

Targeting RNA in Disease with Novel Technologies (TRDNT) Challenge

An NIH Common Fund Venture Program Initiative

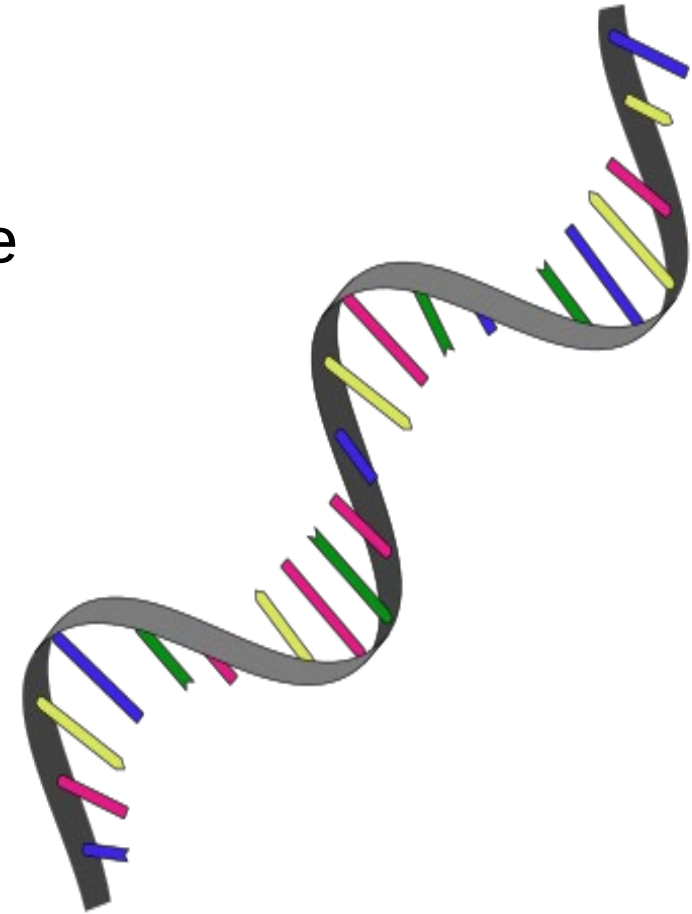
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National Institutes of Health
Office of Strategic Coordination—The Common Fund

Agenda

- What is a Challenge?
- Background and Objectives of this Challenge
- Phases of Challenge
- Prizes and Timeline
- Rules
 - Eligibility
 - Participation
- Submission requirements (Phase I)
- Judging (Phase I)
- How to enter — coming soon
- Questions



PLEASE NOTE

The intent of this webinar is to answer general questions associated with this Challenge.

Questions relevant to the scientific scope will be addressed, but questions relevant to specific individual projects will not. These can be addressed with the program leads at a later date.

What is a Challenge?

A challenge or prize competition is a type of project that allows the public to solve challenges presented by federal agencies and receive awards for the best solutions.

The process boils down to three steps:

- Agency announces a prize competition and invites the public to solve it.
- Participants create and submit solutions to the problem.
- Agency evaluates solutions and awards prizes to the best ones.



How is a Challenge different from a Grant?

In grants and contracts, an agency receives proposals to do tasks or research, chooses one or more entities to participate, and then pays the monetary award incrementally for the work to be done. In prize competitions, an agency generally selects a winner or winners based on the work that has already been done. In prize competitions, only the winner(s) receives an award.

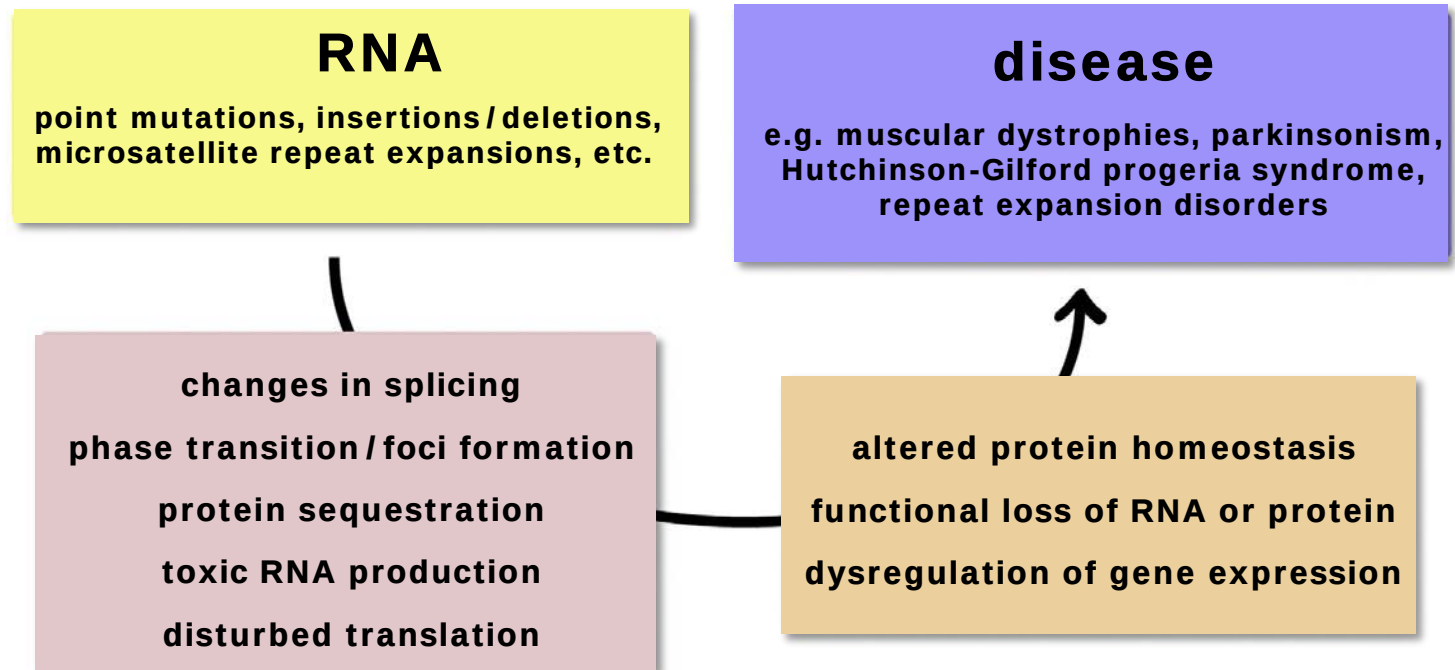
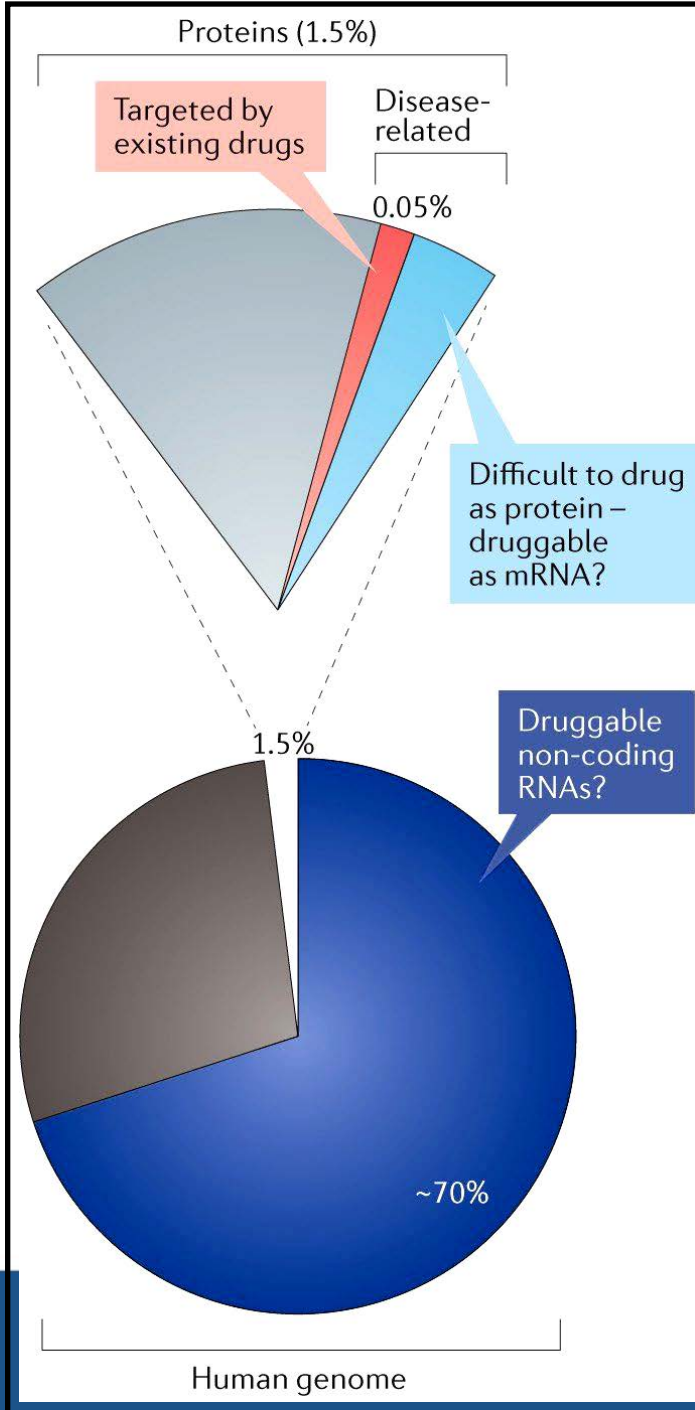
Prize competitions define a smaller set of requirements, which allow participants to bring their creative solutions.



Targeting RNA in Disease with Novel Technologies (TRDNT) Challenge – An NIH Common Fund Venture Program Initiative

- The TRDNT is the latest initiative from National Institutes of Health (NIH) Common Fund's Venture Program, which supports short-term projects with long-term impact.
- The Common Fund Venture Program is a new area of Common Fund support that provides a framework for development of short-term Common Fund initiatives that embrace bold approaches and are responsive to the shared priorities of NIH Institutes, Centers, and the Office of the Director.

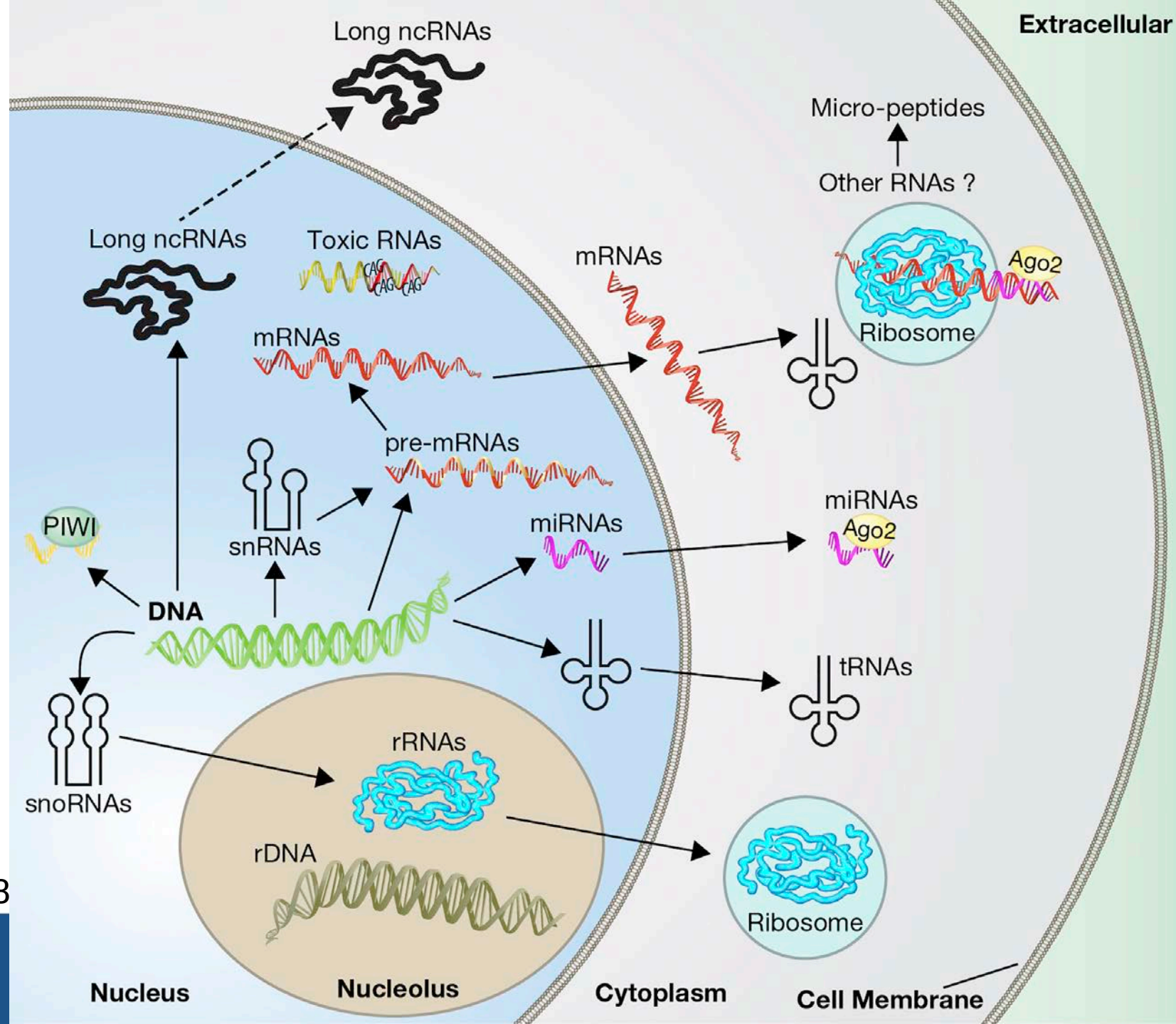
RNA as a Target for Treatment



Neueder, Andreas, 2019 Journal of Molecular Biology

Several forms of RNA can be targeted: mRNA, pre-mRNA, tRNA, rRNAs, miRNA, long noncoding RNA

Potential RNA Targets of Interest



Crooke et al, Cell Metabolism 2018



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Targeting RNA in Disease with Novel Technologies (TRDNT) Challenge

RNAs are an important emerging target class for the development of therapeutics, and progress in the development of RNA-targeting technologies should provide exciting future possibilities.

The goal of this Challenge is to develop, validate and disseminate a publicly available suite of novel RNA-targeting technologies for new therapeutic classes that can lead to the development of precision RNA-targeted therapies to treat diseases that are either (1) caused by difficult to drug protein targets (proteins unlikely to be modulated with a small molecule) that could be treated upstream at the RNA level or (2) for diseases that at this time are incurable but have roots in RNA dysfunction.

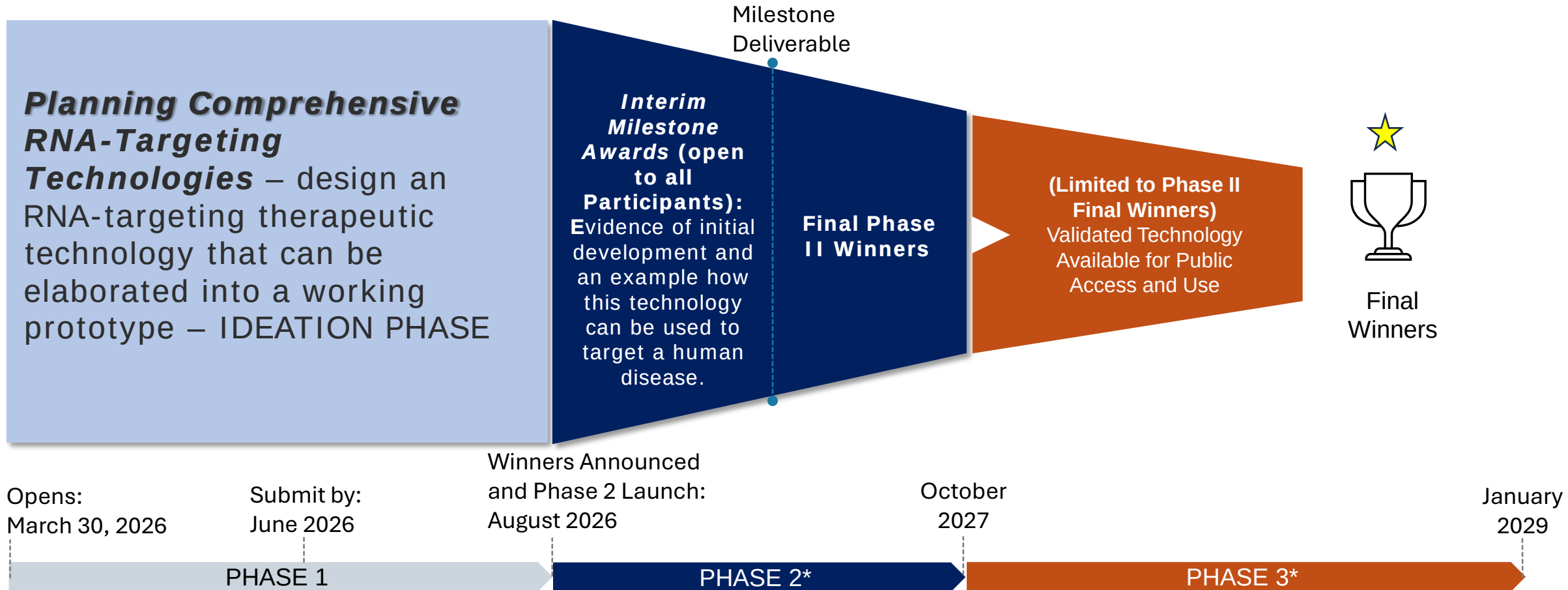
Only solutions that target endogenous RNA to treat disease will be considered competitive for this Challenge.

TRDNT Challenge: Phases

- *Phase I: Planning Comprehensive RNA-Targeting Technologies* – design an RNA-targeting therapeutic technology that can be elaborated into a working prototype.
- *Phase II: Prototype Development and Use Case Demonstration* – (Open to all Participants, Phase I participation not required) Required submission of evidence of the initial development of the prototype RNA-targeting technology and an example via use case of how this technology can be used to target a human disease.
- *Phase III: Final Iteration and Technology Dissemination* – (Open to Phase II final winners only) Submission of the final, validated version of their technology, as well as their finalized plan for ensuring their technology is publicly available at time of prize payment.

TRDNT Challenge: Phases and Timeline

Open Call for Solutions	Judging and Winners	Prototype Development and Use Case Demonstration	Final Iteration and Technology Dissemination
	\$20K Prize (25 Winners)	\$120K Prize (25 winners), \$320K Prize (15 winners)	\$200K Prize (3 Runners-up), \$525K Prize (8 Final Winners)



TRDNT Challenge: Rules

Eligibility Rules (Full rules in Challenge Announcement)

To be eligible to win a prize under this Challenge, a Participant (whether participating as a Team or Entity):

- Shall abide by the rules of the Challenge as published;
- Shall have complied with all the requirements set forth in the Challenge;
- Shall be a citizen or permanent resident of the United States, or, in the case of a business, be incorporated in and maintain a primary place of business in the United States.
- Shall not be a federal entity or federal employee acting within the scope of their employment;
- Shall not be an employee of the Department of Health and Human Services acting in their personal capacity;
- Who is employed by a federal agency or entity other than HHS (or any component of HHS), should consult with an agency ethics official to determine whether the federal ethics rules will limit or prohibit the acceptance of a prize under this Challenge;
- Shall not be a judge of the Challenge, or any other party involved with the design, production, execution, or distribution of the Challenge or the immediate family of such a party.
- Shall be 18 years of age or older at the time of submission.

TRDNT Challenge: Rules

Notes on Participation:

- Can apply as individual, team or entity, but there are tax implications for each – please speak to an accountant
- If federal funds are utilized to develop the submission, the submission must be made by the Authorized Organization Representative (AOR) of the Entity (ex. University federal funds were awarded to)

TRDNT Challenge: Rules

Participation Rules (Full rules in Challenge Announcement)

1. Federal grantees and recipients of cooperative agreements or other transaction (OT) awards are eligible to participate in the Challenge but may not use Federal funds to develop their Challenge submission or to fund efforts in support of their Challenge submission unless use of such funds is consistent with the purpose, terms, and conditions of the grant award, cooperative agreement, or OT award.

2. Federal contractors may not use federal funds from a contract to develop their Challenge submissions or to fund efforts in support of their Challenge submissions.

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6. By participating in this Challenge, each Participant (whether participating as a Team or Entity) warrants that they are sole author or owner of, or has the right to use, any copyrightable works that the submission comprises, that the works are wholly original with the Participant (or is an improved version of an existing work that the Participant has sufficient rights to use and improve), and that the submission does not infringe any copyright or any other rights of any third party of which the Participant is aware.

...

8. Each Participant (whether participating as a Team or Entity) agrees to follow all applicable federal, state, and local laws, regulations, and policies.

9. Each Participant (whether participating as a Team or Entity) participating in this Challenge must comply with all terms and conditions of these rules.

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TRDNT Challenge: Rules

Participation Rule 7: Intellectual Property

By participating in this Challenge, each Participant (whether participating as a Team or Entity) grants to the NIH an irrevocable, paid-up, royalty-free nonexclusive worldwide license to reproduce, publish, post, link to, share, and display publicly the submission on the web or elsewhere. Each Participant will retain all other intellectual property rights in their submissions, as applicable. To participate in the Challenge, each Participant must warrant that there are no legal obstacles to providing the above-referenced nonexclusive licenses of the Participant's rights to the federal government. To receive an award, Participants will *not* be required to transfer their intellectual property rights to NIH, but Participants must grant to the federal government the *nonexclusive licenses* recited herein.



Only the Title and Executive Summary from participant submission will be posted publicly, as stated in the Submission Requirements section of the Challenge

TRDNT Challenge: Submission Requirements (Phase I)

Phase I: Planning Comprehensive RNA-Targeting Technologies – design an RNA-targeting therapeutic technology that can be elaborated into a working prototype in the second Phase of the Challenge.

To be highly competitive in this Challenge, solutions **must**:

- Address RNA targets across multiple diseases.
- Address unmet medical needs in the RNA-targeting space.
- Be innovative and novel in approach, with avoidance of well-established and widely utilized technologies.
- Have the appropriate expertise and environment (or the ability to quickly acquire the relevant resources and expertise) to support the development of proposed technology in future Phases.
- Identify potential roadblocks and suggest additional expertise or alternative methods to facilitate roadblock resolutions.

TRDNT Challenge: Submission Requirements (Phase I) Continued

- 1. Title and Executive Summary**, the latter of which should include a brief description of the technology and how it will help to develop novel RNA-targeted therapies across multiple diseases. *Do not include any proprietary or confidential information here.*
- 2. Description of how the technology will address a significant health need in the patient community**, including a description of the potential impact of the solution on the development of novel RNA-targeting therapies.
- 3. Early-stage technical concept** for how the technology will target RNA and provide a framework for developing novel treatments.
- 4. Detailed plan to outline how the Participant will carry out development and use case demonstration of the technology.**
 - Participant expertise and environment.
 - Potential roadblocks and solutions.

TRDNT Challenge: Judging Criteria

Phase I Evaluation Criterion - the review will consider:

Completeness – 10 points

Potential clinical impact of solution – 30 points

- Address unmet medical needs in the RNA-targeting space?
- Address multiple disease areas or classes of diseases?

Novelty of the proposed solution – 30 points

- How comprehensive and innovative is the proposed technology?
- Level of detail provided in the technical concept and could technology be successfully prototyped?

Likelihood that Participant can carry out development of the technology – 30 points

- How feasible and straightforward is the proposed workflow?
- Team composition - appropriate group of innovators with the ability to tackle the proposed problem?
- Comprehensive plan to ensure appropriate expertise and environment to support development?
- Potential roadblocks identified and additional expertise or alternative methods suggested for resolutions?

TRDNT Challenge: How to Enter

COMING SOON

Challenge will be open March 30, 2026

Registration site, including additional details concerning how to register and submit, will be provided around this time.

Questions?

trdnt@od.nih.gov

<https://www.nih.gov/challenges/targeting-rna-disease-novel-technologies-trdnt-challenge>

All questions & answers from this webinar will be posted publicly on
<https://commonfund.nih.gov/venture/trdnt/faqs>