Clinical and Translational Science Awards Program
Coordination, Communication, & Operations Support

CTSA Program Webinar

March 27, 2024

National Center for Advancing Translational Sciences

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UNIVERSITY of ROCHESTER

Agenda

TIME	TOPIC	PRESENTERS
2:00 PM ET	Welcome	Lauren Fitzharris, M.P.H., P.M.P. CCOS
2:01 – 2:10 PM	NCATS/CTSA Updates	Mike Kurilla, M.D., Ph.D. NCATS
2:10 – 2:15 PM	CCOS Updates	Kerry James, M.P.H., P.M.P. CCOS
2:15 – 2:30 PM	Advancing Dissemination and Implementation Sciences Working Group	Kathleen Stevens, R.N., Ed.D., ANEF, FAAN UT Health Science Center- San Antionio Jonathan Tobin, Ph.D. Rockefeller University Reza Yousefi-Nooraie, Ph.D., M.Sc. University of Rochester
2:30 – 3:00 PM	Biomedical Data Translator	Tyler Beck, Ph.D., NCATS/ODDP
3:00 PM	Adjourn	

NCATS

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NCATS/CTSA Program Updates

Michael Kurilla, MD, PhD

Director, Division of Clinical Innovation

NCATS

March 27, 2024

National Center for Advancing Translational Sciences

FY 2024 Budget Recap

NCATS Overview

	FY 2023	FY 2024	+/-
CTSA	*At least* $629,560,000	*At least* $629,560,000	$0
CAN	*Up to* $70,000,000	*Shall be available* $75,000,000	$5,000,000
General	$223,763,000	223,763,000	$0
Total	**$923,323,000**	**$928,323,000**	**$5,000,000**

- CAN bill language change: “up to” (ceiling) is now $75 million “shall be available”
- Report language from the Senate mark was adopted

NIH

$48.6B, +$300M over FY23

- +$120M for cancer research
- +$100M for Alzheimer’s disease research
- +$75M for mental health research
- +$12.5M palliative care research program (new at NIA)
- +$10M for the IMPROVE initiative for research on maternal mortality
- +$10M for diabetes research (new at NIDDK)
- +$10M to improve Native American Cancer Outcomes and Research (new at NIMHD)
- +$5M for opioid research (HEAL)

ARPA-H

$1.5B, flat w/ FY23

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Reminder about NIH Guidance on Applications Involving Clinical Trials

- For help with the NIH's definition of a clinical trial, please see NIH's Definition of a Clinical Trial and for help with determining if your human subjects research meet this definition see: Does Your Human Subjects Research Study Meet The NIH Definition of a Clinical Trial?
- **Delayed Start:** For research projects that can be described at time of application, but research will not immediately begin (will occur later in the funding period) applicants should add a study record for each proposed study involving human subjects if your study has a delayed start. As such, the four questions in the clinical trial questionnaire need to be answered "Yes" if the delayed start study involves NIH-defined clinical trial.
- **Delayed Onset:** For research projects that are anticipated within the period of award, but definite plans are not yet known and cannot be described in the application all applicants should check the Anticipated Clinical Trial box, and complete all related sections. Please see the instructions in G.500 PHS Human Subjects and Clinical Trials Information.
- Consistent with NOT-OD-15-129, delayed onset projects will undergo prior approval (See more information here: https://ncats.nih.gov/research/research-activities/ctsa/ctsa-program-governance-guidelines/human-subjects-research).

Please note that misclassified clinical trial applications may be withdrawn: https://grants.nih.gov/policy/clinical-trials/definition.htm

Applicants are strongly encouraged to consult with appropriate Program Staff for guidance.

NIH
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Reminder: Availability of Applicant Information for the CTSA Program Suite

- Technical assistance webinars and application information (FAQs) can be found here: https://ncats.nih.gov/research/research-activities/ctsa/applicant-information
- **Clinical and Translational Science Award (UM1 Clinical Trial Optional)**
  - Introduction Webinar / Introduction Slides
  - UM1 Webinar / UM1 Slides
  - FAQs
- **Research Training and Career Development Awards**
  - Overview Slides / K12 Slides / R25 Slides / T32 Postdoc Slides / T32 Predoc Slides / FAQs
- **RC2 Specialized Innovation Award**
  - RC2 Webinar / RC2 Slides / FAQs
- **Collaborative Innovation Awards**
  - CCIA Webinar / CCIA Slides / FAQs

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Administrative Supplements to CTSA K12/KL2

- NOT-TR-24-015: Notice of Special Interest (NOSI): Administrative Supplements to NCATS CTSA Program KL2/K12 Institutional Career Development Awards as part of the INCLUDE (Investigation of Co-occurring Conditions across the Lifespan to Understand Down syndrome) Project
  - **This Notice of Special Interest (NOSI) will support additional scholars to active KL2/K12grants currently approved under the CTSA Program.**
  - Applicants must have an active NCATS-funded institutional career development (KL2/K12) award.
  - Application Due Date(s) - Applications may be submitted at any time prior to the NOSI expiration date but should be received at least 4 months prior to the requested start date.
  - Jamie Mihoko Doyle, Ph.D. Email: jamie.doyle@nih.gov

https://www.nih.gov/include-project

*NOT-TR-24-014:Termination of NOSI NOT-OD-22-192 - Administrative Supplements to NCATS CTSA Program KL2/K12 Institutional Career Development Awards as part of the INCLUDE (Investigation of Co-occurring Conditions across the Lifespan to Understand Down syndrome) Project

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NIH Simplified Review Framework for NIH Research Project Grant Applications

- NOT-OD-24-010 Simplified Review Framework for NIH Research Project Grant Applications
  - A new framework for the peer review of most research project grant (RPG) applications beginning with submissions for **due dates on or after January 25, 2025**
  - (Mechanisms recently updated!): Proposed for the grants and cooperative agreements with the following RPG activity codes: R01, R03, R15, R16, R21, R33, R34, R36, R61, RC1, RC2, RC4, RF1, RL1, RL2, U01, U34, U3R, UA5, UC1, UC2, UC4, UF1, UG3, UH2, UH3, UH5, (including the following phased awards: R21/R33, UH2/UH3, UG3/UH3, R61/R33)
- **Resources:**
  - Simplifying Review of Research Project Grant Applications
  - Simplifying Review FAQs
  - Direct all inquiries to: simplifiedreview@nih.gov

- NOT-OD-24-081: Registration Open for Webinar on NIH Simplified Review Framework for NIH Research Project Grants (RPGs): Implementation and Impact on Funding Opportunities
  - Wednesday April 17, 2024; 1-2 ET
  - Register here: https://grants.nih.gov/learning-center/srf-updates-to-funding-opportunities

Relevant NIH Notices

- NOT-MD-24-011: Notice of Informational Webinar for PAR-23-144, STrengthening Research Opportunities for NIH Grants (STRONG): Structured Institutional Needs Assessment and Action Plan Development for Resource Limited Institutions (RLIs) (UC2 - Clinical Trial Not Allowed)
  - Date: July 26, 2024
    Time: 01:00 PM in Eastern Time (US and Canada)
  - Webinar link available in the notice

Public Access Policy Reminders

- Applies to any manuscript that is peer-reviewed, accepted for publication in a journal and arises from any direct federal government grant funding support and/or approved voluntary committed cost share.
- ONLY include publications, along with the PMCID (Pubmed Central ID) found in MyNCBI, that were directly resulting from the award.
- For publications where the UM1/UL1 only contributed shared resources, list and/or summarize these publications in section B2. Publications listed and/or summarized in this section will not count against the section's two-page limit.
- Review publication listings **early** to prevent Public Access Non-Compliance. NIH cannot issue an award until all publications are compliant. Repeated submissions of applications with non-compliant publications will result in potential compliance actions.
- For Institutional Training, Career Development, and Related Awards(T32/TL1, R25/RL5, K12/KL2): Trainee, scholar, and participant publications fall under the public access policy if the publication resulted from work conducted while the individual was supported by the award (i.e., receiving a stipend or salary from the award).

To date - 25% of CTSA RPPR submissions for FY 2024 have been non-compliant.

NIH Public Access Policies

Website:
https://sharing.nih.gov/public-access-policy

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Upcoming Dates to Remember

Next CTSA Program Webinar

April 24, 2024; 2-3 PM ET. Register here.

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CCOS Updates

Kerry James
CCOS

The Informatics EC meeting took place last week during the AMIA Summit in Boston, MA

Spring 2024 CTSA Program Groups Meeting

DATE: Friday & Saturday, April 5 & 6, 2024 (after ACTS)

LOCATION: The Paris Hotel, Las Vegas, NV

See Spring Meeting Website for more details and to access the registration link

- **Agenda is listed in *Pacific Time***
- Registration is now closed.
- There is a **virtual option** for CTSA Program Group meetings
- The **UL1/UM1 PI meeting** will be **in person only**
- Questions? Contact CTSASpringMtg@ccos.ctsa.io

Spring 2024 CTSA Program Groups Meeting Draft Agenda

Friday April 05, 2024

11:30 AM - 12:30 PM PDT	UL1/UM1 PI In-person Meeting
1:30 PM - 4:30 PM PDT	Communicators Group
1:30 PM - 6:00 PM PDT	CTSA Program Steering Committee Meeting

Saturday April 06, 2024

9:00 AM - 12:00 PM PDT	Workforce Development Enterprise Committee / KL2 Directors / TL1 Directors Group
9:00 AM - 12:00 PM PDT	Collaboration and Engagement Enterprise Committee
1:00 PM - 4:00 PM PDT	Integration Across the Lifespan Enterprise Committee
1:00 PM - 4:00 PM PDT	Diversity, Equity, Inclusion, and Accessibility Enterprise Committee

NOTE: Detailed session agendas are now available

Strategies for Successful Real World Data Research and Workforce Development

National COVID Cohort Collaborative

New collaboration developed by N3C and CTSA Workforce Development EC

Friday, April 5th
12-3 PM PT
The Paris Hotel, Las Vegas, NV

- Tailored for Decision Makers, PIs, Clinical Informaticists, Program Directors and Instructors, this workshop dives into the intricacies of incorporating real-world data (RWD) into clinical trials and research studies, including discussing team science and the diverse roles and expertise needed for successful RWD research.
- Interactive breakouts will help you gain insights into data quality issues, understand the nuances, and discover the future of RWD training and infrastructure to support research.
- Don’t miss this opportunity to shape the future of clinical research and empower the next generation of professionals in this field!
- ***This meeting is being coordinated by N3C***. For questions or more information, contact Shawn O'Neil (shawn.oneil@cuanschutz.edu) or Anita Walden (anita.walden@cuanschutz.edu).
- Registration is closed.

Spring 2024 CTSA Program Group Meetings

UL1/UM1 PI Meeting

- The 1-hour meeting will take place on April 5th at 11:30am after the close of the ACTS meeting at the Paris Hotel (same hotel as ACTS).
- The discussion will center on, *"How the CTSA and DEIA Initiatives fit into NCATS Strategic Plan and Planning."*
- Drs. Kurilla and Rutter will provide an overview of the strategic plan and engage in a discussion with the CTSA PIs.
- CCOS sent an email with a survey link to enter question(s) that PIs would like to raise at the meeting. The survey will stay open so PIs can "upvote" questions submitted by other PIs.

Still Time to Register

Learning Health Systems Collaborative Workshop

ACCME ACCREDITED WITH COMMENDATION

Co-sponsored by:

- **The Coordination, Communication, and Operations Support (CCOS) Center**
- **Wake Forest CTSI and Wake Forest University School of Medicine**

What's Our Focus?

Bringing together:

- CTSA Program representatives
- Researchers
- Clinicians
- Policymakers
- Healthcare innovators
- Opinion leaders
- Other healthcare professionals

Wednesday, May 22, 2024
8:00 am – 4:30 pm ET
In-Person Meeting

Sanger Heart & Vascular Institute
Kenilworth Medical Office Building 1
1237 Harding Place
Charlotte, NC 28204

Stay Updated on Collaborative Workshops!
Visit ccos-cc.ctsa.io/groups/collaborative-workshops
Email collaborative_workshop@ccos.ctsa.io

SCAN ME TO REGISTER

Why Attend?

This is an opportunity for CTSAs to:

- Form teams around LHS
- Learn about the ways the CTSAs have and can support LHS
- Research implementation science and operations to address translational science barriers

NIH National Center for Advancing Translational Sciences

Wake Forest University School of Medicine

CTSI Your Partner In Research

TEAM SCIENCE

CCOS

Learning Health Systems Collaborative Workshop

ACCME ACCREDITED WITH COMMENDATION

ACCREDITATION: The University of Rochester School of Medicine and Dentistry is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

CERTIFICATION: The University of Rochester School of Medicine and Dentistry designates this live activity for a maximum of 5.25 *AMA PRA Category 1 Credit(s)™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Questions? Email us at collaborative_workshop@ccos.ctsa.io

SCAN ME TO REGISTER

TEAM SCIENCE

CCOS Website Updates

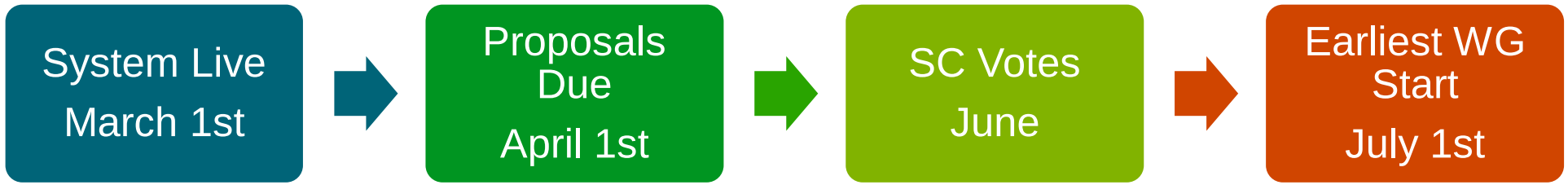
- Recent Updates include:
  - **Pod Submission Form** for Steering Committee Pod Leads and Pod **Submission archive**
  - **Collaborative Workshop** landing page and other links to the LHS Workshop in May
  - **CTSA Program Webinar** landing page with link to archived meetings and materials/recordings
  - **Spring 2024 CTSA Program Group Meeting** details and registration
  - **CTSA Program Governance and Guidance documents**
  - **CTSA Working Group Proposal** submission form improvements
  - **CCOS Survey** landing page (to be launched on 3/29/24)

COORDINATION

Next Cycle for Working Group Proposals

Working Groups Proposal Submission portal for Cycle XII open on CCOS website during the month of **March 2024**

WG proposals deadline is **April 1st at 3pm ET**



Want to stay up to date on the CTSA Program?

Follow this link or scan the QR code to join the CCOS All Communications Email List to receive CTSA Program communications and updates:

http://eepurl.com/iw9nZA

Remember to add communications@ccos.ctsa.io to your contacts list to prevent important CCOS emails from ending up in your spam folder!

Advancing Dissemination and Implementation Sciences Working Group:

Equity-focused Dissemination & Implementation Science in Clinical Research, Clinical Practice and Communities

Report to Steering Committee

March 25, 2024

Status as of February 2024

Co-Chairs

Dr. Kathleen R. Stevens
Castella Endowed Distinguished Professor
University of Texas Health Science Center at San Antonio

Dr. Reza Yousefi-Nooraie
Assistant Professor
University of Rochester Medical Center

Dr. Jonathan N. Tobin
Co-Director, Community Engaged Research
The Rockefeller University
President/CEO
Clinical Directors Network (CDN)

UT Health San Antonio

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Membership

- Audie Atienza, NCATS
- Tiffany Pineda, University of Florida
- Victor Montori, Mayo Clinic
- William Calo, Penn State
- Janey Van Cleave, UT Health Houston
- Emma Meagher, University of Pennsylvania
- Eunyoung Kang, UT Health Houston
- George Jackson, UT Southwestern
- Yan Du, UT Health San Antonio

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DIWG GOALS 2023-2025

1. **Advance critical links between research and practice communities through Practice Based Research Networks (PBRNs)** by understanding how principles of engagement science and implementation science apply to (a) generating new knowledge and (b) disseminating and implementing new knowledge into practice.
2. **Expand critical links between D&I and clinical research** through building capacities at local hubs to create equity-focused D&I competencies for translational and clinical researchers, *working closely with related Enterprise Committees that are focused on community engagement, informatics, learning health systems and workforce development.*

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DELIVERABLES

Best practices of promoting equity-focused D&I research through ***partnership between CTSA and practice-based research models*** *(PBRNs):*

1: **Case presentations,** through publicly accessible webinars

2: **Qualitative analysis of best practice cases**

3: **Survey** of quality and strength of alignment between PBRNs and CTSA hubs, support exchange, needs and priorities, and activities related to D&I research, across the CTSA consortium.

4: **Consensus paper on training guidelines to achieve minimum competencies** of equity-focused D&I research and practice for clinical and translational researcher and implementers, applicable by CTSA hubs.

5: **Expanded Compendium of D&I resources** to include model curricula for training and disseminating equity-focused D&I competencies, and models of integrating D&I into practice-based research models.

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1: Case presentations of best practices

Expected Completion Date: June 2025

- Call for case study presentations and direct recruitment of experts from outside the WG.
- Request presenters to include considerations of **health equity and DEI** in PBRN-CTSA partnership activities.
- Provide public access through CCOS services.

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1: Case presentations of best practices in PBRNs

Case presentations (5 completed/18 anticipated = 27.7% as of February 2024)

- ***Designing for Dissemination within UW-Madison's Community-Academic Aging Research Network*; Jane E. Mahoney, MD**
- ***Building Full Spectrum Translational Research Teams: Case Studies of Engaging Basic Scientists with Community Clinicians and Community-based Organizations in Studying Implementation*; Jonathan N Tobin, PhD**
- ***Blending Implementation Science, Quality Improvement and Participatory Methods: Learning from Two Decades of Work in the Oregon Rural Practice-Based Research Network*; Melinda Davis, PhD**
- ***A Tale of Two PBRNs: National Dental PBRN and South Texas Oral Health Network*; Rahma Mungia, BDS, MSc, DDPHRCS**
- ***Synergistic collaboration for infrastructural support of PBRNs and CTSAs: Example of WWAMI region Practice and Research Network;* Sebastian Tong, MD, MPH**

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1: Case presentations of best practices in PBRNs

Future presentations:

- ***Lessons learned from implementation and evaluation of national policies focused on improving psychosocial health in the US and Latin America;*** **Heidi Luft, PhD, RN**
- ***Application of IS models and methods for community-engaged preventive health care solutions for underserved communities;*** **Borsika Rabin, PhD, MPH**

2: Qualitative Analysis of Case presentations

Expected Completion Date: June 2025 (10% progress)

Qualitative analysis is dependent on case studies accumulated through Deliverable 1, which provides the data for analysis.

- **Development of an analysis framework (10%)**
- Data extraction from recorded Case Studies
- Qualitative analysis
- Reporting and dissemination

The analytic framework will be developed in tandem with the framework for the survey (Deliverable 3) and based on prior PBRN-CTSA survey.

3: Survey of quality and strength of alignment between PBRNs and CTSA

Expected Completion Date: March 2025 (10% progress)

- **Finalize survey domains**
- **Finalize selection of items from prior surveys related to domains**
- Circulate draft Survey instrument to DIR Workgroup
- Pilot draft survey with 3-5 DIWG Workgroup members
- Design final online Survey in REDCAP with CCOS
- Disseminate online REDCAP Survey to all CTSAs
- Follow-up request with non-respondents
- Tabulate Survey results with CCOS
- Present Survey results and summary to DIWG
- Draft Survey Final Report

4: A **consensus paper** on training guidelines to achieve **minimum competencies** of equity-focused D&I research and practice for clinical and translational researcher and implementers, applicable by CTSA hubs

Expected Completion Date: July 2025 (10% progress)

- **Formation of the authorship team**
- **Review of existing evidence**
- Development of recommendations
- WG feedback
- Reporting and dissemination

- Baumann et al. **A Scoping Review and Critique of the Literature on Translation, Dissemination and Implementation Capacity-Building Initiatives for Various Audiences**

- Narrowing down the project goals upon the progress documented in the Baumann et al. narrative review.
- Plan for the best strategies for consensus development
- Focus on framing the project to inform translational sciences.
- Focus on health equity and DEI

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5: Expand the Compendium of D&I resources to include model curricula for training and disseminating equity-focused D&I competencies & models of integrating D&I into practice-based research models

Expected Completion Date: June 2025 (45% progress)

- A paper reporting on the adoption of compendium [under review].
- working with new sites to integrate the Compendium tool into website and workflows in academic research and working with community organizations.
- Strategies on incorporating equity-focused D&I curricula and practice-based research models.
- Partially dependent on deliverables 1-4 (PBRN Survey, Analysis of Case Studies, Narrative Review of Competencies)

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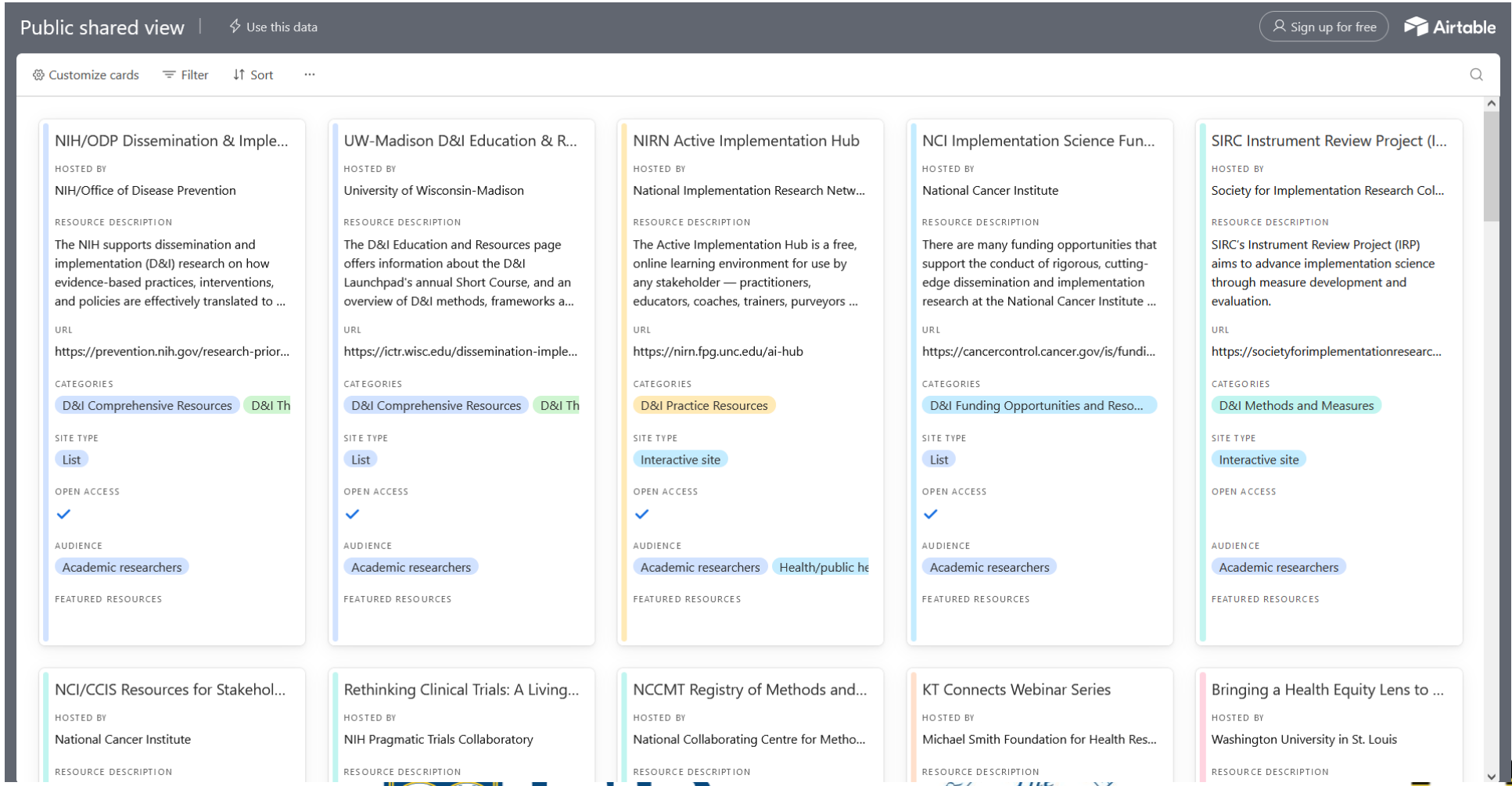
5: Expand the Compendium of D&I resources to include model curricula for training and disseminating equity-focused D&I competencies & models of integrating D&I into practice-based research models (Add URL)



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Working Group as a Community

- 164 members
- 1 meeting per month of 80 minutes duration, with dedicated time for team task work.
- Partnership with other WGs and funding agencies?
- Future presenters:
  - Tara G. Mehta, PhD - University of Illinois at Chicago
  - Leigh Johnson, MPH - NYU Langone Health
  - Bijal Balasubramanian, MBBS, PhD - UTHealth Houston
  - Borsika Rabin, PhD, MPH - UC San Diego
- Google suite shared workspace coming soon!

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Questions for the Steering Committee

- Is the progress satisfactory to date?
- Are there other goals or deliverables that we missed in the conception of this WG that you think we need to incorporate now to enhance the significance?
- Are there any suggestions as to how to enhance the dissemination of the deliverables of this WG to other initiatives and target audience?
- How can we best use the resources and services by CCOS to enhance our impact?

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Please enter questions for the Advancing D&I WG Leads in the Q&A box in Zoom

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NCATS' Biomedical Data Translator: Connecting the Dots

Tyler F. Beck, PhD

Program Director, Office of Drug Development Partnership Programs

National Center for Advancing Translational Sciences, National Institutes of Health

National Center for Advancing Translational Sciences

The Problem

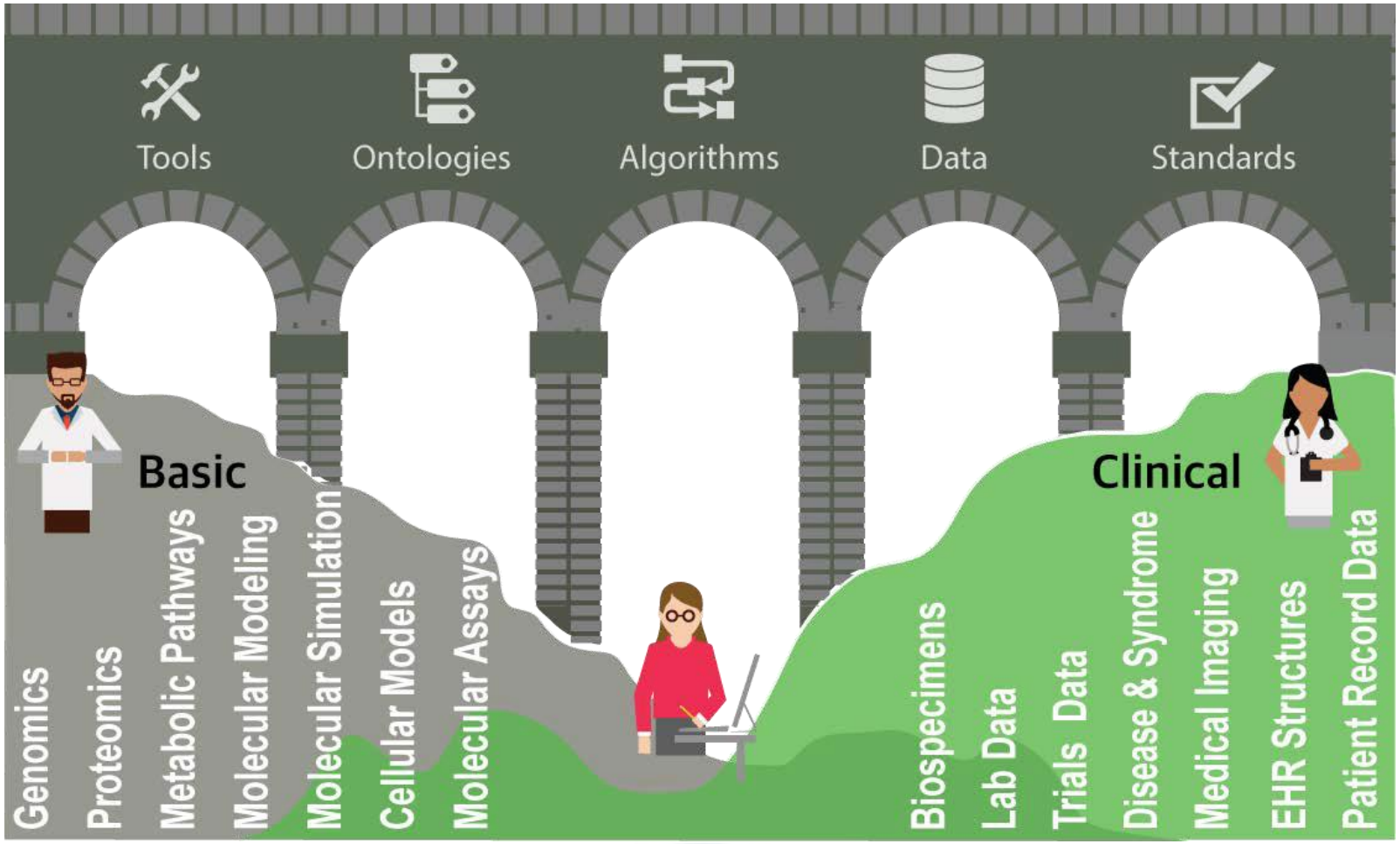
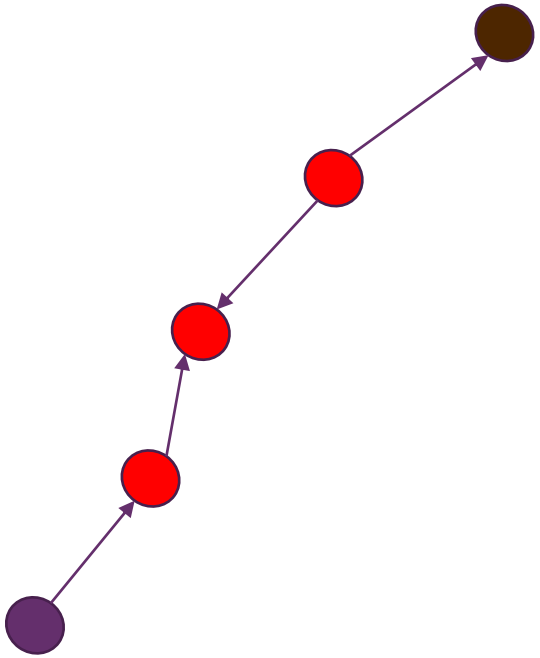


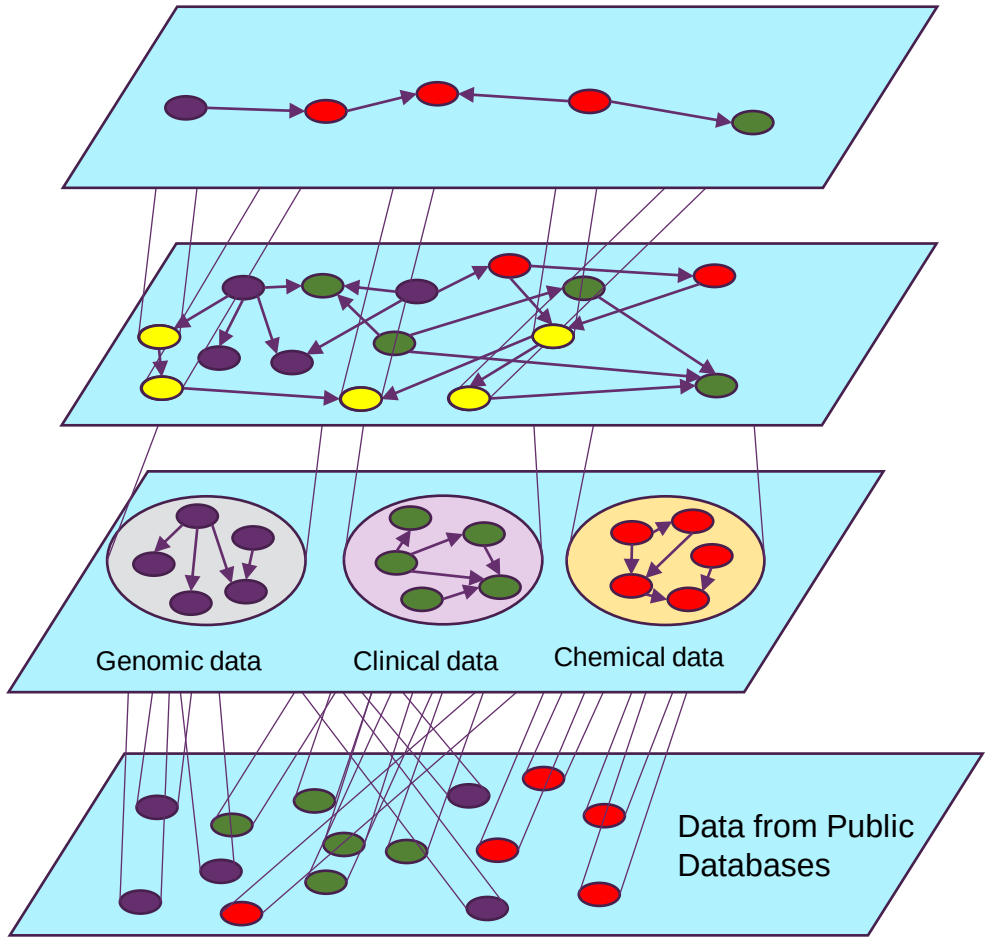
Figure courtesy of Julie McMurry & Chris Chute

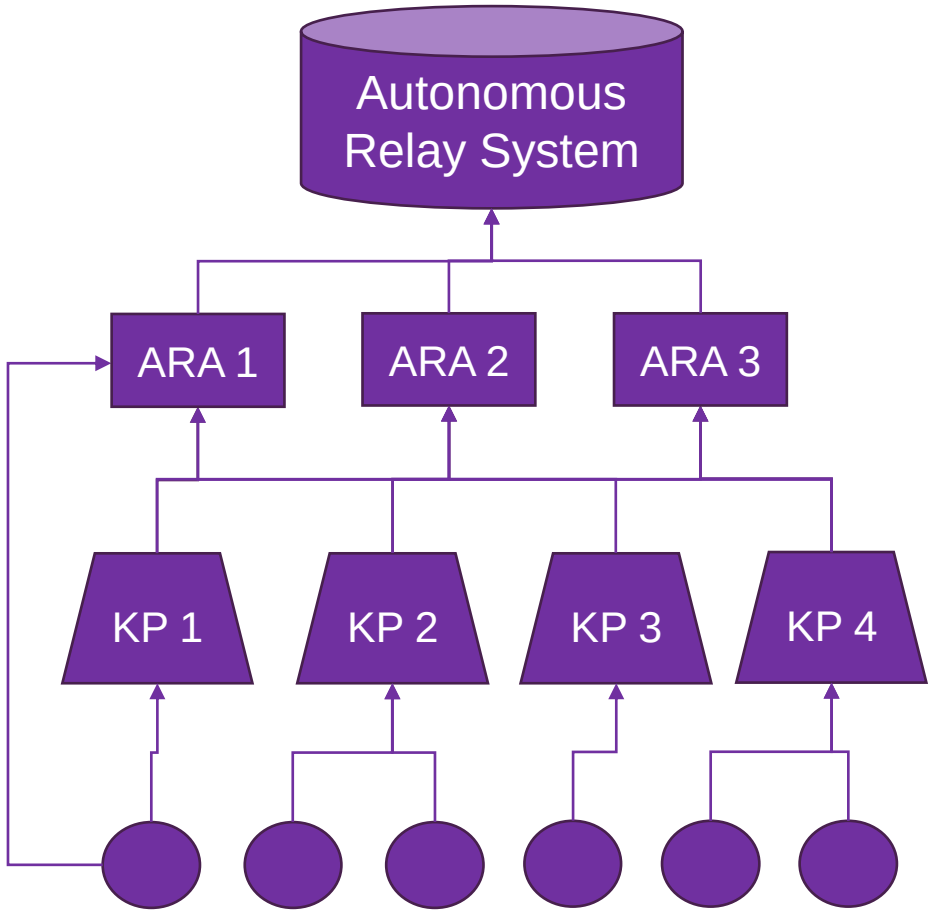
What is the Biomedical Data Translator?

Translator



Translator Architecture



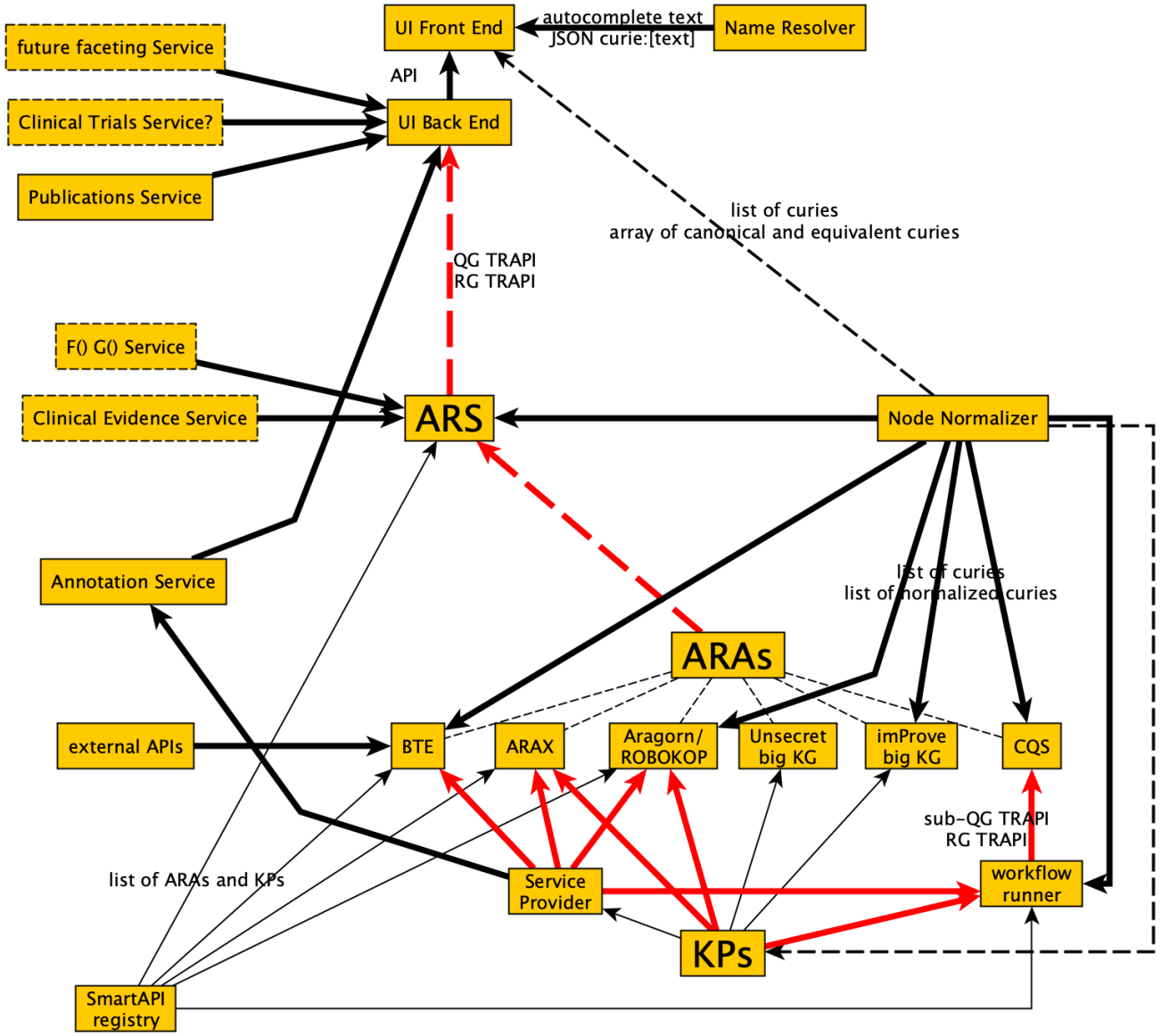


Autonomous Relay Agents

Knowledge Providers

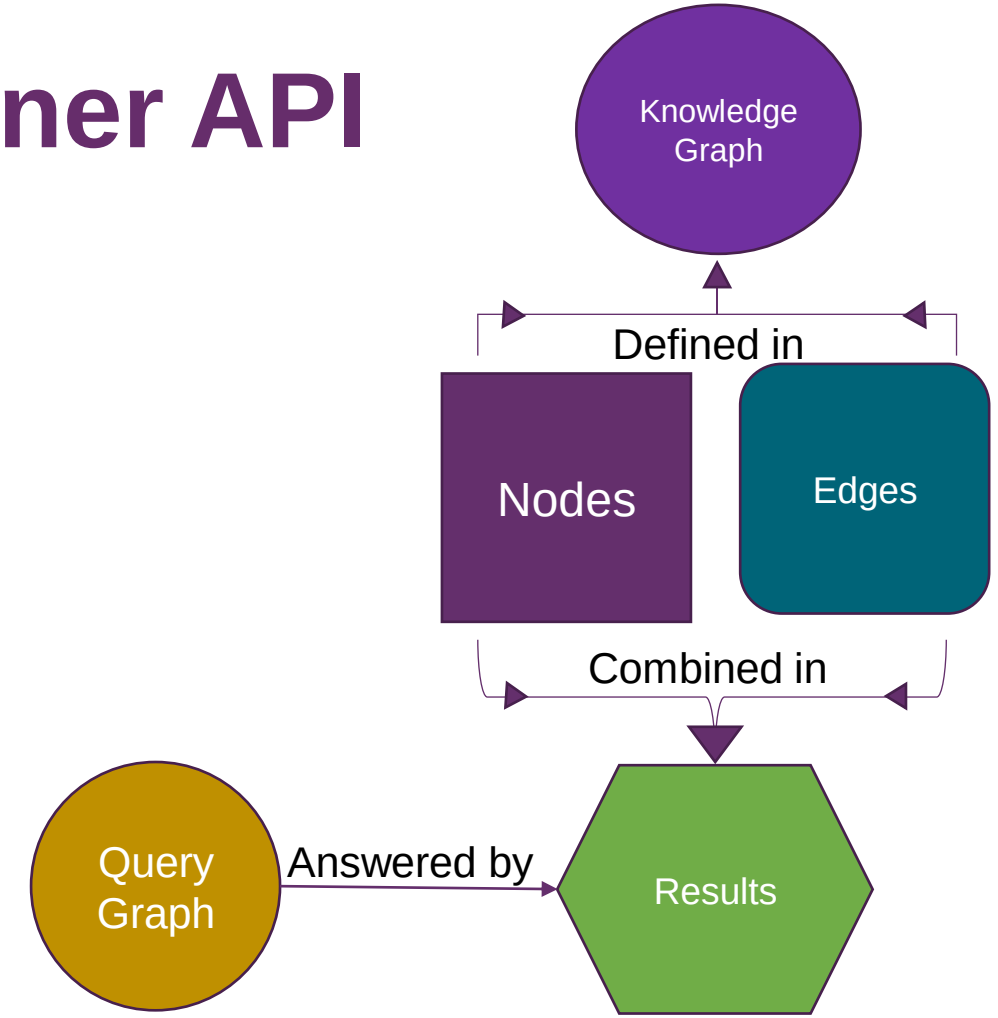
Public Databases/ Knowledge Sources

Flow Diagram



TRAPI – Translator Reasoner API

- The way Translator tools represent:
  - A query
  - An intermediate graph
  - A result
- JSON-based
- Developed by the Translator consortium
- Composed of:
  - A **Query Graph** representing the user's question
  - A **Knowledge Graph** defining and holding data on all **Nodes** and **Edges**
  - **Results** set containing **node and edge bindings** that reference the **Knowledge Graph**



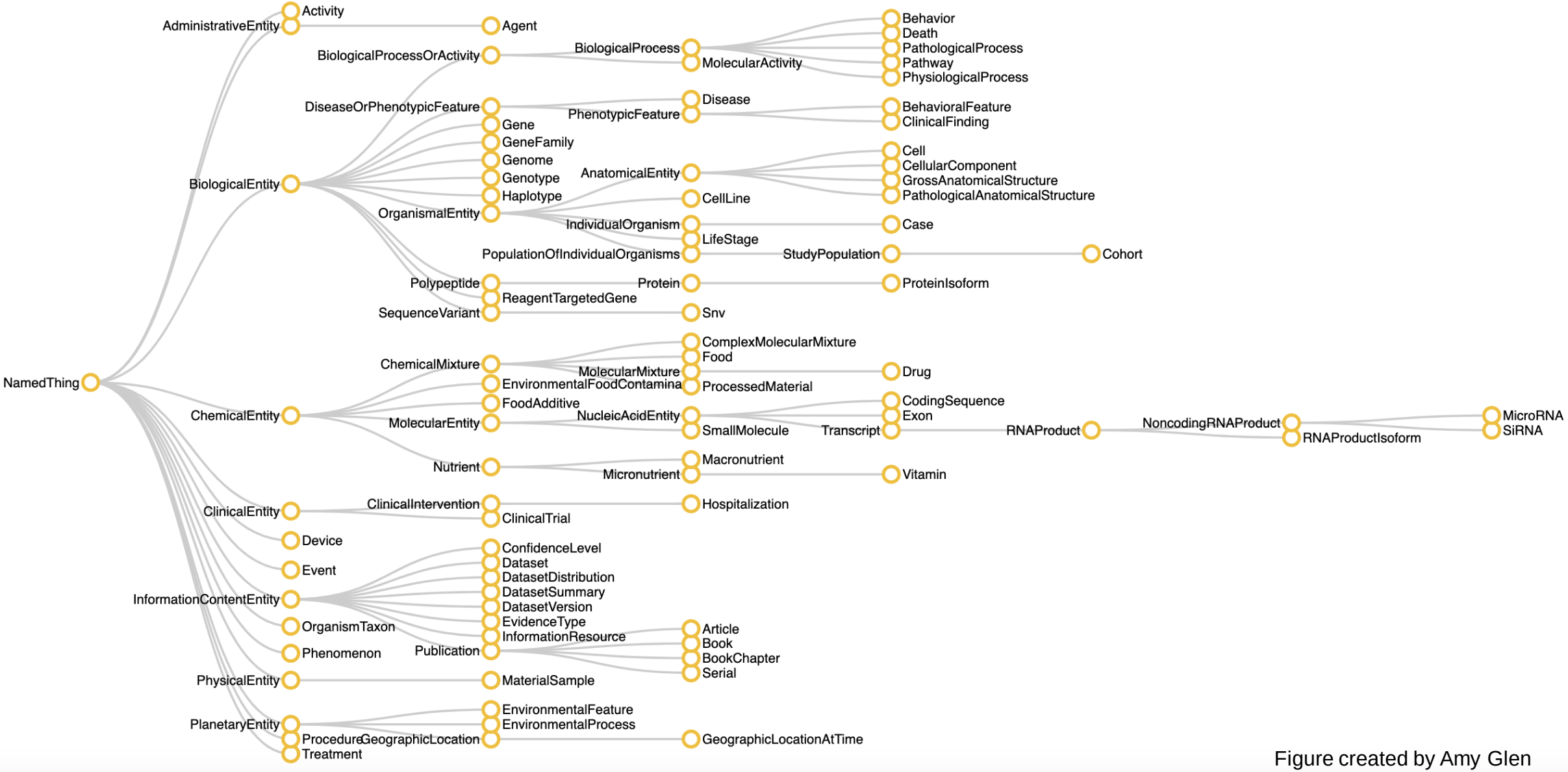
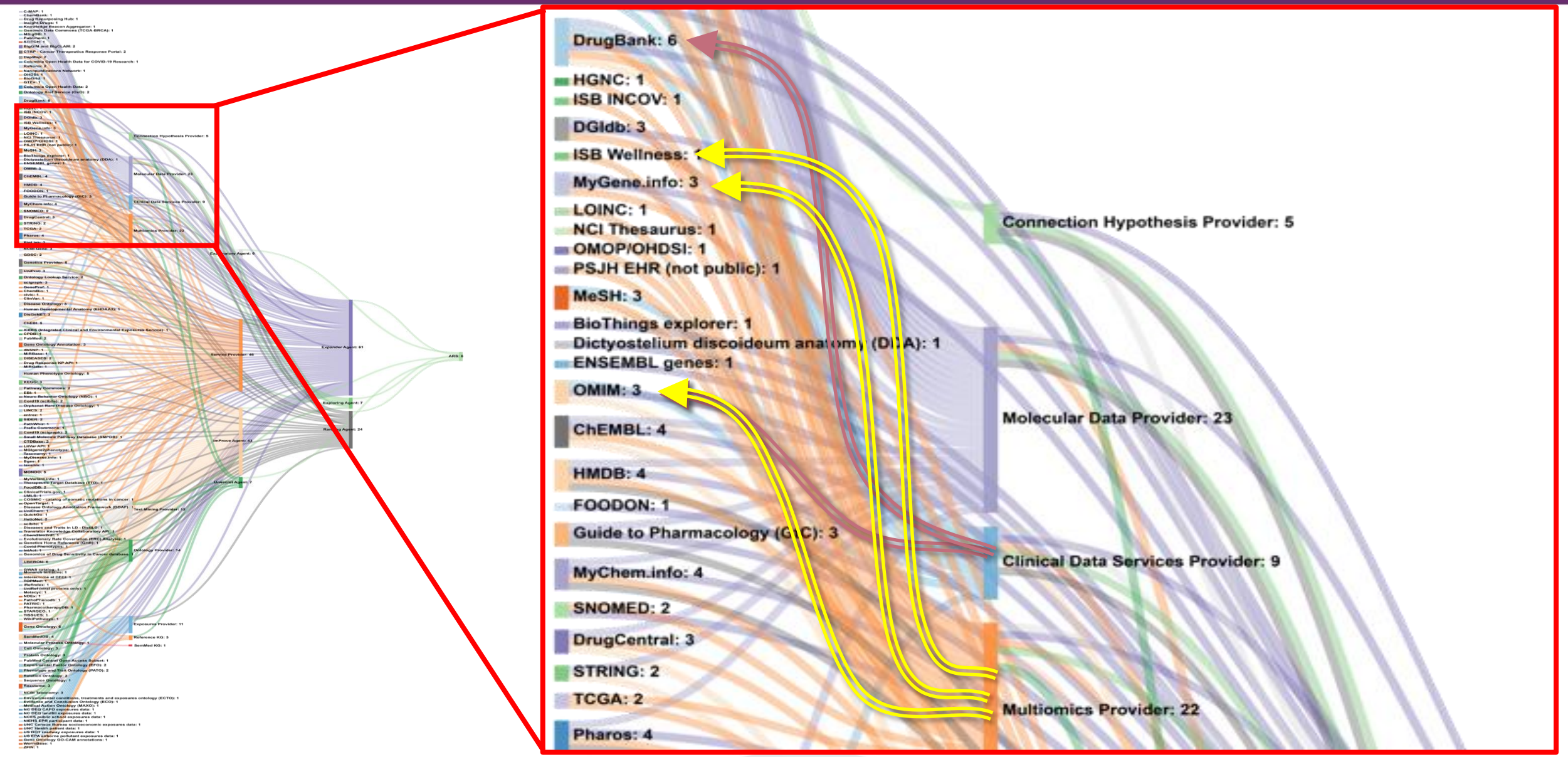
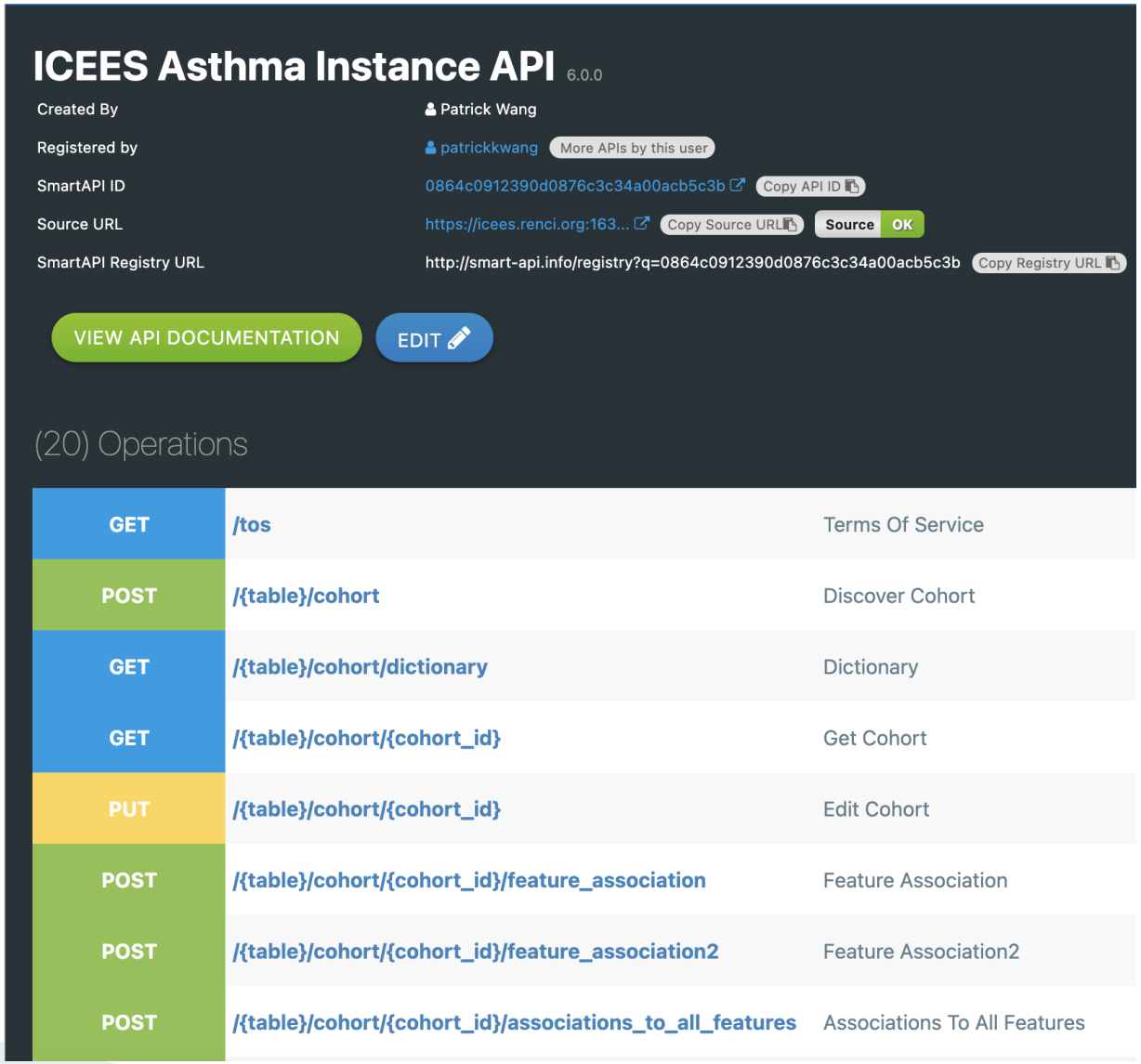


Figure created by Amy Glen

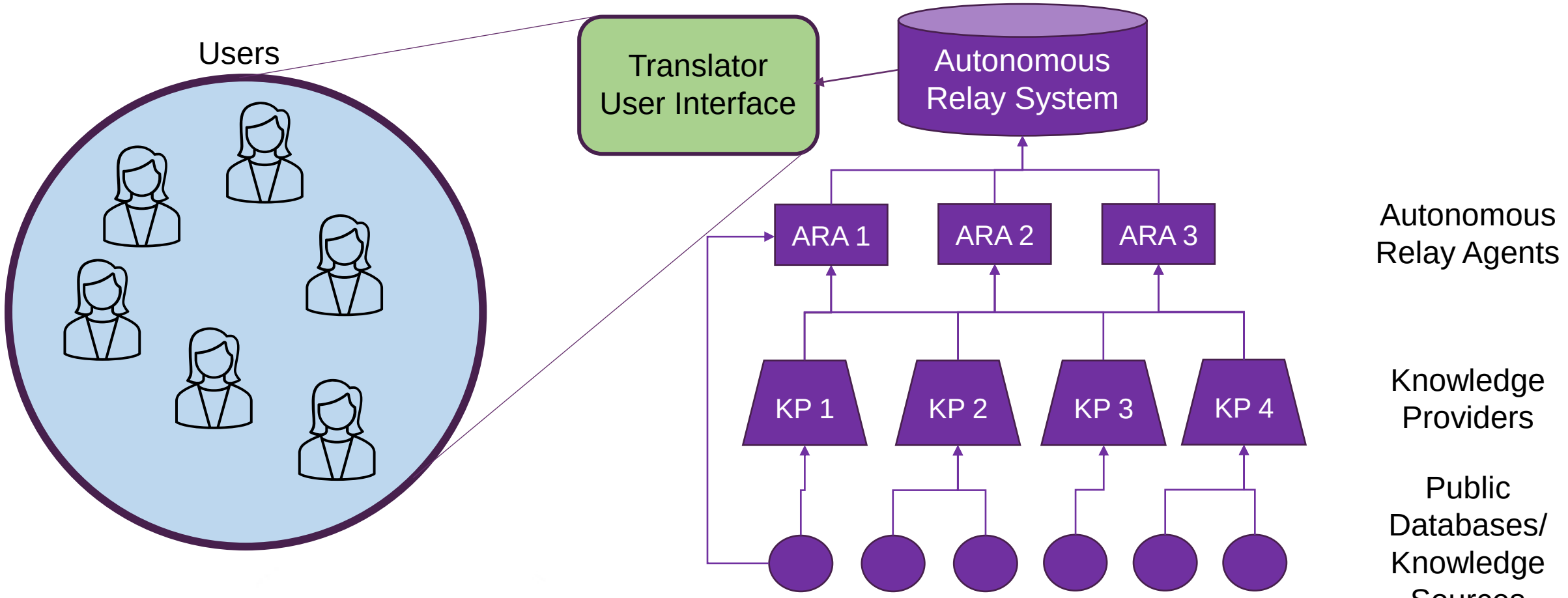

DrugBank: 6
HGNC: 1
ISB INCOV: 1
DGIdb: 3
ISB Wellness: 1
MyGene.info: 3
LOINC: 1
NCI Thesaurus: 1
OMOP/OHDSI: 1
PSJH EHR (not public): 1
MeSH: 3
BioThings explorer: 1
Dictyostelium discoideum anatomy (DDA): 1
ENSEMBL genes: 1
OMIM: 3
ChEMBL: 4
HMDB: 4
FOODON: 1
Guide to Pharmacology (GtoC): 3
MyChem.info: 4
SNOMED: 2
DrugCentral: 3
STRING: 2
TCGA: 2
Pharos: 4
Connection Hypothesis Provider: 5
Molecular Data Provider: 23
Clinical Data Services Provider: 9
Multiomics Provider: 22

SmartAPI Registry

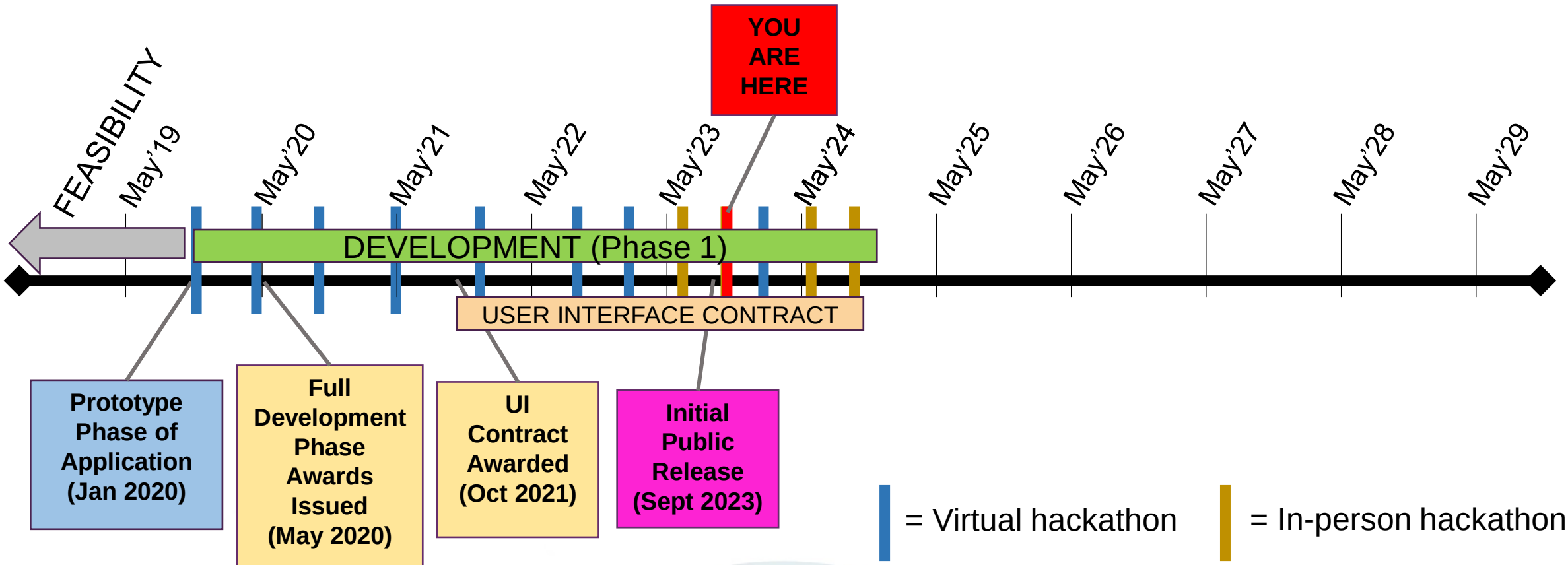
- A registry of Translator tools
- Leverages OpenAPI v3
- Provides semantically annotated JSON metadata about:
  - Where Translator tools can be found
  - What they can do
  - What data they have and how these data are connected
- Programmatically parseable



Translator Architecture



The Translator Timeline



What are Translator Relay Meetings?

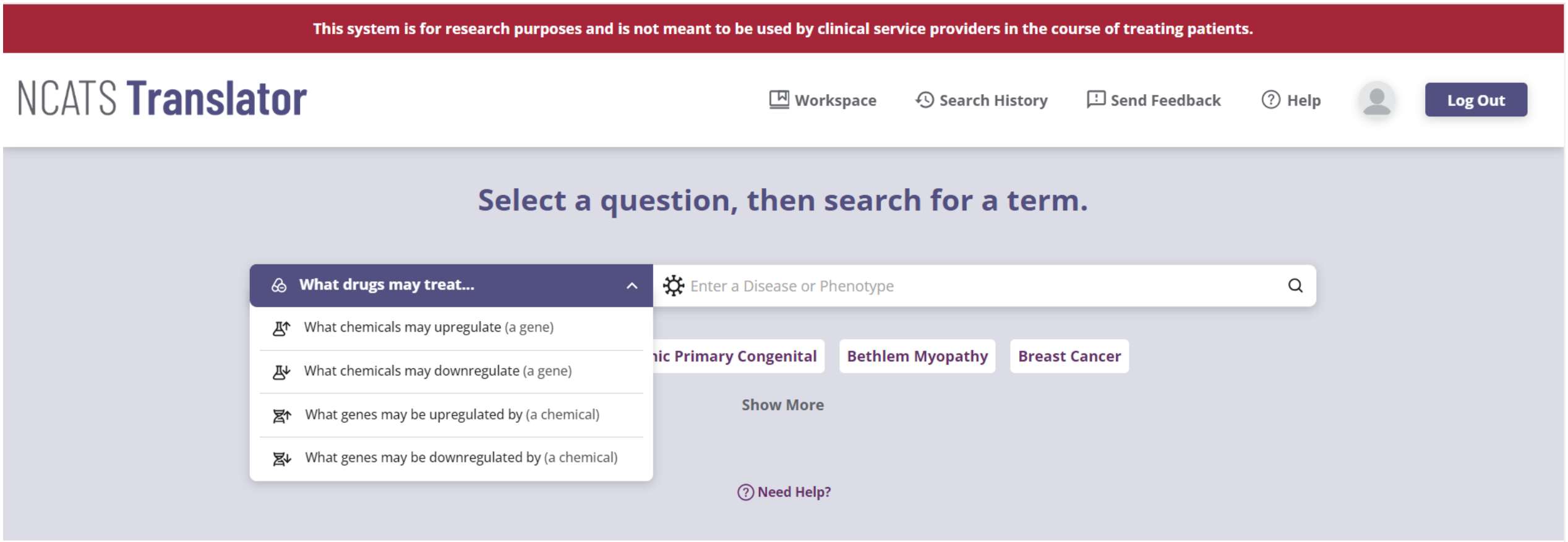
- Held 2-3 times per year
- Working meeting
- In-person component whenever possible
  - Groups often working late into the night
- Extremely collaborative

Who are we building Translator for?

- Translational researchers
  - Searching for support for lab-based observations
  - Early-career, with exciting new ideas
  - Precision Medicine Institute Analysts
    - Working with physicians to find potential treatments for very rare or refractory conditions
- Data scientist collaborators
  - Wish to contribute to and make use of Translator knowledge graphs

Translator alpha release

- Templated queries:
  - What drug(s)/chemicals(s) may treat <disease of interest>?
  - What gene(s) may be up/downregulated by <drug/chemical of interest>?
  - What drug(s)/chemical(s) may up/downregulate <gene of interest>?
- Result scoring:
  - Combination of scores from all reasoning agents that returned that result
  - Higher scores if there is more direct evidence for a result



National Center for Advancing Translational Sciences

The Translator User Interface (alpha)

This system is for research purposes and is not meant to be used by clinical service providers in the course of treating patients.

NIH Translator
National Center for Advancing Translational Sciences

Workspace | Search History | Send Feedback | Help | Log Out

Return To Home Page

Submit Another Query

Showing results for:

What chemicals may upregulate: FRAS1 (Human)

Description:

This gene encodes an extracellular matrix protein that appears to function in the regulation of epidermal-basement membrane adhesion and organogenesis during development. Mutations in this gene cause Fraser syndrome, a multisystem malformation that can include craniofacial, urogenital and respiratory system abnormalities. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Oct 2009].

View this gene on NCBI Gene

Need Help?

The Translator User Interface (alpha)

This system is for research purposes and is not meant to be used by clinical service providers in the course of treating patients.

Filters

Text Filter

Filter Terms

Chemical Categories

Filter on different categories of chemicals.

Drug	(28)
Phase 1 Drug	(2)
Phase 2 Drug	(2)
Phase 3 Drug	(5)
Other	(20)

Node Type

Show only results that include a node with a particular type (Drug, Chemical Entity, Small Molecule, etc.)

Chemical Entity	(5)
Drug	(1)
Named Thing	(4)
Nucleic Acid Entity	(1)
Protein	(57)

Results

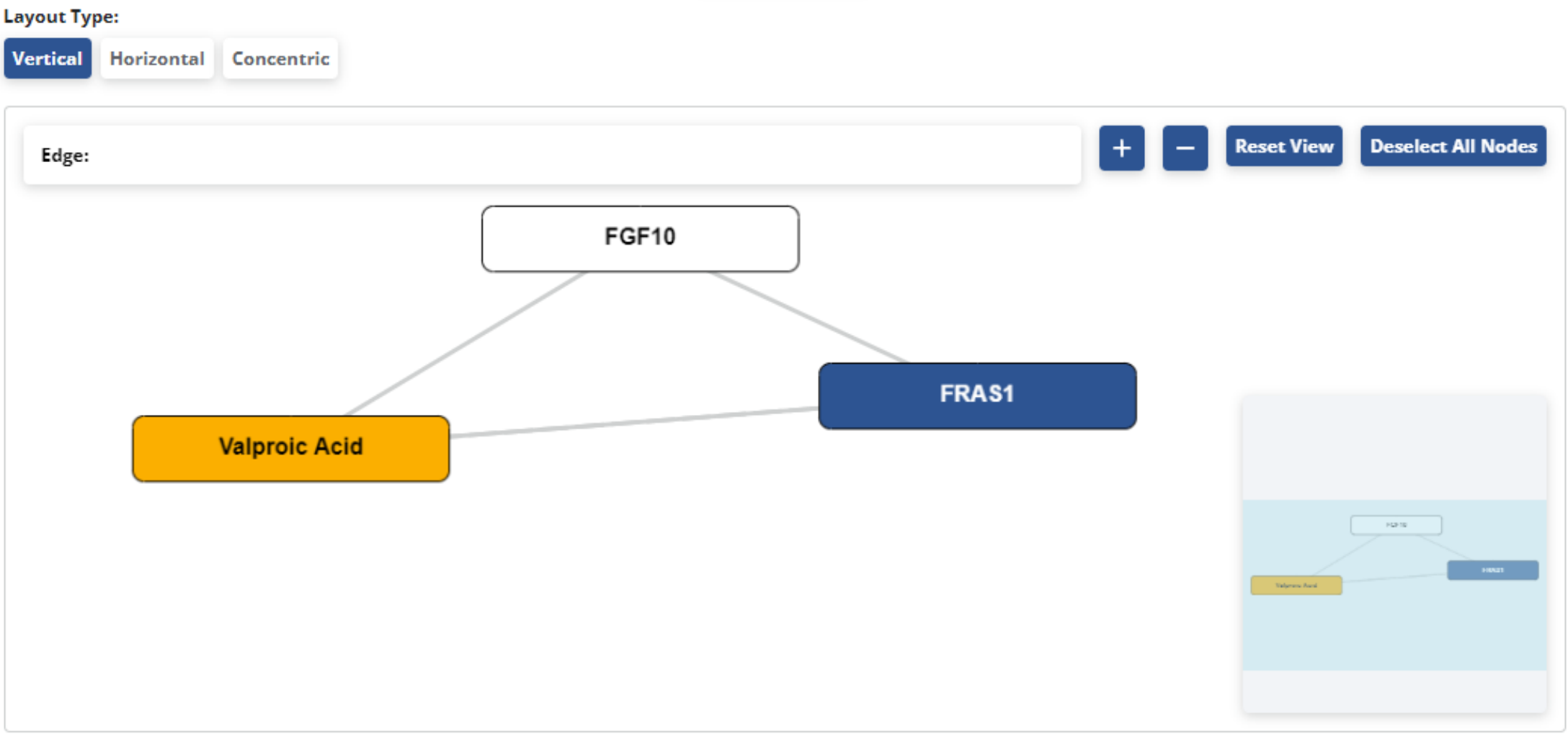
Showing 1-10 of 57 Results

More Reasoning

NAME	EVIDENCE	SCORE
Valproic Acid 3 Paths that may upregulate FRAS1 (Human) Central Nervous System Drug (1) · Neurotransmitter Agent (1) · Ec 3.* (hydrolase) Inhibitor (6) · Aetiopathogenetic Role (4) (+1 more)	Evidence Publications (6) Clinical Trials (0) Sources (3)	5.00
3,4-methylenedioxy-n-ethylamphetamine 2 Paths that may upregulate FRAS1 (Human)	Evidence Publications (2) Clinical Trials (0) Sources (2)	4.90
Gemcitabine 2 Paths that may upregulate FRAS1 (Human) Photosensitizing Agent (1) · Pathway Inhibitor (1) · Pro-agent (2) · Ec 1.* (oxidoreductase) Inhibitor (6) (+6 more)	Evidence Publications (2) Clinical Trials (0) Sources (2)	4.85
2-(n-morpholino)-ethanesulfonic Acid 2 Paths that may upregulate FRAS1 (Human)	Evidence Publications (2) Clinical Trials (0) Sources (2)	4.80
Erlotinib 2 Paths that may upregulate FRAS1 (Human)	Evidence Publications (2) Clinical Trials (0) Sources (2)	

More Reasoning

The Translator User Interface (alpha)



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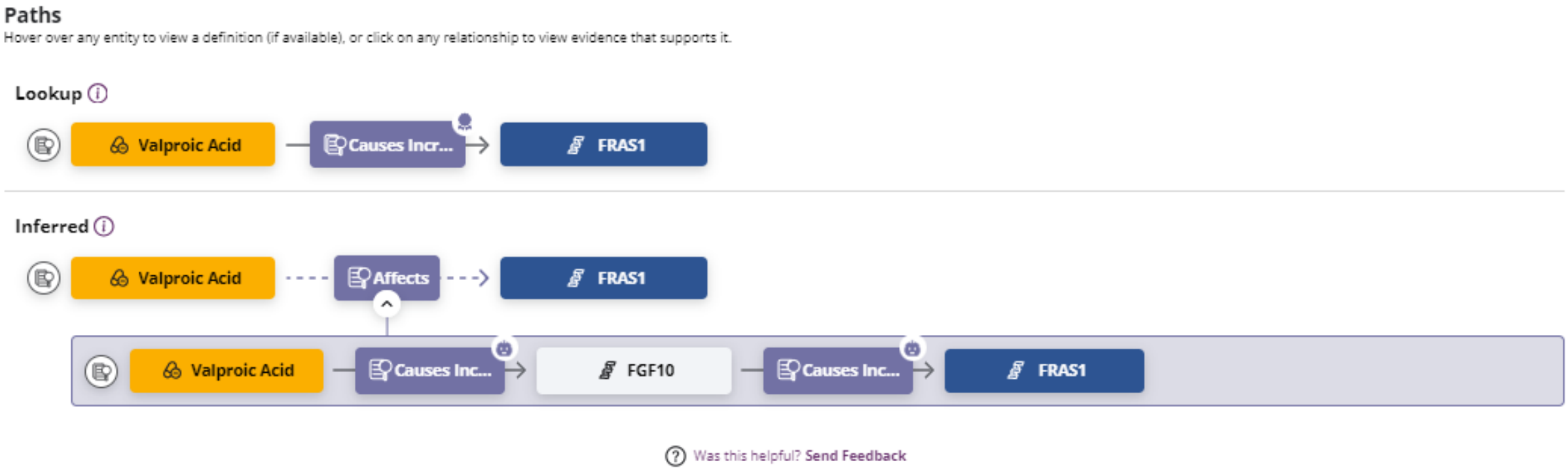

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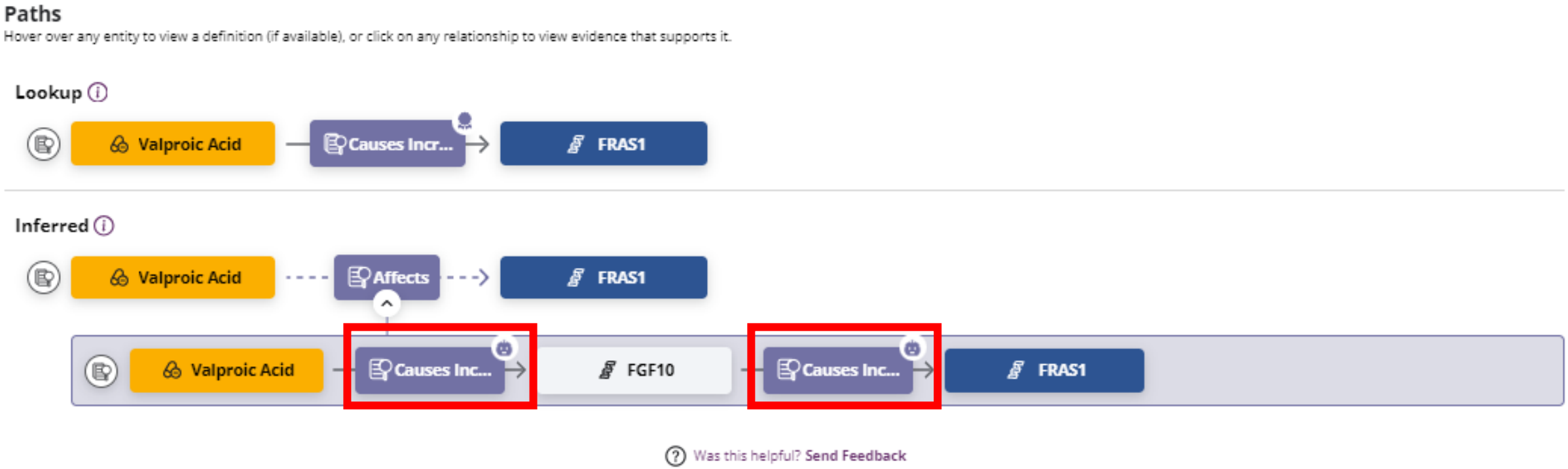

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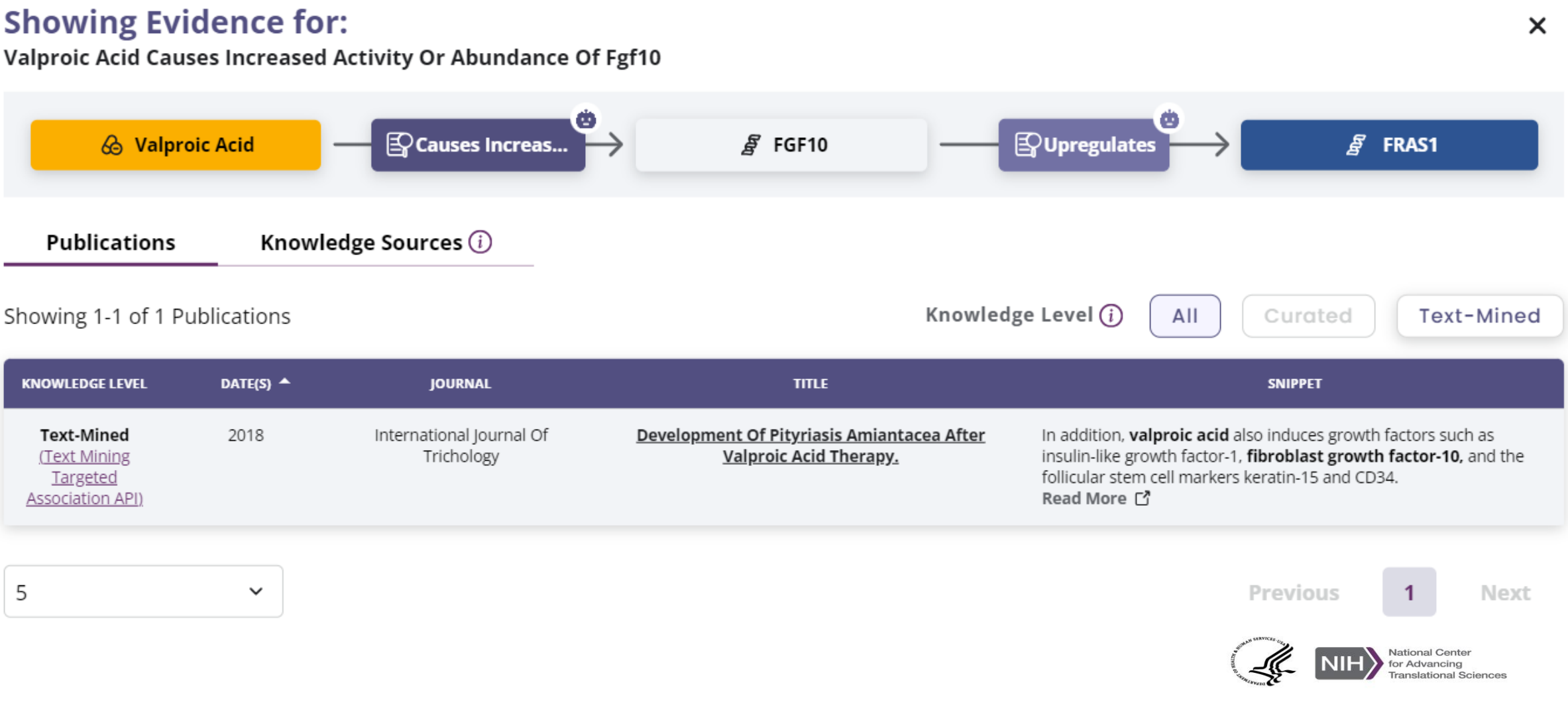


The Translator User Interface (alpha)

Showing Evidence for:

Fgf10 Upregulates Fras1

Publications | **Knowledge Sources** ⓘ

Showing 1-1 of 1 Publications

Knowledge Level ⓘ [All] [Curated] [Text-Mined]

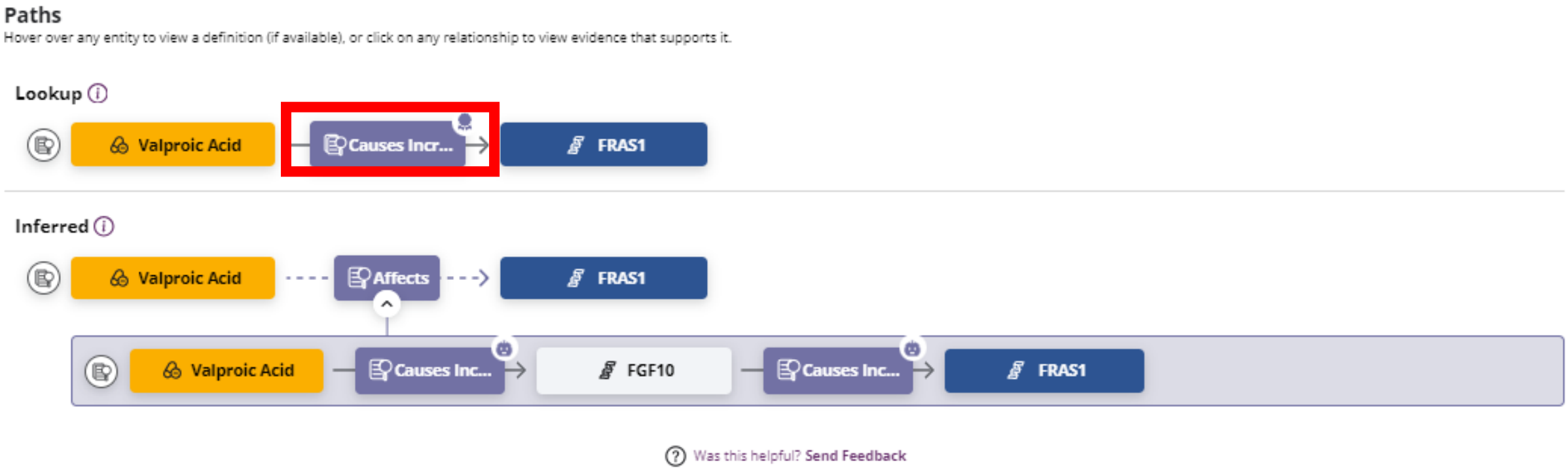
KNOWLEDGE LEVEL	DATE(S) ▲	JOURNAL	TITLE	SNIPPET
Text-Mined (Text Mining Targeted Association API)	2020	Signal Transduction And Targeted Therapy	Fgf/fgfr Signaling In Health And Disease.	For example, recombinant **FGF10** may be useful in alleviating ureteric branching defects in Fraser syndrome (**FRAS1** mutations). **Read More**

5 ⌄

Previous 1 Next

National Center for Advancing Translational Sciences

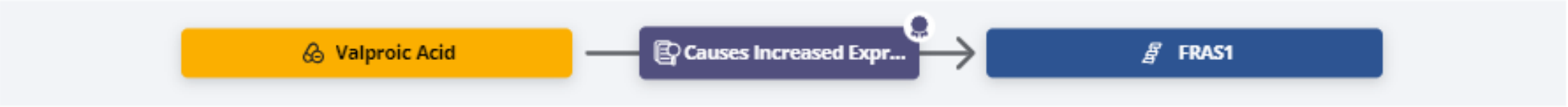
The Translator User Interface (alpha)



The Translator User Interface (alpha)

Showing Evidence for:

Valproic Acid Causes Increased Expression Of Fras1



Publications | Knowledge Sources

Showing 1-4 of 4 Publications

Knowledge Level: All | Curated | Text-Mined

KNOWLEDGE LEVEL	DATE(S)	JOURNAL	TITLE	SNIPPET
Curated (Comparative Toxicogenomics Database)	2017	Archives Of Toxicology	Definition Of Transcriptome-based Indices For Quantitative Characterization Of Chemically Disturbed Stem Cell Development: Introduction Of The Stop-toxukn And Stop-toxukk Tests.	Stem cell-based in vitro test systems can recapitulate specific phases of human development. In the UKK test system, human pluripotent stem cells (hPSCs) randomly differentiate into cells of the three germ layers and their derivatives. In the UKN1 test system, hPSCs... Read More
Curated (Comparative Toxicogenomics Database)	2015	Archives Of Toxicology	A Transcriptome-based Classifier To Identify Developmental Toxicants By Stem Cell Testing: Design, Validation And Optimization For Histone Deacetylase Inhibitors.	Test systems to identify developmental toxicants are urgently needed. A combination of human stem cell technology and transcriptome analysis was to provide a proof of concept that toxicants with a related mode of action can be identified and... Read More
Curated (Comparative Toxicogenomics	2014	Chemical Research In Toxicology	Design Principles Of Concentration-dependent Transcriptome Deviations In Drug-exposed Differentiating Stem Cells.	Information on design principles governing transcriptome changes upon transition from safe to hazardous drug concentrations or from tolerated to cytotoxic drug levels are important for the application of

The Translator User Interface (alpha)

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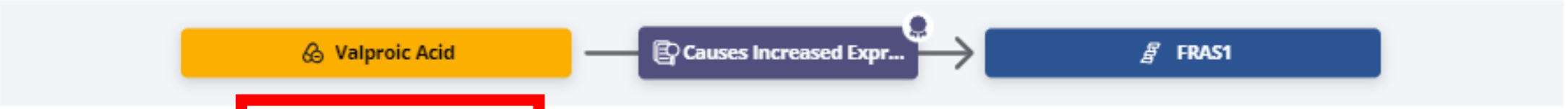

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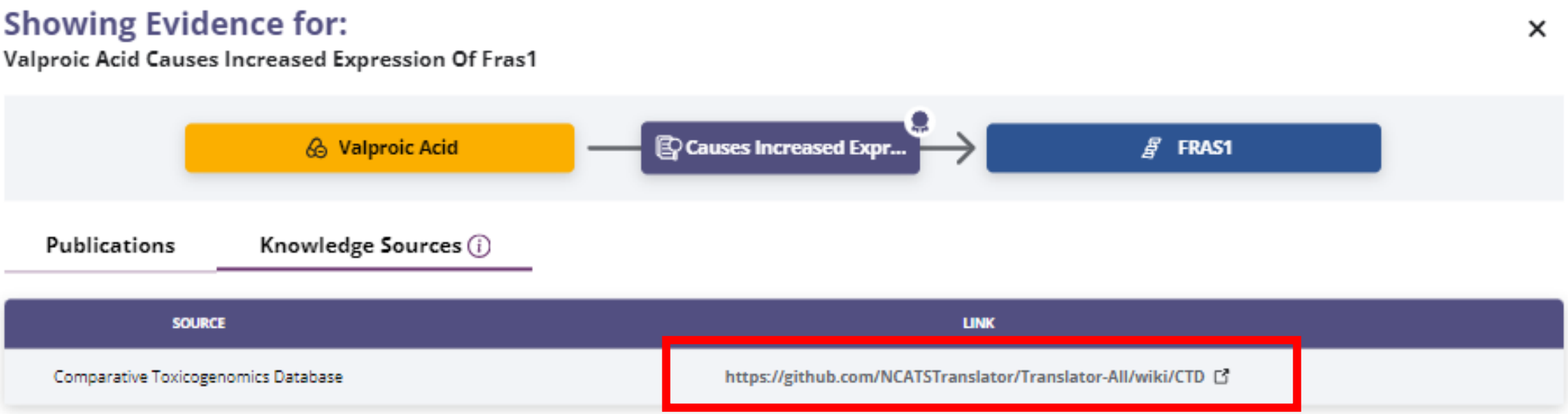
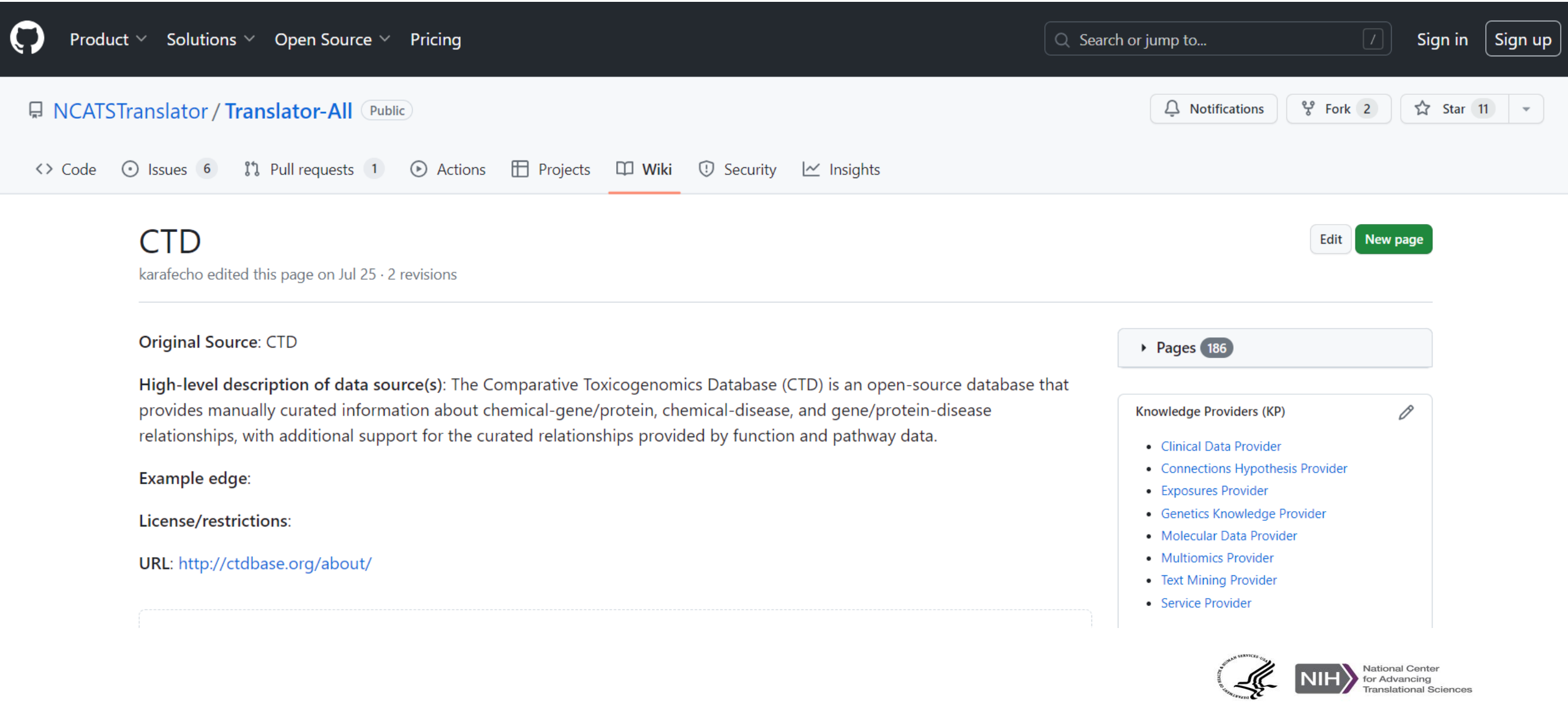


The Translator User Interface (alpha)



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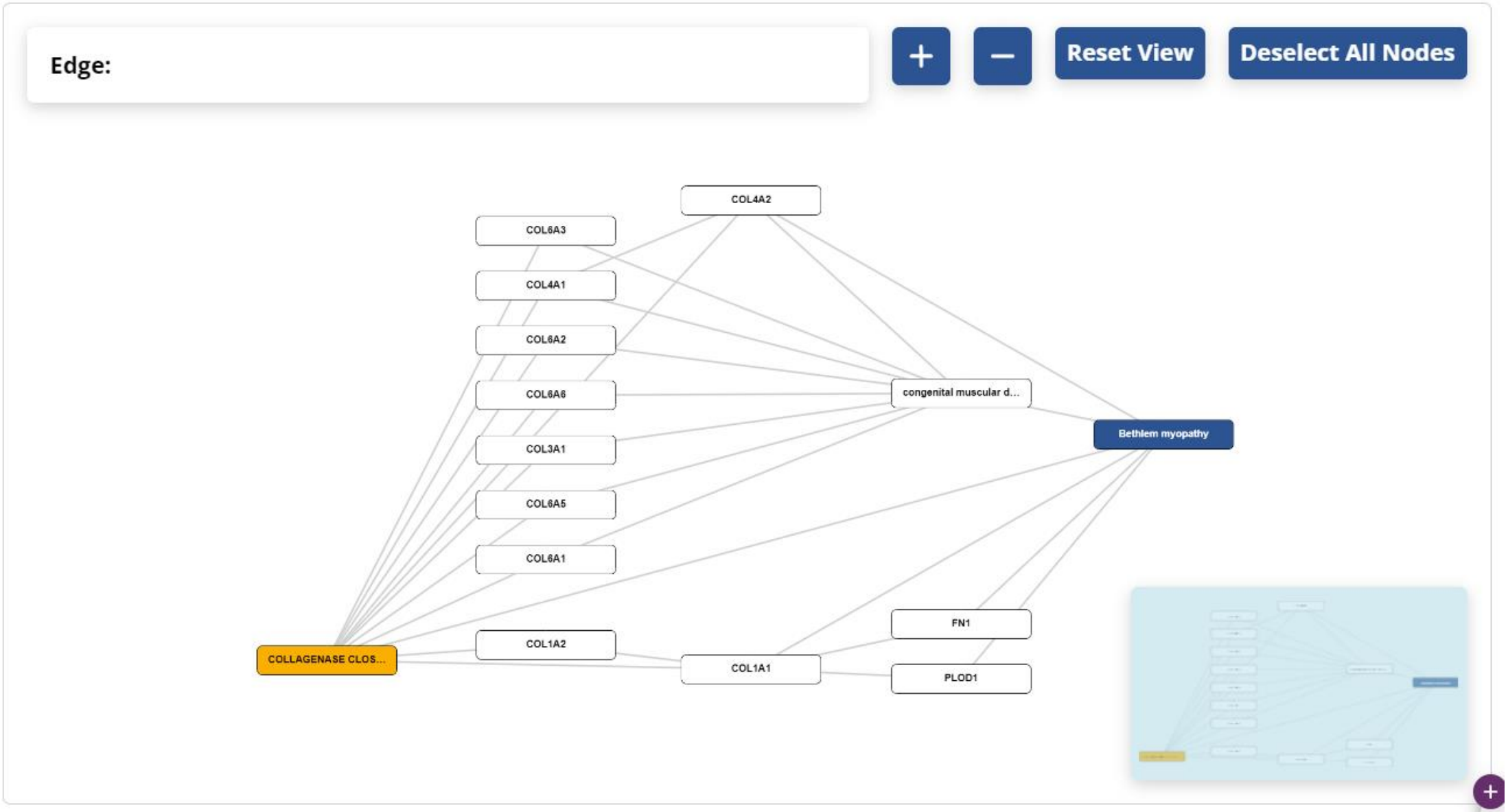
The Translator User Interface (alpha)



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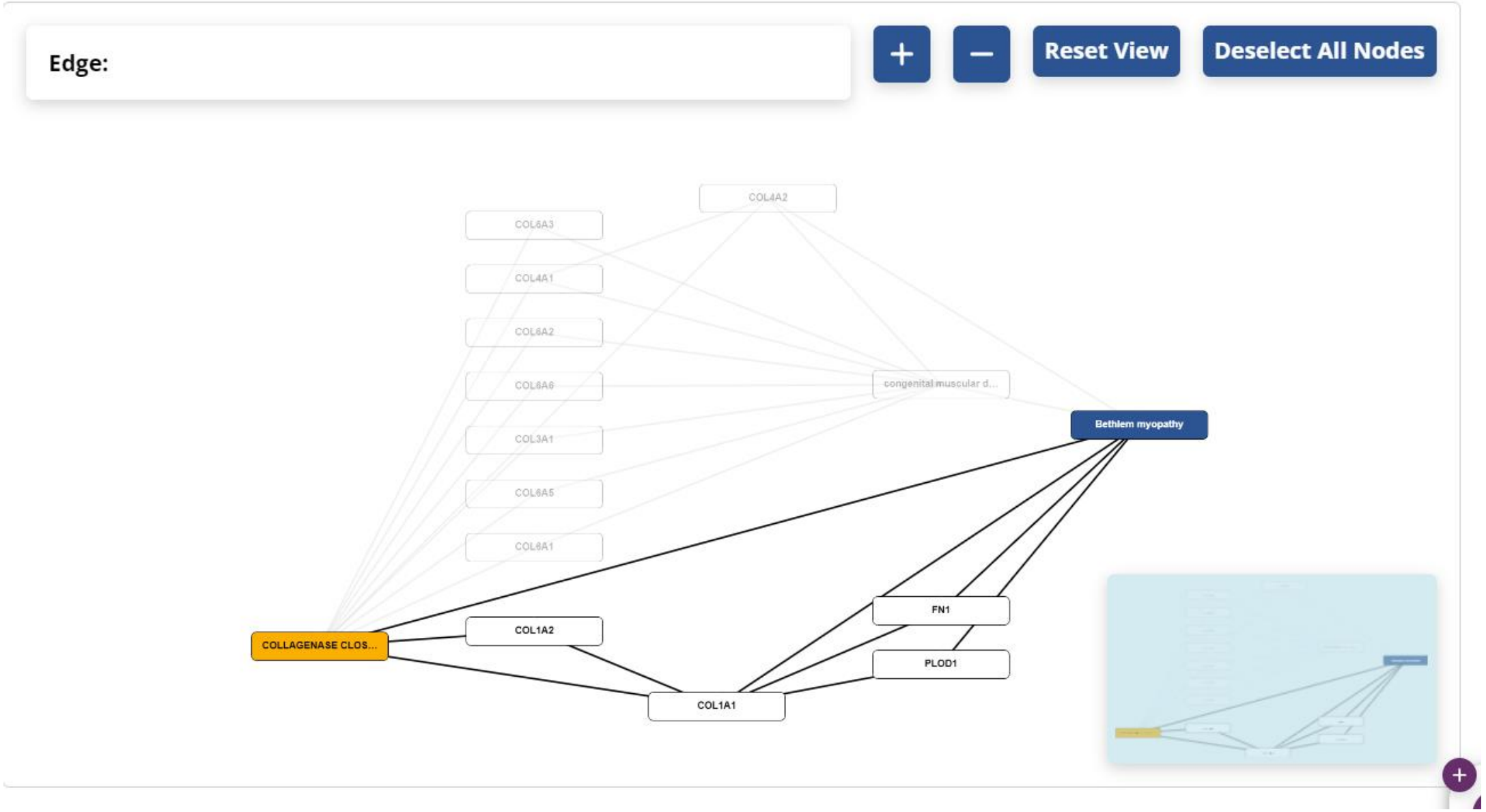


Using Translator for Precision Medicine Research

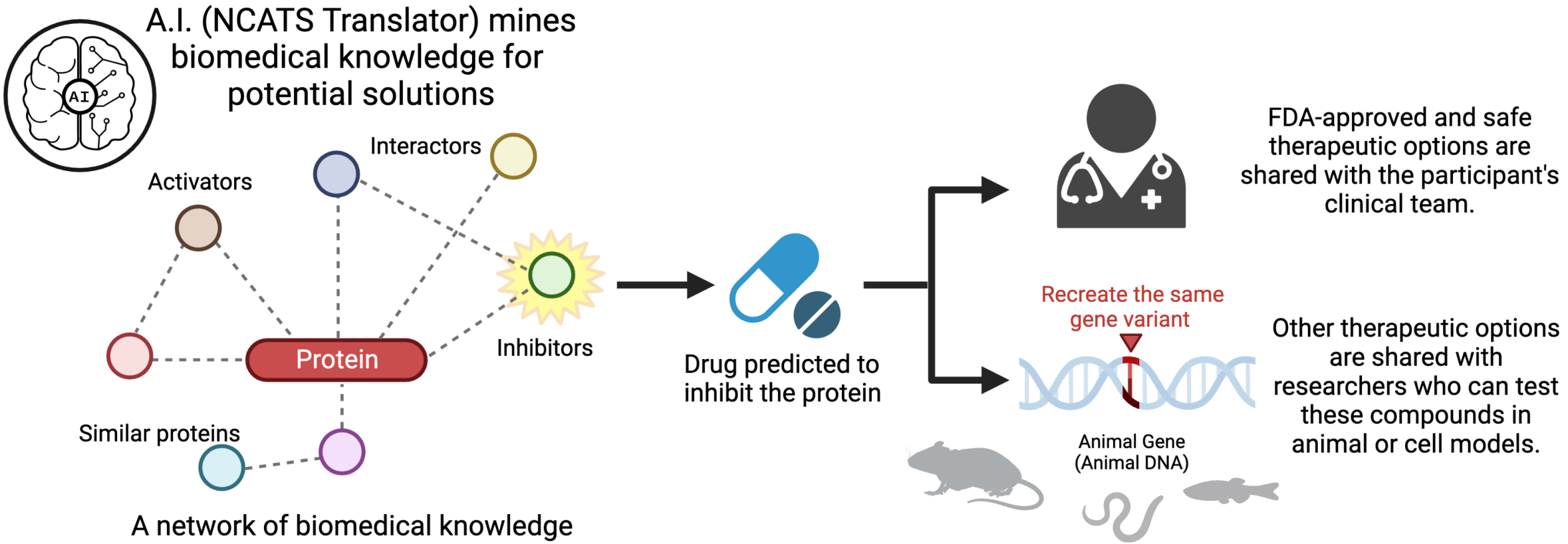
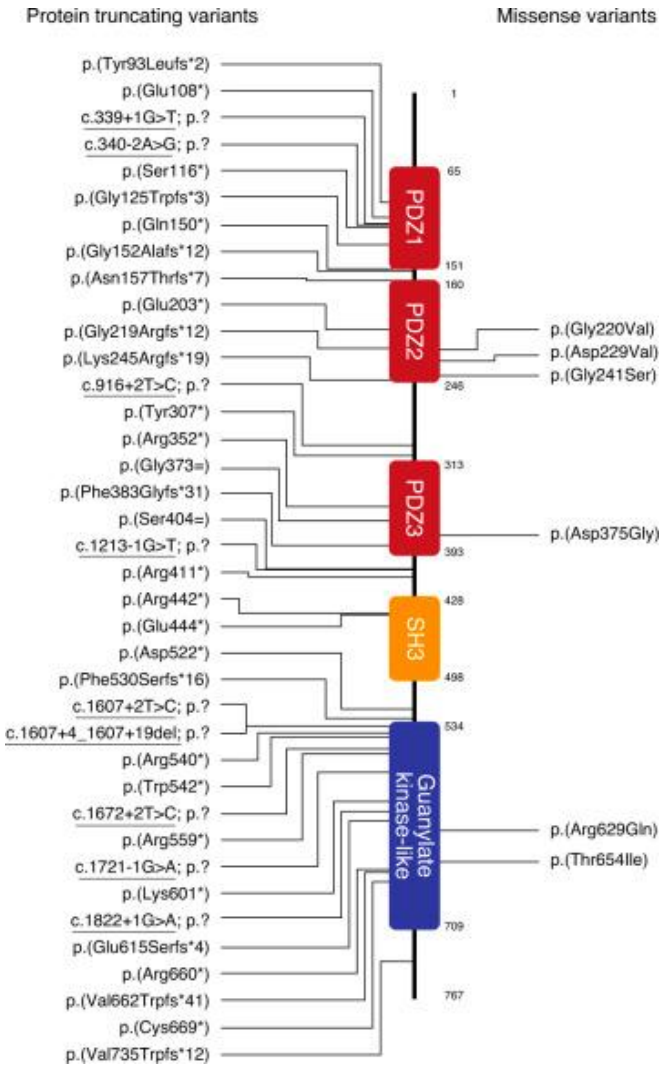


Image care of Andy Crouse, BMA

Use Case – SHINE Syndrome

- SHINE syndrome, also known as DLG4-related synaptopathy, is an extremely rare neurodevelopmental disorder characterized predominantly by:
  - **S**leep Disturbances
  - **H**ypotonia
  - **I**ntellectual Disabilities
  - **N**eurological Disorders
  - **E**pilepsy
- Gene: *DLG4* (discs large MAGUK scaffold protein 4)
- Protein: PSD-95 (postsynaptic density 95)
- Predicted impact of variants: LOF, haploinsufficiency



SHINE Syndrome - Outcomes

- Translator tools returned many potential treatments
- Analyst report suggested a few options
- Guanfacine, common blood pressure treatment
  - After a few months, improvement in motor skills and social/behavioral skills

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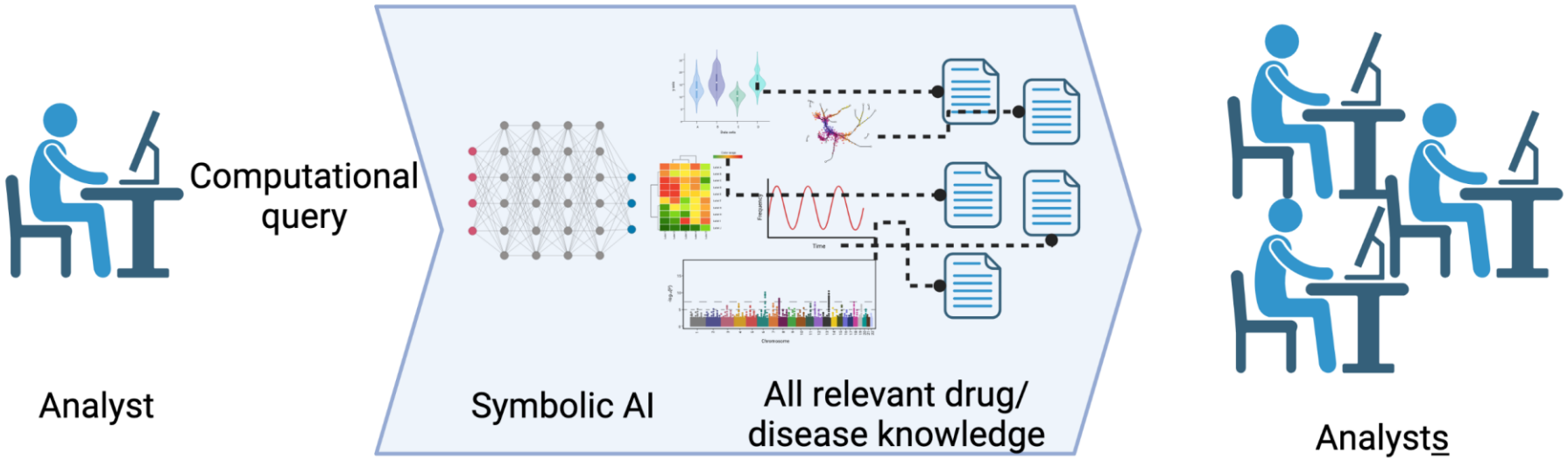
SHINE Syndrome - Outcomes

- Translator tools returned many potential treatments
- Analyst report suggested a few options
- Guanfacine, common blood pressure treatment
  - After a few months, improvement in motor skills and social/behavioral skills
  - “…a real improvement in Peppa Pig!”
- Other clinical trials have resulted
- Translator can show value for research of all stages – early preclinical to clinical

Translator is more accessible and scalable with ChatGPT



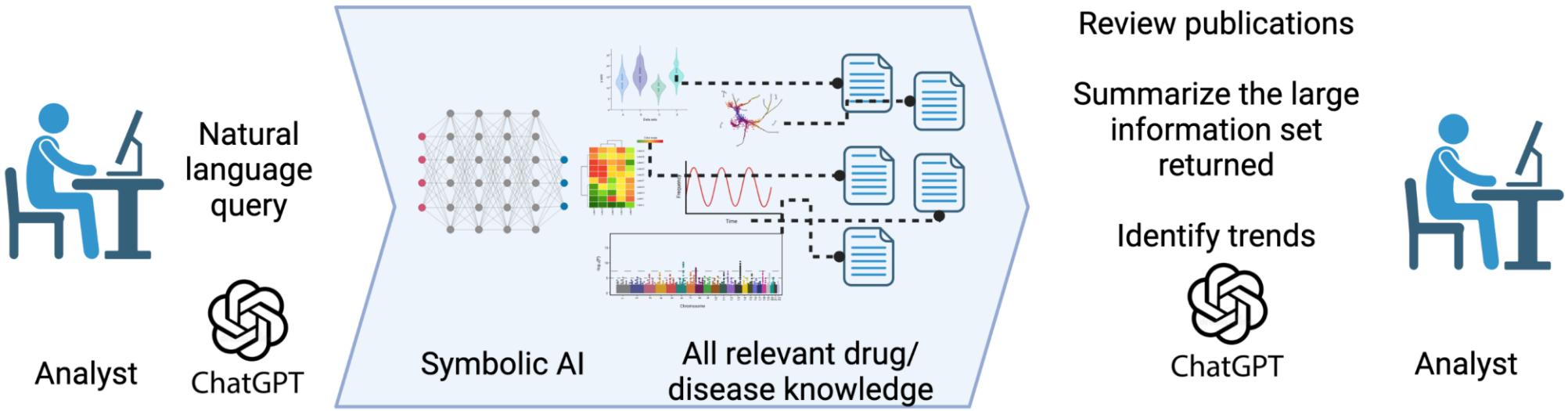


Image credit: Andy Crouse

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What's Next for Translator?

- Several additional templated queries
  - Eventual support for the general query "What is the relationship between <concept 1> and <concept 2>?"
- Performance improvements
  - Speed of return
  - Support for more concurrent users
- Documentation improvements
  - Instructions/tutorials for additional collaborators to include their data in the Translator ecosystem and to utilize Translator knowledge graphs
  - A user guide to help researchers understand what Translator can help them accomplish

The Biomedical Data Translator Team at NCATS

Ewy Mathe, PhD

Qian Zhu, PhD

Sarah Stemann

Mark Williams

Shervin Abdollahi

Tyler Beck, PhD

Christine Colvis, PhD

Sharat Israni, PhD

Amber Peters

National Center for Advancing Translational Sciences

Questions?

Try Translator for yourself: ui.transltr.io

Translator Award Recipient Institutions

- Broad Institute
- Institute for Systems Biology
- University of California San Francisco
- Columbia University
- Maastricht University
- Dartmouth University
- Oregon State University
- Pennsylvania State University
- Drexel University
- Scripps Research
- Renaissance Computing Institute at University of North Carolina, Chapel Hill
- CoVar Applied Technologies
- Lawrence Berkeley National Laboratory
- University of Colorado Anschutz School of Medicine
- University of Alabama at Birmingham

Thank you!

Next webinar is **April 24, 2024;** 2-3 PM ET.