

CTS Pilot Module Program

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Module Goals and Alignment with ICTR Strategic Goals

ICTR Strategic Goals

Catalyze and support research to advance translational science

Facilitate community and stakeholder engagement throughout the translational process

Create and **implement** state-of-the-art scientific resources, services, and informatics capabilities to facilitate CTR

Develop and maintain a skilled, multidisciplinary translational workforce to support and lead high-quality CTR

Partner with other CTSA hubs and CTSA consortium to accelerate TR and rapidly respond to public health emergencies

CTS Pilot Project Program Goals

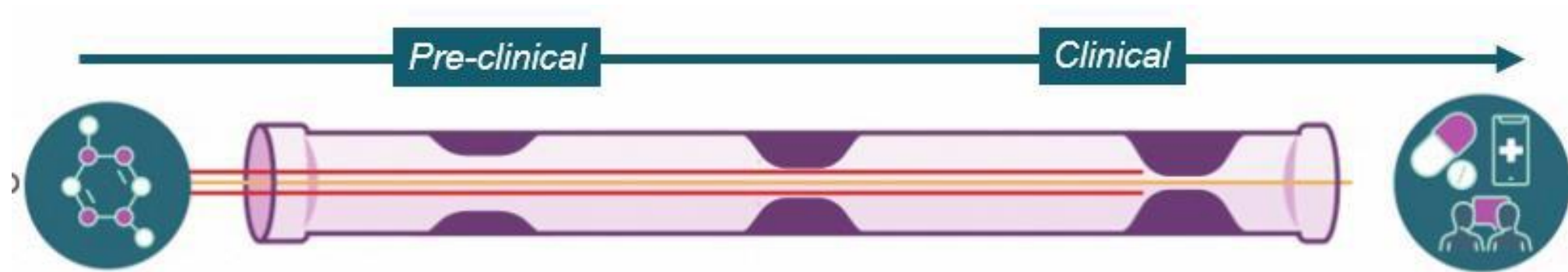
Implement and administer the CTS Pilot Module program

- RFA that address challenges in TS in all areas and stages of the translational process
- Prioritize junior investigators and those for whom TS represents a new direction of research
- Emphasize ICTR priority areas

Coordinate an educational and mentoring program to engage and advise investigators in CTS

- Education and engagement
- Mentorship

Impact of Pilot Module



- Overcoming a Long-Standing Translational Barrier in Stem Cell Research
- A General Cell-Based Approach for Overcoming the Blood-Brain-Barrier to Treat Brain Diseases
- Finding Neoantigens Using An mRNA Translational-Based Approach
- Oxygen-Sensitive Proteins: Novel Targets for Biology and Medicine
- Developing a method to inactivate AAV-based gene therapies

- Production of Therapeutic Engineered Red Blood Cells
- Rapid Antimicrobial susceptibility testing of slow-growing microorganisms using a reporter phage-based system
- Cough Capture as a Portal into the Lung
- Predicting population-specific genetic disease risks in biobank-scale data

- Community-Based Virtual Group Reminiscence Therapy to Improve Loneliness and Apathy in Community-Dwelling Older Adults
- Bridging the Gap: Assessing Digital Health Literacy and Readiness for Behavioral Change in Emergency Department Populations
- A novel data science framework for EHR-based health disparity research

Pilots Funded since 2023	Publications	Patents	Grants submitted
12	3	2	2

Year 3 – Approaches

Enhance outreach, education & number of responsive projects in TS

- ICTR newsletter and website, RFA
- 1:1 consultations with Program Directors
- Presented at Faculty Senate meeting
- Translational Science Town Hall meeting
- Translational Science Seminar Series
- **Letter of Intent (LOI)**

Year 1

Year 2

Year 3

Year 3 – New Approaches

- **Application process**

- Required LOI outlining the research roadblock addressed by the project.
- Program Directors reviewed and selected responsive LOIs.
- Applications by invitation only – selected applicants received email with link to submit their proposal.

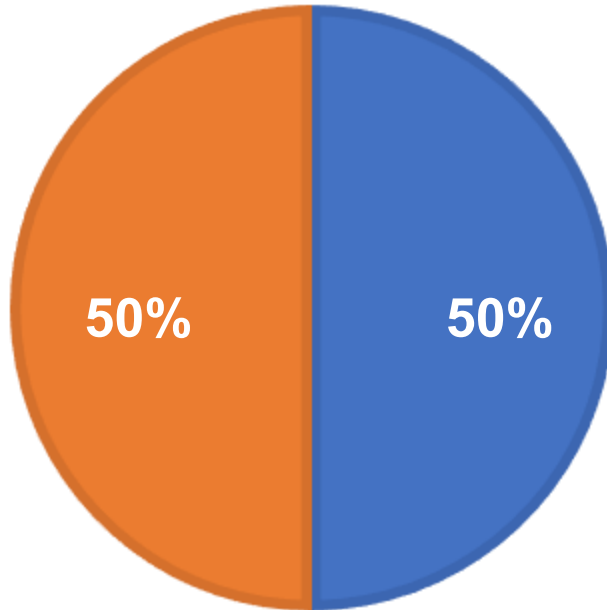
Outcomes

- Number of LOI received: 23 total, 12 selected, 11 proposals submitted
- Number of Responsive Applications:

Year 1 – 2023

RESPONSIVE

■ YES ■ NO

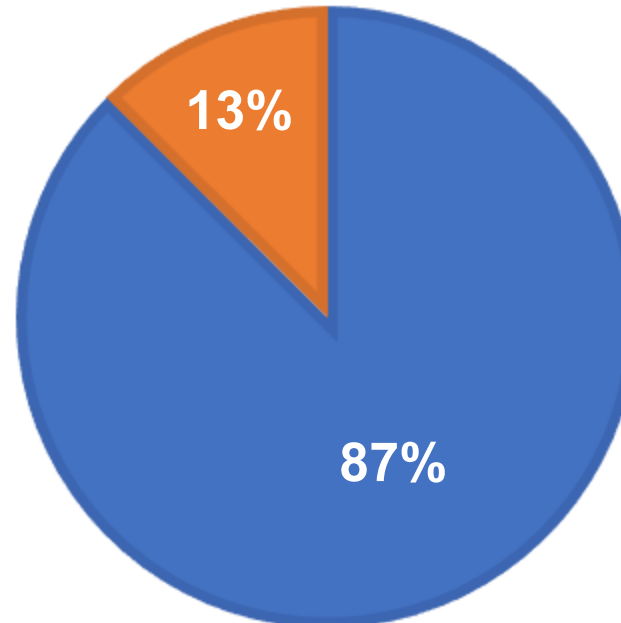


n = 18

Year 2 – 2024

RESPONSIVE

■ YES ■ NO

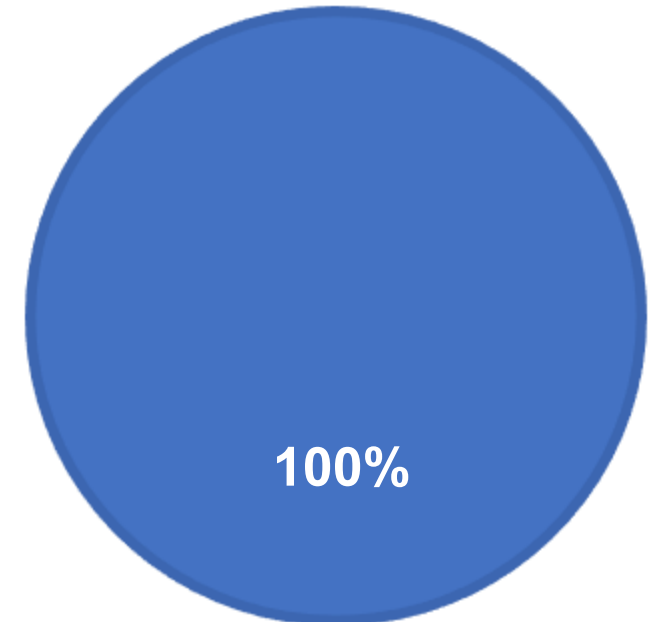


n = 8

Year 3 – 2025

RESPONSIVE

■ YES ■ NO



n = 11

Outcomes

Applicant Demographics

	Physician (MD/DO)			Scientist (PhD)			Physician-Scientist (MD, PhD)		
	Year 1	Year 2	Year 3	Year 1	Year 2	Year 3	Year 1	Year 2	Year 3
Instructor				1	1				
Assistant Professor	6		1	2	3	4		1	1
Associate Professor	2		1	1					1
Professor	1	1	1	5	2	1			1

Year 1 to Year 3 – more balanced between basic and clinical, and career levels

Gender	Number (%)		
	Year 1	Year 2	Year 3
Male	12 (66.7)	5 (62.5)	7 (63.6)
Female	6 (33.3)	3 (37.5)	4 (36.4)

Year 1 to Year 3 – relative number of applications has not changed

Year 3 – New Approaches

- **Review process**
 - Continued with NIH-based scoring, focusing on feasibility and TS potential
 - Piloted a new tool to score on TS potential: *TRANSIT*

Year 3 – Innovation

Piloted use of a new tool to score projects on their TS potential

- Translational Science Indicator Tool (*TRANSIT*)
 - created by Mimi Kim
 - scores based on NCATS' TS principles

TS Principles domains	Scores
Focus on unmet need	
Generalizable Solution	
Creativity and Innovation	
Team Science	
Efficiency and Speed	
Bold and Rigorous	
Boundary-crossing Partnership	

Does the project address this TS principle?

- 1 = Not at all
- 2 = Slightly
- 3 = Moderately
- 4 = Very
- 5 = Extremely



2025 Pilot Project Review Analysis: TRANSIT vs NIH scoring

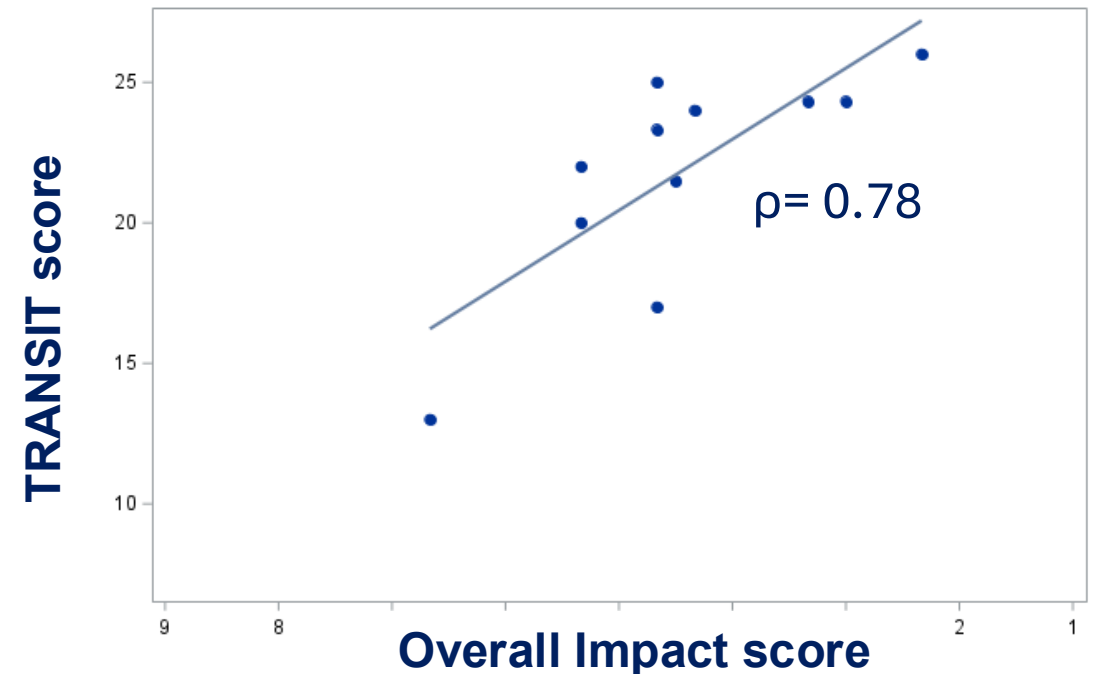
Projects (n=11) scored by 3 reviewers:

- *TRANSIT*
- NIH-based criteria

TRANSIT total score vs NIH Overall Impact

- Average score of each project

Average *TRANSIT* score by Average Impact score



Year 3 – Funded Projects, 2025



Mirnova Ceide, MD, MS
Associate Professor, Departments
of Psychiatry and Behavioral
Sciences, Medicine (Geriatrics),
and Neurology

***A Virtual Life Story Club
Intervention to Improve
Loneliness and Apathy in
Community-Dwelling Older
Adults: A Mixed-Methods
Feasibility Study***



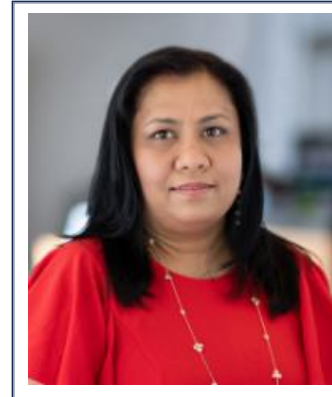
Carlo Lutz, MD
Assistant Professor, Department of
Emergency Medicine

***Bridging the Gap: Assessing
Digital Health Literacy and
Readiness for Behavioral Change
in Emergency Department
Populations***



Srilakshmi Raj, PhD
Assistant Professor, Department of
Genetics

***Predicting population-specific
genetic disease risks in biobank-
scale data***



Kamini Singh, PhD
Assistant Professor, Department of
Molecular Pharmacology

***Finding Neoantigens Using An
mRNA Translational-Based
Approach***

Takeaways – Preliminary Analysis

- ***TRANSIT* scores correlate with Overall Impact from NIH-base scoring criteria:**
 - Average *TRANSIT* vs average Overall Impact scores.
- **Preliminary assessment validates *TRANSIT*, supports**
 - New review criteria using *TRANSIT* combined with NIH-based criteria.
 - Use in 2026 Pilot application and review.

New Review Criteria for 2026

Scoring domains	Scores
Focus on unmet need	
Generalizable Solution	
Creativity and Innovation	
Team Science	
Efficiency and Speed	
Bold and Rigorous	
Boundary-crossing Partnership	
Feasibility	
Approach	
Investigators	
Overall Impact	

Scores 1 to 5
1 – lower score
5 – higher score

Score	Descriptor
1	Not at all
2	Slightly
3	Moderately
4	Very
5	Extremely

Score	Descriptor
1	Poor
2	Fair
3	Good
4	Very good
5	Outstanding

Show and Tell

- *New Review Criteria*
- *Self-assessment TRANSIT scoring tool*

redcap.einsteinmed.org/surveys/?s=HR9HFFYML84Y47AX



Takeaways and Plans for Year 4 - 2026



Takeaways

- Maintain requirement for LOI.
- Encourage applicants to use *TRANSIT* to learn about TS and self-assess TS alignment of their proposals.
- Implement *TRANSIT* review criteria for reviewers.

Collaborate and Disseminate

- Include Health Informatics Core and Clinical Research Center in the review of applications to identify areas for potential collaboration and synergy.
- Analyze *TRANSIT tool* data from Year 4 and publish results.
- Disseminate *TRANSIT* self-assessment and review tool to other CTSA hubs.