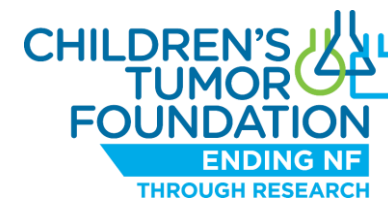


The CTF experience with Registered Reports

Salvatore La Rosa, PhD
Chief Scientific Officer

SPRING 2022 HRA MEMBERS MEETING (VIRTUAL)
Open Science: Tortoise and the Hare

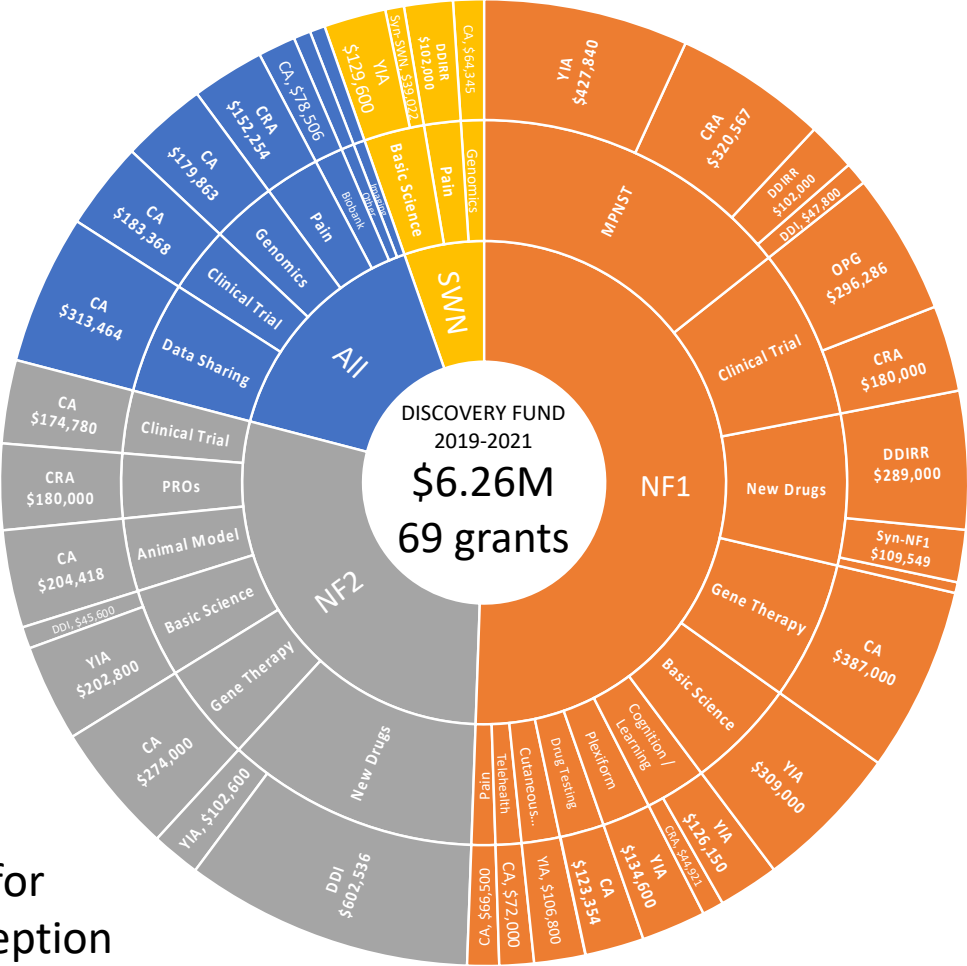


CTF Open Science Integration

- 2014 – First Synodos (large collaborative grants) team share data through Synapse
 - 2017 – Four more Synodos teams use Synapse
All CTF grants on Dimensions DB
 - 2018 – Launched the NF Open Science initiative + NF Data Portal
 - 2019 – Other NF organizations co-fund the NF Data Portal
ORCID requirement
 - 2020 – Started requiring data-sharing for most CTF awards
 - 2021 – Data sharing plan required for all grants
 - 2021 – Implemented DOI for grants – push grant info into ORCID records
-
- 2018 – Launched DDI Registered Reports in collaboration with PLOS ONE
 - 2022 – Decided to revert back to DDI

CTF PI-initiated Grants: The Discovery Fund

- YIA - Young Investigator Awards
- DDI – Drug Discovery Initiative
- DDIRR - Drug Discovery Initiative Registered Reports
- CRA - Clinical Research Awards
- CA - Contract Awards



DDI/DDIRR accounts for \$1.2 million since inception of Discovery Fund

The Registered Reports (RRs) model

- In the Open Science field, RRs is a tool to make research more transparent
- It is a (relatively) new research article type that allows researchers to peer-review their research protocols by submitting to a journal before their research starts and secure a publication of results even if negative
- RRs are intended to strengthen the rigor and transparency of studies that test hypotheses.
- CTF partnered with PLOS ONE editors aligning the DDI grants with the registered report protocol
- The model makes funded research more solid and transparent by pre-registering research protocols and connecting research publications to grant proposals

Transitioning to Registered Reports

DDI



DDIRR

- Simple application
- Defined Protocol
- Proof-of-concept studies (negative results important!)

- Try to keep it simple
- Strengthen the Experiment Protocol before research starts – prevent researchers to run less informative experiments
- Preregister award protocol (linked in publication) and making it available
- Secure publication of results irrespective of research outcomes

The DDI Program

Launched in 2006

The program supports early stage testing of candidate drug therapies for the treatment of NF. It also supports funding for the generation of new model systems.



→
2 cycles/year



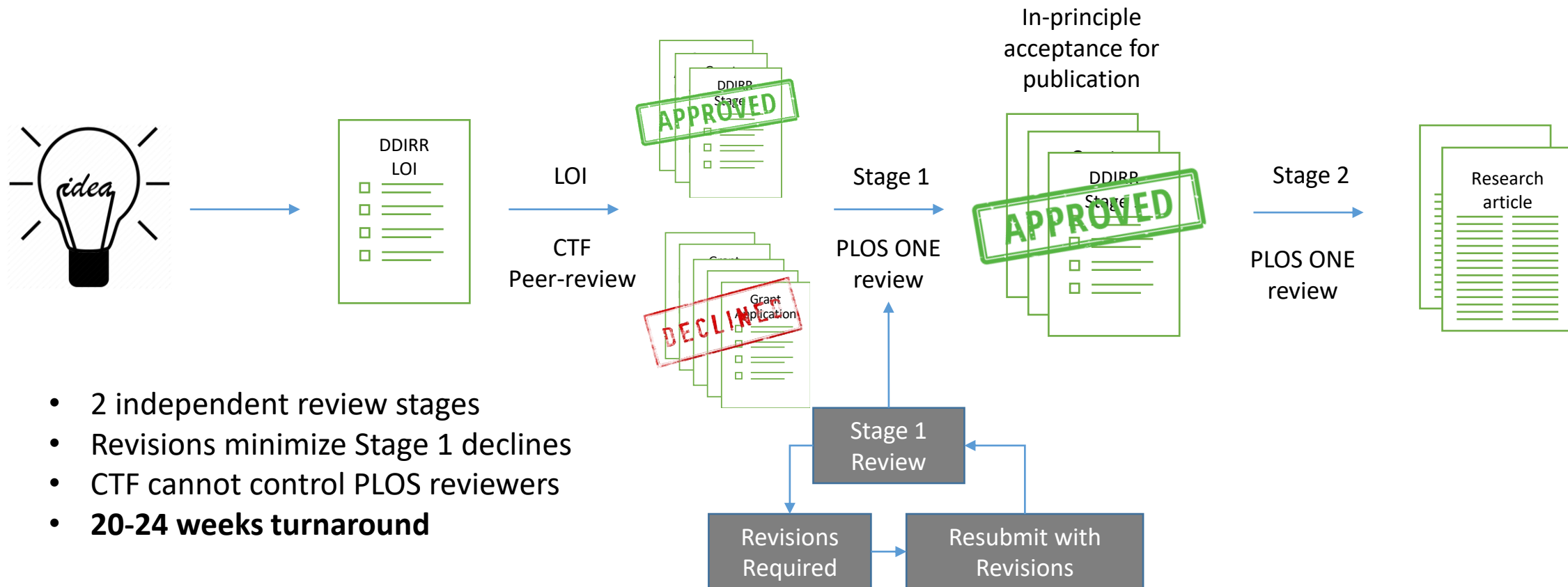
→
Peer-review



Simple application (3-page description) – 6-8 weeks turnaround

The DDIRR Program

Launched in 2018 in Partnership with PLOS ONE



- 2 independent review stages
- Revisions minimize Stage 1 declines
- CTF cannot control PLOS reviewers
- **20-24 weeks turnaround**

DDIRR – Pros and Cons

Pros

- Emphasis on research question and quality of methodology irrespective of final results
- Research conducted must strictly conform to proposed methodology
- In-principle publication acceptance prior to actual research
- Stage 1 protocol is public (after embargo period)
- Stage 2 (final) publication assured even for negative results

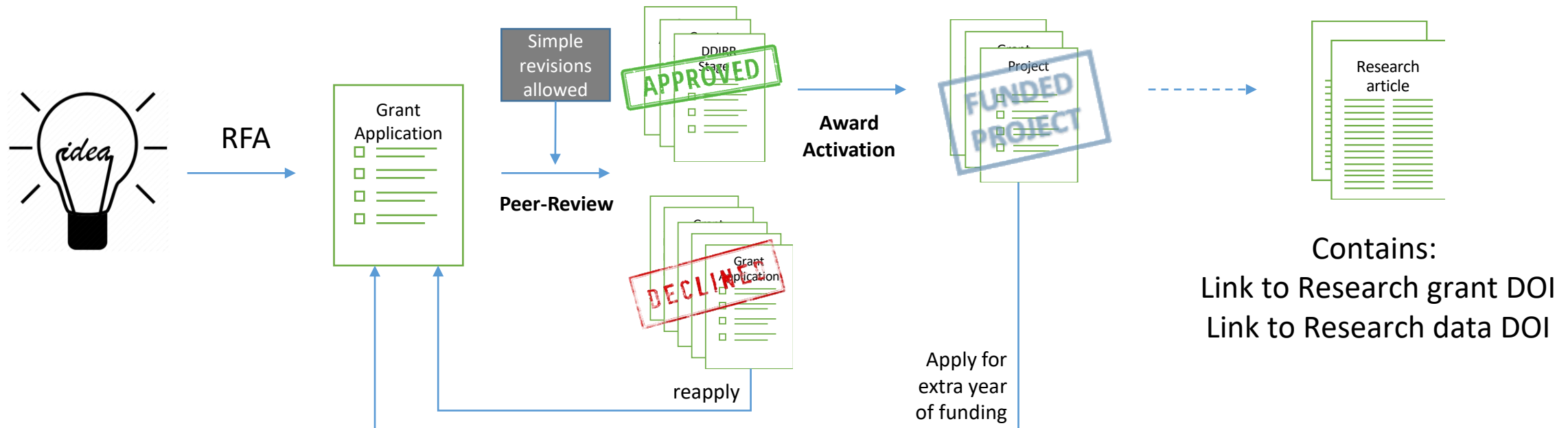
Cons

- Less submissions, less grants awarded
- Lot of work for a one-year grant with limited scope and budget! (applicant feedback)
- Longer review process
- Community does not want to make stage 1 protocol public
- Only one DDIRR recipient opted for a stage 2 publication with PLOS (so far)

- 44 DDI awarded during 2010-2016 (107 submissions – 15/year)
- 13 DDIRR awarded during 2018-2021 (30 submissions – 7.5/year)
 - 5 complete – 1 final publication through stage 2 so far
 - 8 still ongoing

The new DDI Program

Re-Launched in 2022



Peer-Review stage

- Added a specialist reviewer for Statistics
 - Revisions allowed (simple fix)
- Commitment to Data-sharing on the NF data portal

Award activation stage

- Full DSP required – data embargo 12 months from end of award
- Assigned award DOI via Crossref
- Open Project page on Data Portal (obtain DOI)
- Opportunity to apply for 1 extra year

Conclusions – Lessons Learned

- Experimenting the Registered Report (RR) model allowed us to improve the quality of research funded
- The RR model remains one of the ideal tools to achieve transparency, rigor, and assure quality of funded research
- The benefits offered by RR in our implementation were outweighed by the costs of longer timelines and efforts required to get to approval
- New features introduced:
 - Statistical review and protocol revisions
 - DSP required only after grant approval
 - Opportunity to apply for an extra year of funding (competing with new applications)
 - Grant DOI and Project data DOI links allow for added 'openness'
- Open Science remains an evolving objective
- Listen to the community and adjust incentives to gather consensus
- Work with PLOS and other publishers to streamline the RR partnership and offer them again in the future