TUBEROUS SCLEROSIS ALLIANCE
COLLABORATIVE RESEARCH INITIATIVES

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Tuberous Sclerosis Alliance

TUBEROUS SCLEROSIS ALLIANCE (TS ALLIANCE)

The TS Alliance, founded in 1974, is committed to finding a cure for tuberous sclerosis complex while improving the lives of those affected:

- by developing programs, support services and resource information;
- by stimulating and sponsoring research; and
- by creating and implementing public and professional education programs designed to heighten awareness of the disease.

www.tsalliance.org

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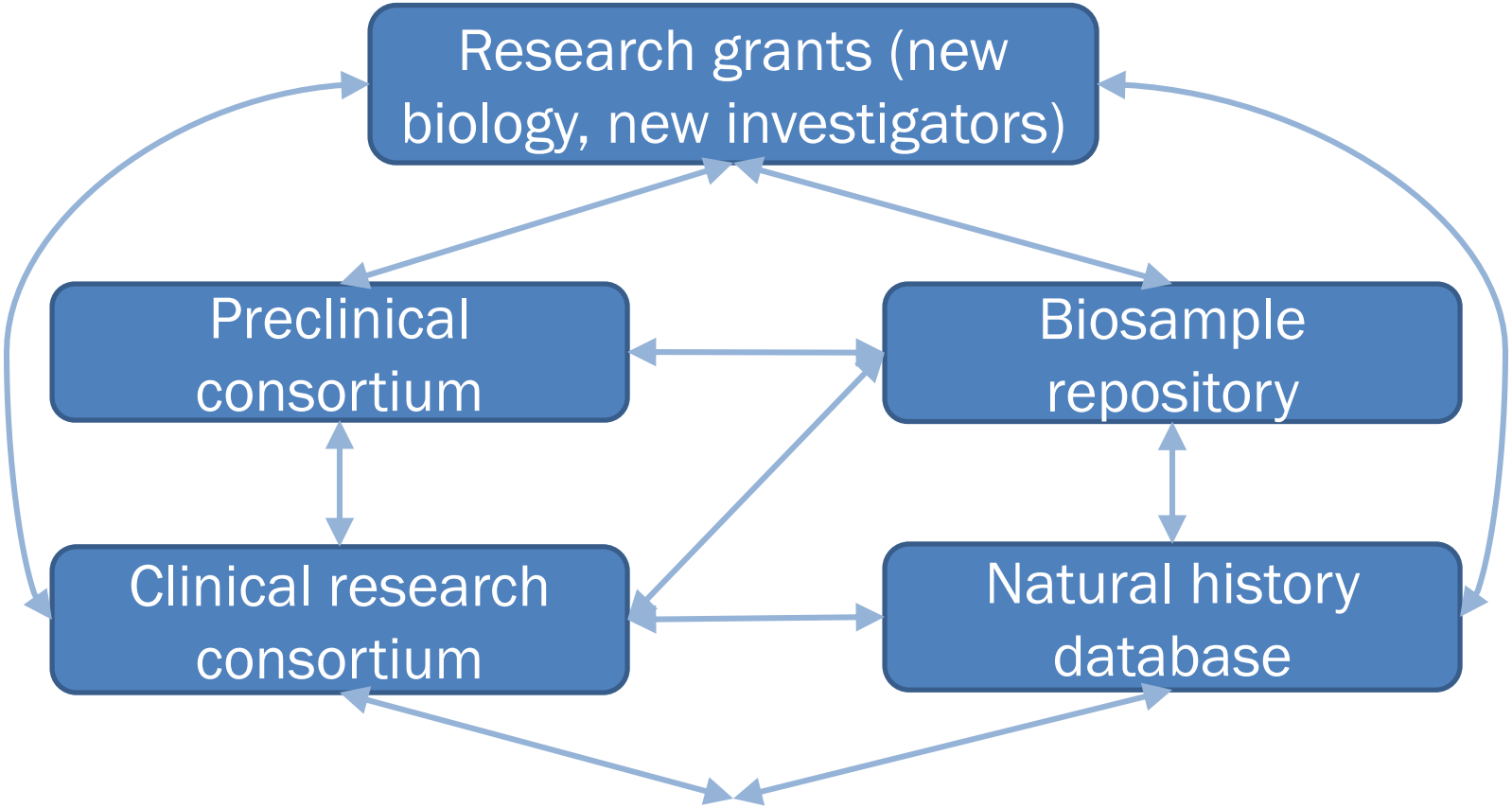
TARGETED RESEARCH INITIATIVES AND COLLABORATION

to accelerate discovery of new treatments and a cure



Improved quality of life, personalized treatment, cure

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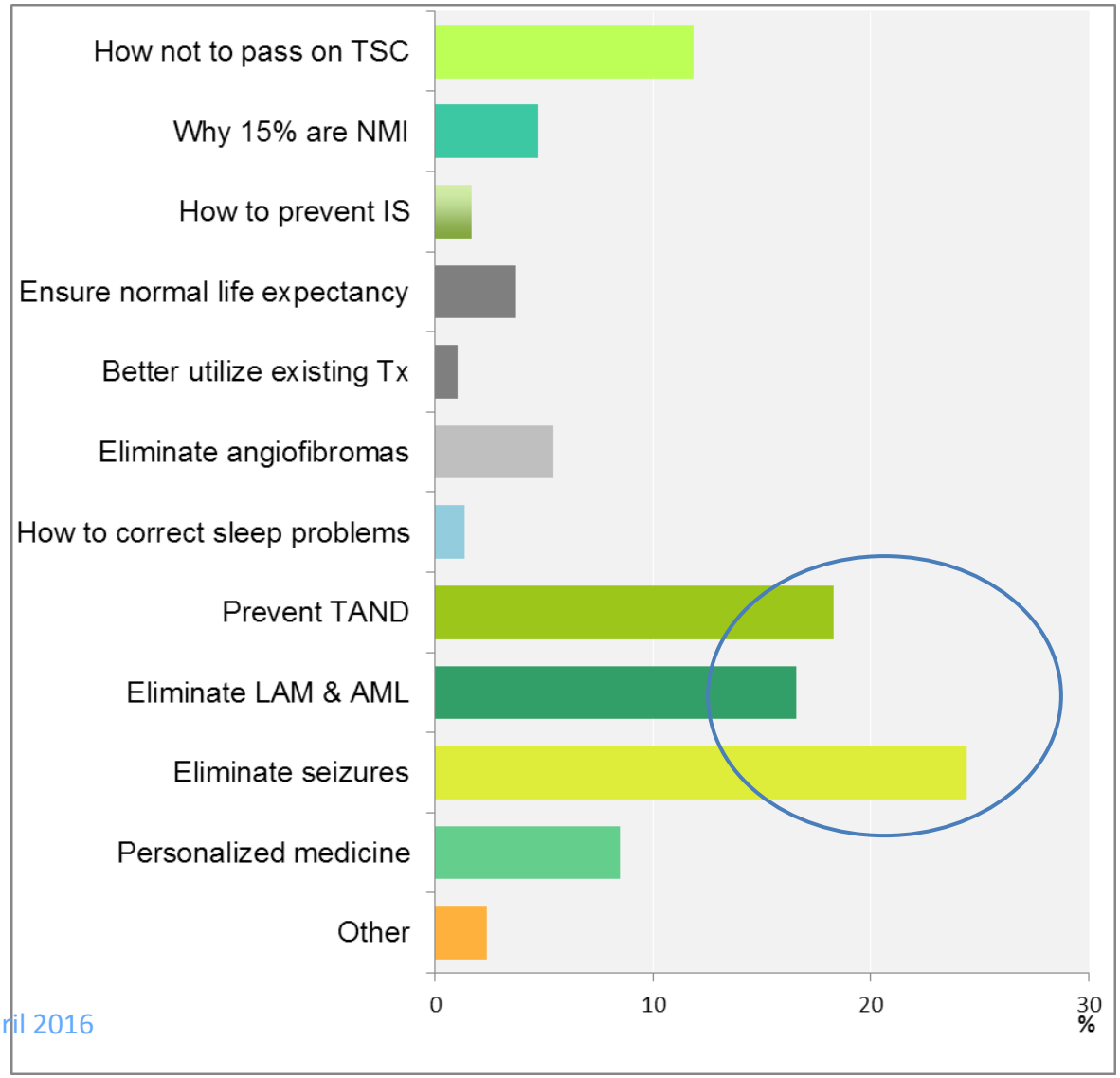
NATURAL HISTORY DATABASE STRATEGY 2016-18

Sub-projects based on TSC constituents' research priorities



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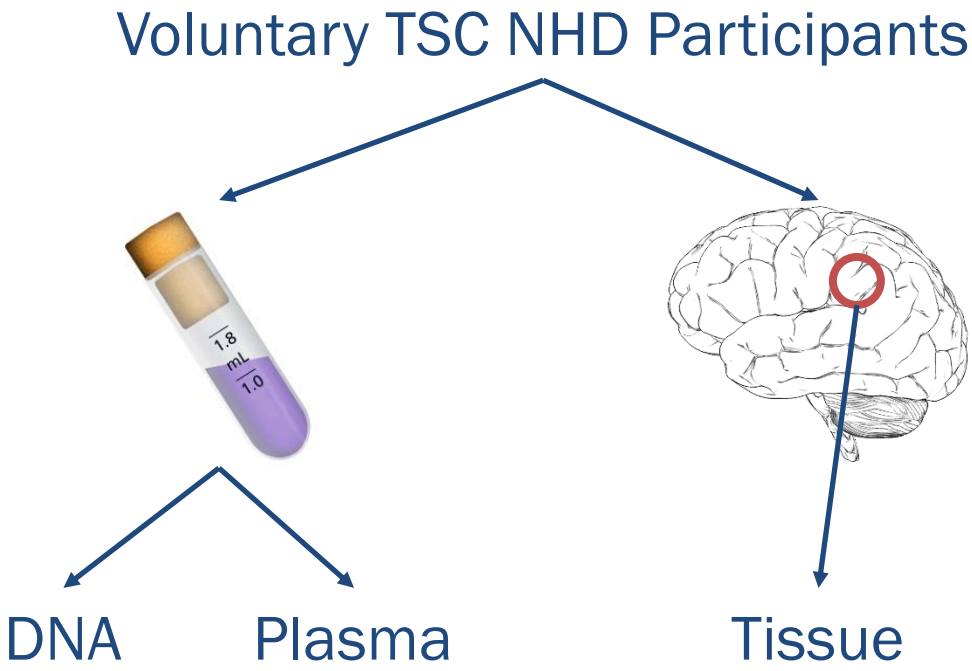
TSC BIOSAMPLE REPOSITORY

Linked to clinical data in TSC Natural History Database (NHD)



Examples of Research Needs

- Understanding phenotypic heterogeneity
- Development of clinical biomarkers
- Patient-derived cells for drug testing

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TSC PRECLINICAL CONSORTIUM

Key piece of TSC research strategy to accelerate drug discovery

- Standardize models, tests and assays for preclinical drug development
  - Re-purpose compounds of interest
  - Test analogs with improved safety profiles
  - Investigate novel compounds and mechanisms of action
- Engage industry and increase opportunities for clinical trials
- Focus on Transparency, Robustness, Replication, Rigor and Translatability

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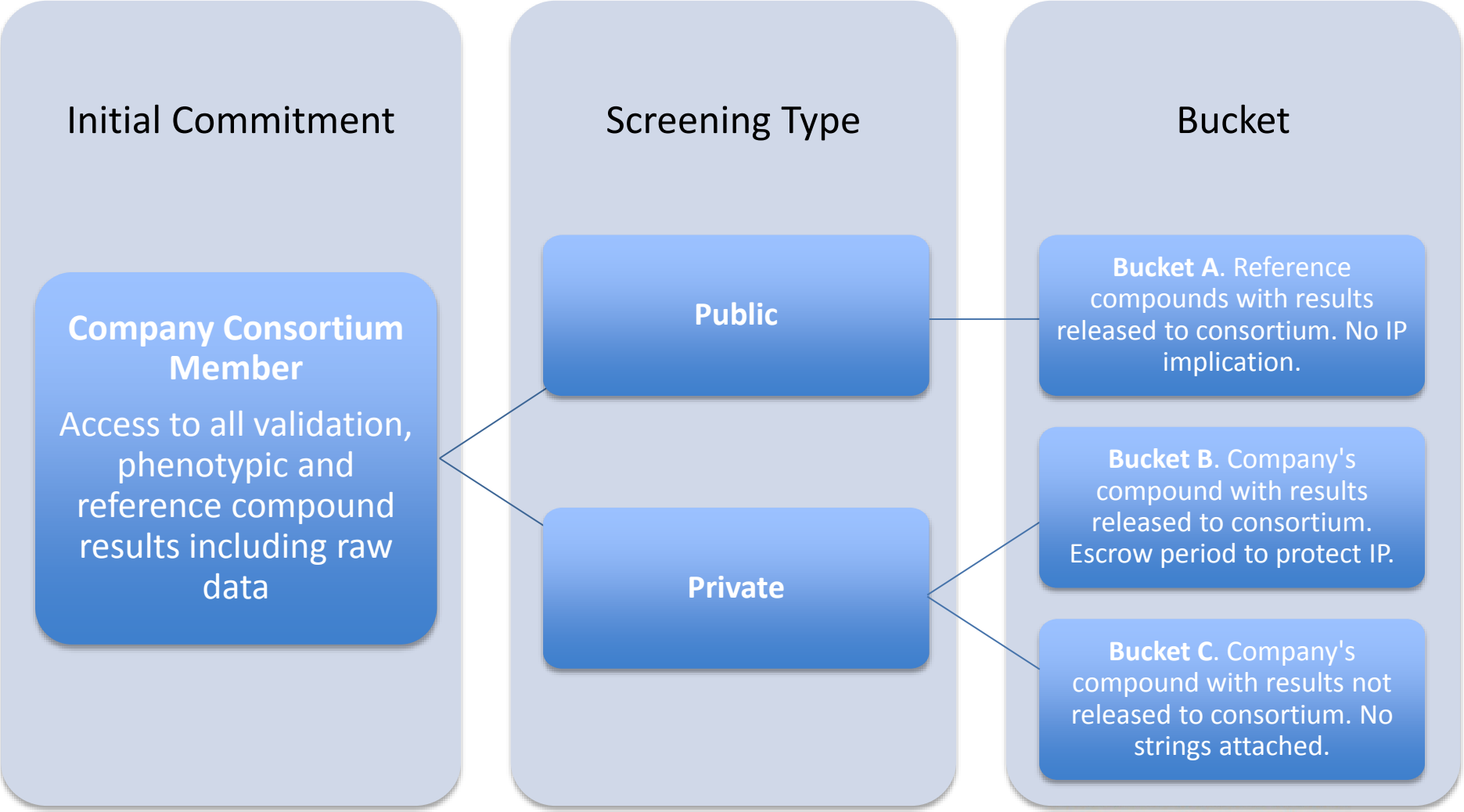
TSC PRECLINICAL CONSORTIUM

Industry screening buckets



TSC CLINICAL RESEARCH CONSORTIUM

Biomarker studies initiated in 2013 funded by NIH

- Identify early markers of risk for autism in TSC (NINDS, NICHD)
- Identify early markers of risk for epilepsy in TSC (NINDS)
  - Regular EEG and imaging evaluation of 40 infants
  - Interim results published in October for 28 infants

	Clinical seizures	No clinical seizures
Abnormal EEG	14	0
Normal EEG	5	9

- Sensitivity-73.7%
- Specificity- 100%
- Positive Predictive Value (PPV)-100%
- Negative Predictive Value(NPV)--64%

Wu et al (2016) *Pediatr Neurol* 54:29-34

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PREVENTING EPILEPSY USING VIGABATRIN IN INFANTS WITH TUBEROUS SCLEROSIS COMPLEX (PREVeNT) TRIAL

- NINDS-funded Phase II study
- Projected start date: Fall 2016
- Multicenter: 7 sites across the US
- Study objective: impact of early versus delayed treatment with vigabatrin on development, assessed at 24 and 36 months of age

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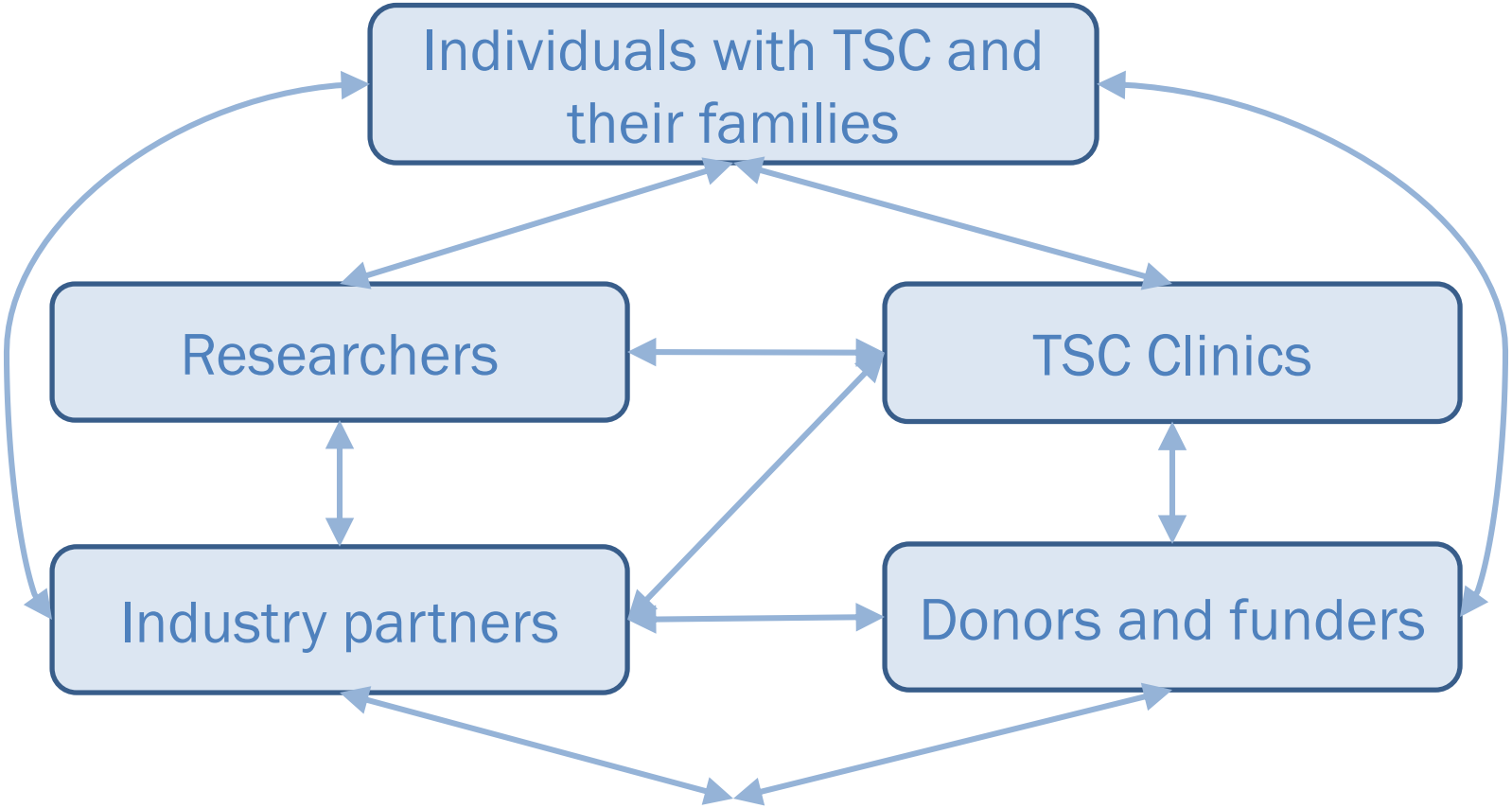
ACKNOWLEGING OUR PARTNERS AND COLLABORATORS



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