THE LOOP ZURICH
MEDICAL RESEARCH CENTER

2nd Call for Proposals for Research Consortia with Focus on Precision Medicine

December 2021

Content

1. The LOOP Zurich – overview

The LOOP Zurich is a translational research center focusing on precision medicine*. Our goal is to improve the fundamental understanding of diseases in order to develop individual treatment strategies and therapies – because every patient is different.

The LOOP Zurich brings together the expertise of ETH Zurich, University of Zurich, and the four university hospitals in Zurich – University Hospital Zurich, Balgrist University Hospital, University Children's Hospital, University Hospital of Psychiatry Zurich – in the fields fundamental biomedical research, bioinformatics, biomedical engineering, and clinical research. Based on building extensive medical data and sample sets, modern analytical and bioinformatics methods are used to gain new insights into cause and progression of diseases, enabling highly specific treatments for the benefit of patients.

** Under the term precision medicine, we understand the customization of healthcare measures to the individual patient, or more precisely, to the specific molecular and/or phenotypic make-up linked to a pathology.*

2. Summary of the 2nd call for proposals

The LOOP Zurich project grants for precision medicine will enable groups of ideally around 5 to 8 researchers, and their teams. They should bring together complementary skills, knowledge, and resources, to address an ambitious medical problem. In this second call, we foresee to support 1 to 2 project(s) falling under Swiss legislation of the Human Research Act. The overall budget for The LOOP Zurich project grants for precision medicine is a maximum of 5 Mio CHF to be spent over 5 years.

Projects are inherently translational and must include demonstration of *proof-of-principle of the proposed solution in patients,* which lays the groundwork for the potential subsequent clinical development.

The projects shall benefit from existing IT, biobanking and clinical research infrastructures at the University of Zurich, the ETH Zurich, and the four university hospitals. At the same time, the projects are intended to advance and support the development and implementation of a sustainable infrastructure that enables the generation of health-related data, samples, and their further use for research purposes. Besides addressing a specific topic and driving infrastructural developments, the LOOP Zurich expects that the projects establish know-how and expertise in order to advance the research ecosystem of Zurich.

The projects must be designed as such that the proposed research questions can be only successfully addressed through synergistic contributions of all principal investigators (PIs) and their teams and through the synergy of fundamental biomedical research, bioinformatics/biomedical engineering, and clinical research.

The submission procedure involves two stages: outline proposals and full proposals.

Timelines (2nd Call: December 2021):

- Submission deadline for outline proposals: **March 15th, 2022**
- Submission deadline for full proposals: **August 15th, 2022**
- Earliest project start: **January 1st, 2023**

3. Principles and requirements for The LOOP Zurich research projects

There is no thematic focus for the call apart from the requirement that projects must be *translational* and should include a *bioinformatics* branch. Projects must cover the following scientific competences and disciplines:

- **Scientific competences:**
  The LOOP Zurich's scientific concept is based on gathering groups of experts within the Zurich scientific community jointly covering three areas of scientific expertise:

I. Biomedical research and engineering: Member projects will study human diseases and will therefore typically rely on quantitative analysis of human patient samples. They are necessary for computational modelling and may include clinical data. Methods will be defined by the researchers.

II. Bioinformatics: A key element of The LOOP Zurich strategy is high-density data analysis and modeling. This relates to the development of novel computational solutions for analyzing patient-derived information such as spatially-resolved cellular and molecular data or disease-related phenotypic data to learn about disease mechanisms, computational models could also be used for connecting patient derived information with clinical and health data.

III. Clinical research: The LOOP Zurich projects must comprise a strong clinical research component, i.e., physician-scientists and clinicians are expected to address unmet or insufficiently met medical needs, conducting phenotypic disease analysis, and developing new methods for diagnosis and treatment in close collaboration with basic scientists and bioinformatics scientists. The projects must be inherently translational, i.e., must include the demonstration of *proof-of-principle of the proposed solution in patients* as a prerequisite for further development of the concept in clinical trials. The expertise in clinical research at the hospitals and the clinical trial centers/units will be able to facilitate this process and might be a key success factor for reaching the translation phase.

- **Collaborations with outside groups:**

  If a specific expertise required for the project is missing in the Zurich biomedical research area, collaborations with national and/or international partner labs are possible.

It is, however, required that the principal activity is in Zurich, resources allocated to external collaborations should not exceed 10% of total funds.

- **Eligibility**
  Principal investigators (PIs) and Co-PIs are employed by one of the following partner institutions: ETH Zurich, University of Zurich, University Hospital Zurich, Balgrist University Hospital, University Children's Hospital Zurich and the University Hospital of Psychiatry Zurich. Biomedical researchers, engineers, bioinformaticians, or clinical researchers qualify as PIs.

  PIs and Co-PIs must have guaranteed employment for the duration of the grant period and guaranteed access to the home institution's infrastructures and services as needed to conduct the approved research. Research groups from at least two of the partner institutions shall be involved in a project.

  PIs of an ongoing The LOOP Zurich- project cannot apply as PI for any further The LOOP Zurich projects if the duration of the two projects overlap. However, they are eligible as Co-PIs. Co-PIs, on the other hand, can participate in different projects without restrictions.

- **Gender Equality**
  The LOOP Zurich is in line with the efforts of its partner institutions in the field of gender equality and diversity. Prospective LOOP-research consortia should apply and implement the correspondent gender equality action plans of their home institutions.

4. Time, financial scope, and project management

- The total duration of a The LOOP Zurich research project is a maximum of 5 years and funding for up to a maximum of 5 Mio. CHF (allocated up to 1 Mio. CHF / year)
- Direct project costs, which includes personnel salaries (PhD students, postdocs, technical personnel), consumables and travel will be provided by the grant scheme. Costs for salaries of PIs and Co-PIs, major equipment and/or infrastructure will NOT be provided (fees for services and for use of infrastructure necessary for data/sample collection/management and analyses can be charged).
- Project funding will start earliest on January 1st, 2023.
- Progress of The LOOP Zurich research projects will be regularly monitored, which includes the submission of annual intermediate reports (scientific and financial reports at month 12, 24, 36, and 48) as well as a midterm appraisal (on site) by the SAB after 36 months. Funding for years 4 and 5 may be adjusted based on the outcome of the appraisal. At the end of the project a final report (scientific and financial) must be delivered.

- Projects that use human samples, patient data or animal models will require the necessary ethical and legal approvals by the responsible commissions as a prerequisite for the final allocation of funding. The LOOP Zurich adheres to the respective regulations of the partner institutions (e.g. Institutional governance processes and data strategies) and recommends early cooperation with the appropriate bodies (e.g., Clinical Trial Center Zurich).

5. Criteria for the evaluation of grant proposals

The LOOP Zurich research project proposals will be prioritized following these criteria, which have to be fulfilled:

a) **Medical relevance**: The proposal addresses a problem, that is highly relevant regarding diagnostic, prognostic, therapeutic, or preventive management of diseases and for which there is currently no solution at all or no satisfactory solution.

b) **Novelty**: The scientific concept is novel, i.e., it should not be a minor modification of already established approaches

c) **Translation/market potential:** Researchers demonstrate the translational character of their project and if appropriate the economic potential of the project outcome.

d) **Feasibility and Quality**: The Project is feasible *including proof-of-principle in patients* within the 5 years period of the project duration. In addition, the application should include information documenting that the *patient data required for carrying out the project can be made available and accessible from the Zurich's databases*. Sufficient resources must be requested in the proposal to achieve the availability and/or to generate the data and sample required in high quality and accuracy.

e) **Interdisciplinarity:** The project covers the following disciplines: Basic biomedical research and engineering, bioinformatics, and clinical research.

f) **Benefit for Zurich**: PIs demonstrate how the Zurich (bio-)medical ecosystem would benefit from the research project. In particular, the authors should address, why Zurich is suited for this project, what expertise and prior art is available in Zurich, and how the project capitalizes on the inputs from the founder institutions.

g) **Competitive Position**: The PIs position the project in comparison to similar projects (if any) that are currently pursued at other comparable national and international institutions. In which domains can Zurich position itself in relation to these competitors?

h) **Contributions by PIs**: Proposals document (in-kind) contributions by the individual PIs and their teams. Each PI/Co-PI is expected to devote *20% of her/his time* to the project.

6. The two-stage submission procedure

Outline proposal: In the first stage, an outline proposal shall be submitted that describes the research idea, highlighting the scientific novelty, know-how already available in partner labs, technical feasibility, interdisciplinarity, value for the biomedical research community Zurich, international competitive situation, and in-kind contribution from individual research group.

The proposal should comprise 6 pages at maximum and include a budget estimate (no detailed budget required at this stage). Moreover, the proposal should include biosketches of all PIs (max 2 pages per PI).

[See *"7. Instructions for Application"* for details.]

Submission deadline of the Outline Proposal: ***March 15, 2022***

Full proposal: Applicants, whose outline proposals have passed the first evaluation round, are invited to submit a full-length proposal describing the project in more detail. These proposals must comprise:

- *A common research plan* describing the overall hypothesis, the role of the individual subprojects, the organization of the collaboration, and the expected impact of the overall proposal.
- Study protocols of the individual sub-projects with hypotheses, preliminary work by researchers in the field, schedules and milestones, relevance.
- *Detailed budget*, which includes budget positions for IT-services and study personnel (e.g., data management, study conduct, sample and data collection/acquisition), as well as budget for a dedicated project manager.

[See *"7. Instructions for Application"* for details.]

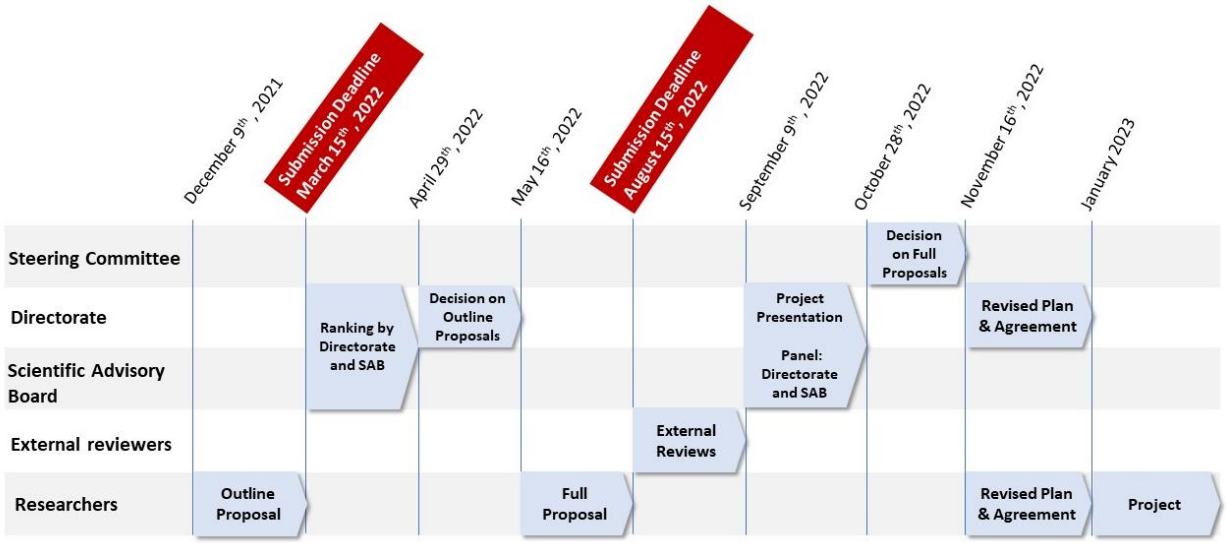
Submission deadline of the full proposal: ***August 15th, 2022***

7. Instructions for applications

- **Templates**
  Templates for outline proposal and full proposal can be found on the homepage of The LOOP Zurich (https://www.theLOOPzurich.ch/en/project-submissions.html)

- **Submission procedure**
  The submission procedure comprises two-stages: outline proposals and full proposals. The outline or full proposals must comply with the specifications given below and must be submitted in full and on

time. Outline or full proposals that are incomplete, exceeding page limits, or not submitted on time will not be considered.



- **Submission of Outline proposals**

  The outline proposal comprises **six different parts I.-VI.** (excl. title page and appendices), is written in English and structured as follows:

I. General Information
   Research project title, information on the project management (lead) and the mainly involved institutions and faculties (title page)

II. Description of Work (max. 6 pages)

   a) Short description of the planned research program, including description of possible sub-projects (background information, objectives, prior work by applicants) (≈3 pages)
   b) Demonstration of relevant clinical/medical expertise to ensure the medical significance of the projects and envisioned outcome (≈ 0.5 page)
   c) Significance of the project: Expected added value and innovation potential, clinical relevance gained through interdisciplinary cooperation. (max. 1.5 pages)
   d) Comment on implementation of the gender equality action plans (≈ 0.5 pages)
   e) Goals and measures in the field of academic career development, and science communication (≈ 0.5 pages)

III. References

IV. Budget estimate

V. CV and publication list of the persons involved (2 pages per person, 1 page CV + 1 page with 5 most important publications of the last 10 years and a URL to a complete publication list (ORCID, Scholar, Scopus, ZORA, etc.)).

VI. Suggestions for at least five external reviewers (according to template)

The outline proposal must be prepared according to the official templates (https://www.theLOOPzurich.ch/en/project-submissions.html)

Submission deadline: The outline proposal (incl. appendices) must be submitted as one PDF document to The LOOP Zurich (jens.selige@theLOOPzurich.ch) by **March 15, 2022**

Decision: The decision on the outline proposal will be communicated to the applicants after **May 16th, 2022**

- **Submission of Full proposals**

  A full proposal may be submitted on invitation following the successful evaluation of the outline proposal. The full proposal comprises **a maximum of 15 pages** (excl. title page and appendices), is written in English and structured as follows:

I. General Information

II. Description of work

a) Research project title, information on the project management and the mainly involved institutions and faculties (title page)
b) Summary of the planned research program (1 page)
c) Scientific question and state of research (2 pages)
d) Research plan for five years and perspective for the following years, incl. description of sub-projects (7 pages)
e) Significance of the project: Expected added value and innovation potential gained through interdisciplinary cooperation compared to the sum of the individual projects (1.5 pages)
f) Use of existing or research infrastructures within Zurich (1 page)
g) Strategy for academic career development, gender equality and science communication (1.5 pages)
h) Organization: Persons involved (management; sub-project leaders), tasks and responsibilities, organization chart (1 page)

III. References

IV. Budget including in-kind contributions by PI and Co-PIs and their teams (according to template)

V. CVs and publication lists of the persons involved (PIs, sub-project leaders, potential outside collaborators) (2 pages per person,1 page CV + 1 page with 5 most important publications of the last 10 years and a URL to a complete publication list (ORCID, Scholar, Scopus, ZORA, etc.))

VI. Support letter(s) by relevant infrastructure units involved: e.g., clinical IT center ITC, Clinical Trial Center (CTC), etc.

VII. Support letter(s) by external collaborators: If external collaborations are essential for the project, the application must include a letter by the external project partner stating her/his commitment for the project.

VIII. Data Management Plan

IX. A statement confirming that all patient related data collected and used in the course of the project will be entered into the respective research data bases.

The full proposal must be prepared according to the official templates
(templates will be send directly after a positive evaluation).

Submission deadline: The full proposal (incl. appendices) must be submitted as a PDF document to The LOOP Zurich (jens.selige@theLOOPzurich.ch) by **August 15th, 2022.**

Decision: The decision on the full proposals will be communicated to the applicants by **November 16th, 2022**

8. Evaluation and decision bodies

- The LOOP Zurich Directorate (Outline Proposals only)
- The LOOP Zurich Scientific Advisory Board members (Outline and Full Proposals)
- Specific external reviewers (min. 3 per proposal) – ad hoc (Full Proposals)
- Final funding decision by the Steering Committee of The LOOP Zurich

9. Contact

The LOOP Zurich

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