CMLH PROPOSAL TEMPLATE

PROPOSAL DEADLINE: OCTOBER 22, 2019

THE CMLH SEeks proposals that are as focused as possible (an initial and valuable use case in health care) that solves the identified problem with novel solution based on innovative technology. Proposed work and tasks are to be completed within a year and should be designed to provide a ‘proof of concept’ at the end of the period that will serve as a basis for funding further research, commercial incubation of the solution, or both. The CMLH favors proposals that propose applied as opposed to theoretical inquiry and that present a potential pathway to commercial application.

You can type over the instructions in the response boxes below, cut and paste into them or submit a document that follows the format shown.

Project Title:

*Short descriptive title*

Research Team:

List PI(s) and all researchers (name, affiliation and email address) and anticipated graduate student (Masters or PhD) involvement (name, degree program, curriculum/department). Include CMU and non-CMU researchers/collaborators.

1. Executive Summary (please limit to one half page or so):

*An overview of the problem, solution and its enabling technology, research plan and projected impact of the work.*

2. Statement of Work: (please limit to four or 5 pages minus diagrams if used)
A. A description of the unmet need: the problem being solved, why it is important, and its scale: number of individuals affected/size of the market, expenditures incurred, associated trends, etc. It is useful to have an initial, valuable focus for the work even if it is extensible beyond this initial projected application.

How your solution solves the problem: please describe how the technology will be deployed and by whom to solve the problem.

B. Research Plan: please walk through the major stages of your planned work. Highlight prior work if any that is being built upon, trials designed to validate the technology, data to be used or needed to drive the work.

A statement of anticipated outcomes of the work (software, algorithms, prototype, etc.) that can be used to drive a decision to fund further research, an effort to incubate the solution for commercial use, or both.

C. Please describe how the innovation creates value (better outcomes, lower cost/variability, reduction of waste/better resource allocation, et al) and who will use/interact with the system or tools (physicians, patients, etc.)

Please speak to the economic/clinical incentive to adopt, and if possible to the underlying change in process that it may require for adoption in practice. Generally, excluding regulatory restrictions (patient privacy, etc.), adoption of digital solutions in health care tends to focus on physician decision making processes that may have to evolve or patient behaviors that technology seeks to enhance or modify.
3. Project Budget Information (CMU costs plus subcontracted items)

You may enter the budget here as line items, or insert a spreadsheet as an image. Please note:

- Please see Appendix item 2 for a sample budget.
- Period of Performance = 12 months
- Graduate student (Masters or PhD) support: Use standard tuition/stipend rate for your department.
- Benefits rate: Please use current non-federal rate of 26.9%
- If your team includes UPMC/UPitt collaborators and associated expenses please include an estimate of these costs separate from your CMU budget.
- Travel and Conferences are not eligible expenses unless they are directly contributing to the proposed work.

4. Data Sources and Needs

Please describe all data/data sources that will be used to fuel and complete your proposed research:

- Publicly available data sets. Please describe and incorporate any fees into your budget
- Data sets owned by CMU. Please describe.
- Data sets owned by the University of Pittsburgh. Please describe and indicate availability/process to access the data.
- Data sets owned by a University other than CMU or the University of Pittsburgh. Please describe and indicate availability/process to access the data.
- Data sets, including clinical, EHR, claims, etc. that would be sought from UPMC. Please describe desired data and indicate UPMC data access collaborator (if you have made such a contact)
- Data sets, including clinical, EHR, claims, etc. that would be provided by another Hospital System or Payer. Please describe the data and indicate data access collaborator (if you have made such a contact)
- Other data not classified above. Please indicate source and describe.
5. Additional Information required. Please include in your submission answers to ALL of the following questions. Check all project characteristics that apply and provide information as requested:

**Human Subjects/IRB**

Will this project be:

- [ ] Conducted solely at CMU
- [ ] Conducted at another or additional location. please describe:

All research to be carried out by CMU faculty/students

- [ ] Yes
- [ ] No. Please identify non-CMU researchers

Will this project involve any activities with humans or review of data derived from humans: data that may or may not be personally identifiable?

- [ ] No
- [ ] Yes. Please describe:

Does the project Include any researcher having interaction or intervention with a living individual?

- [ ] No
- [ ] Yes. Please describe:
Background Intellectual Property

Does the research build upon any existing IP at either CMU and/or UPMC?

☐ No

☐ Yes. Please identify by disclosure and/or patent/patent application #s:

________________________________________________________________________

If you answered yes above, was this background intellectual property developed in collaboration with any other 3rd parties (companies, universities, etc.) or as a part of a consortium?

☐ No

☐ Yes. Please provide details:

________________________________________________________________________

Have you used any third-party resources (including funding) in the creation of the background intellectual property (i.e. material or equipment from a company or university under a Material Transfer Agreement (MTA) or other formal or informal agreement)?

☐ No

☐ Yes. Please provide details, including copies of relevant agreements:

________________________________________________________________________

Have you used any software, libraries, etc. from other internal (e.g., CMU) sources (example projects or researchers) in the development of the background IP or does the technology otherwise build upon earlier work at CMU?

☐ No

☐ Yes
Have you used any Open Source software in the development of this background intellectual property?

☐ No

☐ Yes. Please provide details including Open Source license used:

Do you know of any other inventions, which are related to this invention?

☐ No

☐ Yes. Please describe:

SUBMIT ALL DOCUMENTS BY OCTOBER 22 IN PDF FORMAT VIA EMAIL TO:  CMLH@CS.CMU.EDU

PLEASE USE “PROPOSAL [YOUR NAME] [SHORT PROJECT TITLE]” AS THE FILE NAME

QUESTIONS AND SUPPORT

FOR QUESTIONS REGARDING THE CMLH, REQUIREMENTS AND/OR PREPARATION OF PROPOSALS PLEASE CONTACT:

JIM CIUCA
DEVELOPMENT OFFICER FOR COMMERCIALIZATION, CMLH

JCIUCA@CS.CMU.EDU
Appendix 1:

Focus Areas

The CMLH is looking for compelling science that creates value for stakeholders including patients and caregivers, providers, payers, and healthcare institutions. The three broad focus areas below present some but not all of the relevant challenges that your project may be designed to address. Projects should strive to bridge the gap between research and practice and present a line of sight to commercial application.

**Improving Outcomes**

Connect and coordinate the health system to empower clinicians to provide high-quality care in any setting.

Enabling physicians/providers by harnessing the exponential growth of data (EHRs, omics, patient monitoring, et al.) to enhance diagnosis and treatment that address undesirable cost and variations in therapy and outcomes. New tools are challenged to marry machine insights with human expertise all while addressing potential digital overload.

**Consumer-Oriented Healthcare**

Solutions that allow consumers to access medical services and information anytime, anywhere, and to engage in all steps of the healthcare journey.

Digital enablement of patient engagement unlocks powerful benefits for many stakeholders. Proactive engagement with patients in all settings, beyond structured engagement in hospitals, clinics or offices, benefits patients and caregivers via insights into self-management, compliance/effectiveness of therapy, and earlier intervention.

**Infrastructure and Efficiencies**

Enhance resource allocation, service levels, and care pathways to coordinate and manage the cost of care.

Delivering quality consistently and reliably is key to succeeding in the increasing value-based health care environment. Hospitals are highly-complex ecosystems and are challenged to become high reliability organizations. Technological innovation is needed to objectively understand, analyze, and model processes to enhance outcomes, safety, quality and cost.
Appendix 2:

Sample Budget

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<tr>
<th>Description</th>
<th>Expenditure Type</th>
<th>Time Period in Months</th>
<th>Budget</th>
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<tbody>
<tr>
<td><strong>Salaries</strong></td>
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<tr>
<td>Principal Investigator</td>
<td>Tech/Prof Exempt FT Local</td>
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<td>Co-Principal investigator</td>
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<td>Research Associate</td>
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<td><strong>Total Salaries</strong></td>
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<td>Fringe Benefits-26.9%</td>
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<td>Student Tuition-Graduate Student</td>
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<tr>
<td><strong>Operating Expenses</strong></td>
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<td>ITS Computing Facility Fees</td>
<td>IC Computing Services</td>
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<td>Human Subject Payments</td>
<td>Human Subject Payments</td>
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<td>Tech Supplies (software/hardware)</td>
<td>IC Technical Svcs &amp; Equipment</td>
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<td>Consultant -Design/professional services</td>
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<tr>
<td><strong>Total Operating Expenses</strong></td>
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<td>MTDC Base</td>
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<td>Indirect Costs-51.66% (rate to be used for CMLH projects)</td>
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<td><strong>Total Project Costs</strong></td>
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