
Center Report: Center of Implant Research

Abstract:

The Center of Implant Research (CIR) of the Clinic of Reconstructive Dentistry at the University of Zurich (UZH) was founded in 2016 as platform offering cutting edge facilities and qualified staff for the support of clinical research in dental implantology. The Center started the first activities in 2017 at both national and international level; after a very intensive operational phase, where it was important to provide the service to keep ongoing projects running and to support starting the new ones, the center is entering the next step more focused on the strategical and structural development.

Vision:

To improve oral health care globally by development and improvement of clinical therapy in the field of implant and regenerative dentistry

Mission:

To improve and facilitate global clinical research in implant and regenerative dentistry by providing high quality service structures (qualified staff and cutting-edge infrastructure) to multiple stakeholders like scientists, clinicians, university partners, industrial partners and regulatory bodies

Particularly, the center supports research projects in all phases: from idea development to the performance of the clinical trial and related closing activities (data collection and evaluation) thanks to research expertise and a competent study management staff coordinating all collaborations and ensuring high standards in the performance of the clinical studies.

Activities and Research:

The international network is one of the strengths of the Clinic of Reconstructive Dentistry (RZM) based on the expertise of its faculty and the services of the CIR. After having established a solid network in South America (Sao Paulo, Brazil; Santiago de Chile, Chile), in Asia (Beijing, China; Seoul, South Korea; Pune, India; Singapore) and in Europe (Barcelona, Spain; Ghent, Belgium; Frankfurt, Germany) over the years, new collaboration partnerships with the Queen Mary University of London and with Harvard School of Dental Medicine, Boston (USA) have been initiated.

In particular, the contact with the Harvard School of Dental Medicine has been re-activated in order to evaluate the possibility to create a second hub in North America that would contribute to build up and manage a solid and extended local network.

Overall, 32 international randomized clinical trials and 8 preclinical studies have been initiated and supported by the center since 2017. Compared to the last annual report only 4 new international randomized clinical trials have been initiated. These figures can be explained by the COVID-19 pandemic in 2020 and the very slow re-start of the clinical activities and as well as, of research projects.

Based on the fact that most of the international studies have a multicenter setup (generally 2 sites/study) and that in average 30-35 patients are recruited for each site, it can be roughly estimated that around 2'000 patients have been treated and followed up in specific study protocols so far. This has contributed to generate a significant amount of clinical data that can be used for highly scientific publications and also for creating a larger database to be shared with dental communities and industrial partners. Since the end of 2021 RZM have been granted the license for the installation of a secure software (REDCap) for building and managing online surveys and databases. The application of this tool has provided more flexibility to the CIR study management team in the setup of databases for the clinical studies and in the extraction of clinical data increasing quality and efficiency.

In addition to the international studies, about 30 studies are conducted locally at RZM in a monocenter setup. Thereof, 12 are still in the recruitment phase and the remaining are in the follow up phase. A local study coordinator is fully dedicated to the close supervision of those studies in order to ensure high quality in data collection and study documentation.

By the end of 2020, RZM started a new collaboration with an industrial partner where the CIR has taken on the role of organization providing clinical services such as sites coordination, support in study management and monitoring. By mid of 2022 an exchange with the contracting company helped to define a strategical action plan for a better positioning of CIR as clinical research provider.

The third Steering Committee meeting took place on 24th of June 2022. It was the first face-to-face meeting after the COVID-19 pandemic. As in the previous meetings an update on the ongoing activities and achieved milestones was provided and new strategical trends were shared and discussed.

Outlook:

Based on the current status and activities the Steering Committee is suggesting the following actions within the next 5 years:

- Developing a homepage in order to extend visibility of the CIR. This will make the center more professional and accessible to both academic centers and industry for future collaborations on clinical research.
- Strengthening the study management team by providing a certain structure and stability and by increasing the total FTE
- Extending the research collaboration network to more centers, mostly in North America
- Creating a global university-based database including all data generated from the clinical trials initiated and managed by CIR
- Growing as "Provider" of clinical research services by establishing internal processes and by outlining and implementing the next strategical steps

Center of Implant Research – Summary

Mission:

Establishment of sustainable and realizable therapies in the context of implantology by joining forces worldwide. Serving as an interface for different stakeholders in the field of implantology.

Research Focus:

Dental implantology encompassing biological, clinical and biomechanical and process related issues as well as biocompatible materials for dental clinical use.

Activities:

Management of multi-center clinical trials, compose applications for third party grants, consulting for strategic development of dental devices.



