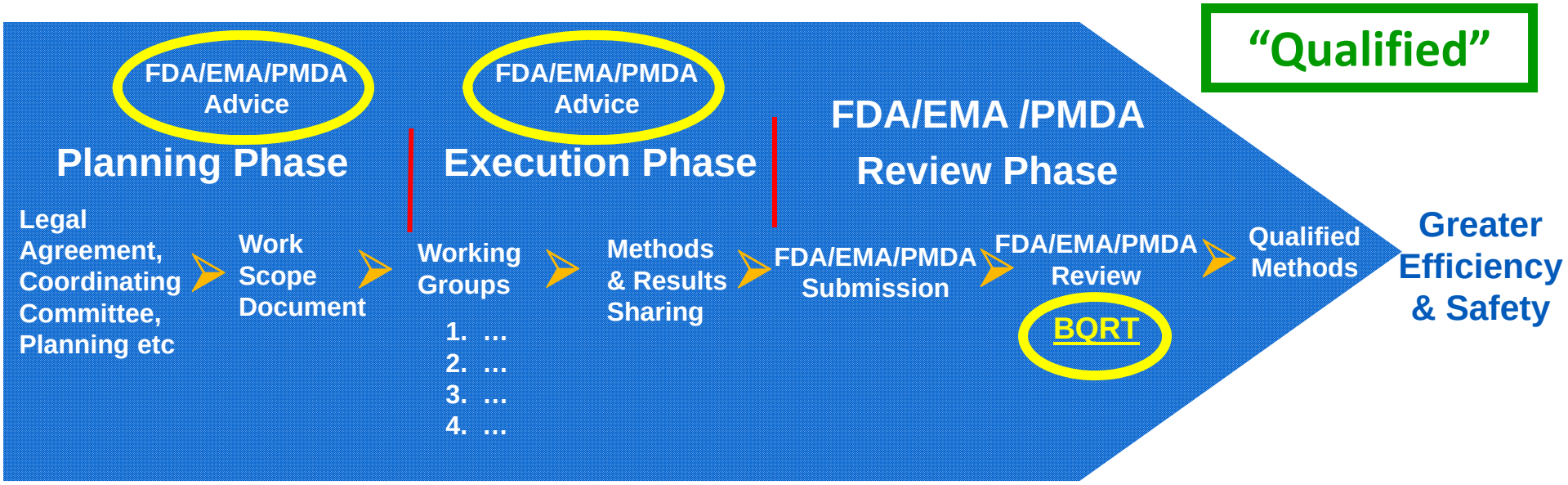
A **new** pathway…..



Scientific Consensus → FDA EMA PMDA

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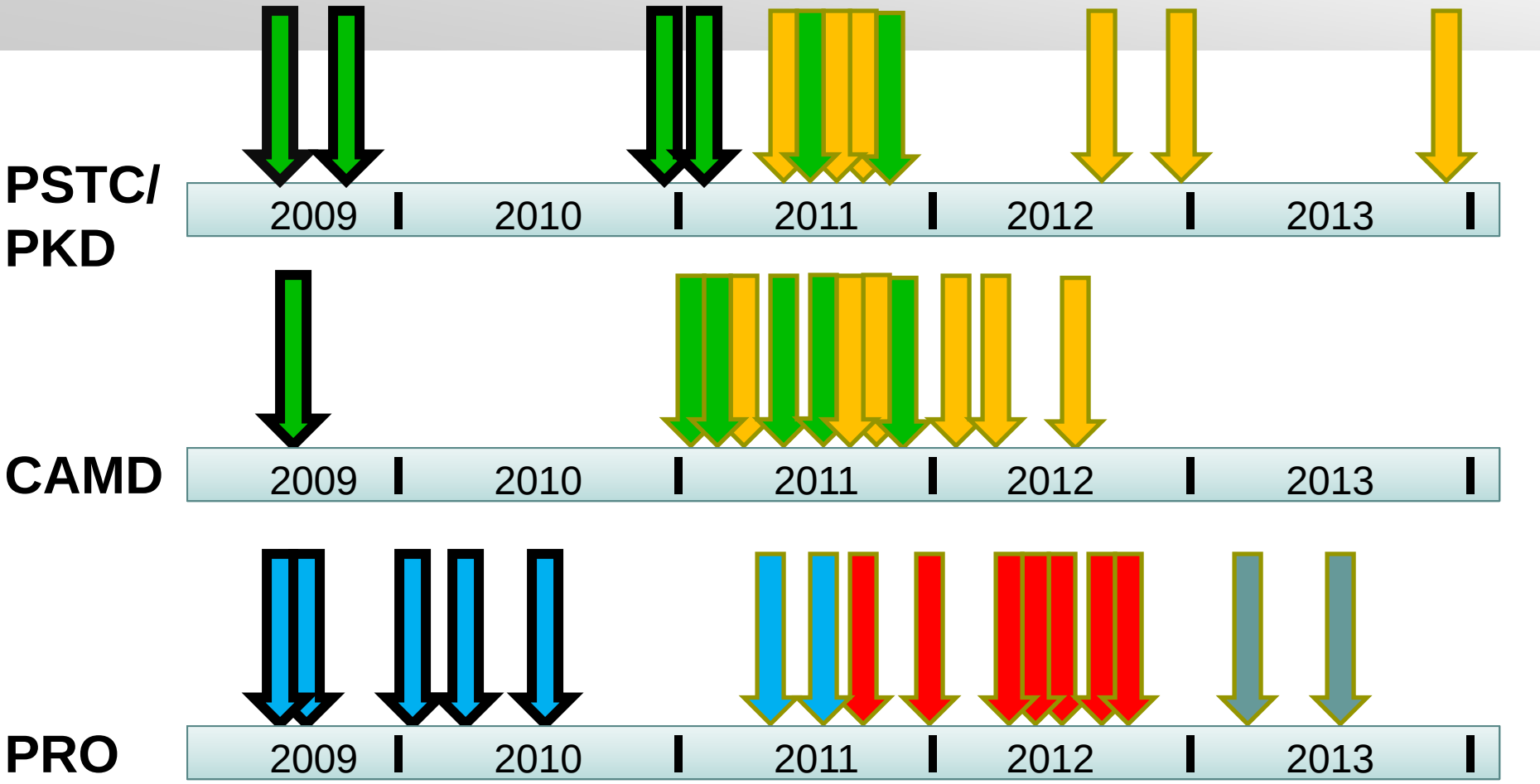
C- Path FDA Submissions



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Summary

- Critical Path Institute (C-Path) and CDISC have partnered to implement improved data standards for clinical trials on an accelerated basis
  - Alzheimer's Disease (complete)
  - Parkinson's Disease (in progress)
  - Polycystic Kidney Disease (in progress)
  - Tuberculosis (in progress)
- C-Path has also partnered with Ephibian, a leading database technology company to develop secure online data repositories for clinical trial data
- C-Path has a collaborative approach to improved regulatory science that provides for:
  - Data mapping and aggregation using CDISC SDTM standards
  - Development and validation of assay standards
  - Development and qualification of biomarkers, disease models and PROs

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Thank You !

www.c-path.org