

Core Facility Name ICTR Center for Clinical Data Analysis (CCDA)
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Amount of Funding Requested 25,000

The Center for Clinical Data Analysis (CCDA) assists investigators with access to data in Epic and other institutional databases, operating as a fee-for-service with two hours per research project funded by the Institute for Clinical and Translational Research (ICTR). The CCDA is staffed with experienced data analysts who assist with access to data while also helping researchers comply with IRB and Data Trust privacy and security regulations.

Briefly describe the core services you offer:

Services include:

1. Preliminary, anonymous data for feasibility, grant applications and statistical population sample-size estimates
2. IRB-approved case-finding for study enrollment (mailings, phone solicitation), chart review, and cohort/case-control studies
3. Natural Language Processing service
4. Research data extracts
5. Data de-identification services to conform to HIPAA Privacy standards
6. Honest Broker services (IRB and Data Trust consultation)
7. Assistance using Epic's SlicerDicer self-service tool

Briefly describe your current user base and how the current proposal will expand that base?

The CCDA serves clinical researchers from the Johns Hopkins clinical research community, including researchers from the schools of Medicine, Public Health, Nursing, and Arts and Sciences. We propose to expand our user base on two fronts. 1) Unfunded junior investigators are often unable to utilize CCDA services since CCDA is a fee for service group. The Core Coins funds would allow us to serve these previously unserved junior investigators by providing them preliminary, anonymous data for feasibility assessment and grant applications, with the goal of helping them to gain funding for their research. 2) There is an increasing demand for Natural Language Processing (NLP) to extract data from text documents. We propose to use the Core coin funding to increase NLP skills and capabilities of our newly established NLP service so that we can provide a wider array of NLP services and serve more customers.

What specific services do you plan to offer as part of this RFA?

The first service we will offer is to provide preliminary, anonymous data for feasibility assessment and grant applications to unfunded junior investigators. The average cost of a request for this type of data is \$840 per request (\$84/hour for 10 hours). The ICTR

currently subsidizes 2 hours per research project, leaving a gap of 8 hours (\$672) per investigator. If we were to receive an award of \$25K and invest half of the money in this service, we could assist 18-19 investigators who are currently unserved.

In addition, we will expand the capabilities of our new Natural Language Processing (NLP) data extraction projects. Since our NLP service is new, our NLP software engineer is expanding his skills and capabilities, and we do not wish to penalize investigators by asking them to pay for our NLP software engineer to expand his skillset. We estimate that for a moderately complex NLP project that requires a significant new technique, we could incur 24 hours of time (\$2,016) per project to learn and test new techniques. If we were to receive an award of \$25K and invest half of the money in the NLP service, we could defray the learning costs for 6 new NLP projects, meanwhile building our capabilities to more efficiently serve even more investigators in the future.

Core Coins funding would increase access to research data services for junior faculty who have not yet established a significant funding base while helping them to strengthen their grant applications. The funding would also expand the depth and breadth of NLP services that we can offer, furthering the advancement of clinical NLP tools and best practices across JHM and JHU as we collaborate with the Center for Clinical NLP as well as the Precision Medicine Platform technology group.

About a week after core coin funding is made available in iLab, we plan to announce the program to researchers via the ICTR web site and through various email lists. We will establish a deadline for submission and response to an initial award cycle, and we will instruct applicants to submit a request through iLab and include a submission form that allows applicants to upload a letter of support and a proposal describing how the Core Coins would be used for their study. Should we fail to receive enough qualified applicants in the first award cycle, we will continue to publicize the program and will award remaining funds as qualified investigators approach CCDA for services.

The following faculty and staff will serve on a review committee to assess each application's eligibility: Dr. Christopher Chute (Chief Research Information Officer), Diana Gumas (CCDA Director), Bonnie Woods (CCDA Manager), and for NLP projects, Masoud Rouhizadeh (CCDA NLP Software Engineer).

The qualified Core Coins recipients must meet the following criteria:

1. For the junior faculty anonymized/feasibility data award, the

How do these services address the goals of the pilot program?

How would you select recipients to receive core services? Please describe the process and criteria you might use.

investigator must be a junior faculty member with minimal or no funding.

2. For the NLP award, the protocol must require NLP techniques to collect clinical data to support the research project.

Applicants will be rated by the review committee based on 1) the scientific merit of the idea, 2) data feasibility, 3) the quality of the applicant and team, and 4) the impact. For NLP projects, impact includes the opportunity to increase the capabilities of the NLP service.

Awardees must agree to reference ICTR/CCDA in publications resulting from the CCDA service and must complete a post-project survey to indicate their satisfaction level with CCDA services.

How do you plan to allocate the amounts available to individual investigators?

We plan to allocate half of the award to unfunded junior investigators and half to NLP services. Each eligible and selected junior investigator would receive up to \$672. Each eligible and selected NLP investigator would receive up to \$2,016. We say “up to” since it is possible that a specific request might require fewer hours than our average estimate, and so in that case the amount allocated would only defray the actual costs of the project.