



CERN MEDICIS – 10th Collaboration Board meeting

CERN, 22nd March 2023

Minutes by C. Duchemin, T. Stora / DRAFT

Link to the agenda and MEDICIS proposals: <https://indico.cern.ch/event/1265693/>

Link to the MEDICIS proposals: <https://medicis.cern/approved-projects>

Agenda:

- Collaboration matters: MoU, financial, review updates
- Facility technical reports
- New proposals
- AOB

Participants (tbc):

Present:

Manuela Cirilli, CERN – KT medical applications, invited

Cyril Bernerd, KU Leuven & CERN EN-STI, invited

Laura Lambert, CERN – CERN, invited

Simone Gilardoni, CERN

Zeynep Talip, PSI, invited

Thierry Stora, CERN – MEDICIS Project leader

Nick Van der Meulen, PSI

C. Kratochwil, Heidelberg hospital, invited

David Viertl, CHUV, Lausanne, Switzerland

Edgars Mamis, Latvia

Ulli Koester, ILL, Grenoble, France – present in parts

Ferid Hadad, Arronax, France – present in parts

Sean Freeman, UK

Valentina Gariboto – HUG – Geneva

Frederic Bois – HUG - Geneva

Agata Beata Rozycka, CERN invited

Michael Lassmann, EANM

Antonio Paulo, IST, Portugal

Zafar Yasin – PAEC -

Moazam Mehmood Khan, Principal Engineer, PAEC

Umair Khalid, Principal Engineer, PAEC

Susanta Lahiri, SINP

Approval of minutes of the 9th Board & Agenda – Thierry Stora, CERN

Minutes of the previous board are approved.

Financial report – Agata Rozycka, CERN

The financial report is available there :

https://indico.cern.ch/event/1265693/contributions/5316840/attachments/2615879/4521165/MEDICIS%20Financial%20report_%202022_MCB.pdf

Overview over the 5 last years is presented. In 2022 there had been a significant reduction in the revenues. No expense on personal. This is related to the contribution of the partner that has been significantly decreased. 50 kCHF in 2022 of donation dropped.

Toms Torins. Riga is the capital of Latvia. There is no university of Riga. It should read university of Latvia to avoid misunderstandings.

MoU updates – A. Raimondo CERN

Annex 1 has been updated, notably updating the representative names, such as prof. Garibotto at HUG. University of Oslo and university of Mainz have been removed.

Annex 2 has been modified as well. Phase C of MEDICIS is the phase covering run 3 until 2025 inclusive. This annex is part of the collaboration agreement and should be approved by the board. KULeuven budget: extra 90 kCHF is for the purchase of a HPLC/ICPMS system. The remaining 60 kCHF/year distributed over 2024, 2025, 2026. Regarding the FTE, TEC will cross-check the number especially regarding 2023 and come back to Alessandro.

IST contribution for the next 3 years of 5 kCHF.

PSI contribution of 25kCHF increased by 5kCHF per year. Nick will check internally. Nick asks that “R&D in isotope mass separation” be removed.

Latvia is contributing with 50 (2023) 50 (2024) 80 (2025) and 100 kCHF (2026). Toms Torins will come back to Alessandro for confirmation.

PAEC is in the council today. Thierry added that 0.5 FTE in 2023 is to be added.

KULeuven will be now acting on behalf of several Belgium institutes (UGent, SCK CEN, Vrije). Associated with the new funding received from FWO for the period 2023-2026, it should now be 'KU Leuven, on behalf of a consortium of research institutions in Flanders (Belgium) (VUB, UGent, SCK CEN)".

MEDICIS Budget & Financial Report - Simone Gilardoni

We know more or less the fix cost of the facility. We can run the facility within a sort of envelope of half a million. Some cost are not seen: cern personal for instance. At the beginning of the MoU the cost were 650 kCHF. Since few years the funding scheme of the collaboration fundings decreased and it becomes difficult. For few years we could count on the contribution of donation and of some members that are clearly missing now. Our management (CERN) accepted to cover partially until 2025 the missing contribution from the collaboration external members. Post 2025 destiny of MEDICIS is being discussed now. 2025 will also correspond to the end of PRISMAP, there will be a change of management at CERN and it will be the start of LS3.

We are being asked by our management to revise the scientific added value of MEDICIS post 2025. The situation differs between now and post 2025. We have been asked to organize an internal review. It is important to use this year to find a way to secure the funding to run the facility and contribution from outside. The CERN-wide financial situation requires not spending as at present. 2023 has been less critical than 2024 and 2025. CERN contribution will end post 2025.

T.E. Cocolios comments that in the financial report PRISMAP is not mentioned as well as some extra contribution such as from SCK CEN. Staff position funded by CERN contribution.

Toms Torins said that from Latvia point of view MEDICIS is of high importance as well as PRISMAP. If PRISMAP continues, then MEDICIS should continue. Toms will express support to find different sources. Toms Torins said that CERN management is wondering if there is still interest from the partner and that he would be happy to contribute to a letter to CERN management to express their interest, at least from Latvia side.

Manuela Cirilli said that the situation of CERN is not good in general. We are allowed medical applications as part as our knowledge transfer policy, with external contributions. MEDICIS is not part of the core program of CERN so one needs to show to the management that the partners are still interested.

Ulli Koester comments that at ILL the core program is neutron scattering and not medical applications. Nobody would never consider to cut-off the medical isotopes because it is the most visible program.

Manuela said that CERN is bound by its mission on particle physics. What would be the damage of shutting down the facility? MEDICIS is an unicorn at CERN since it does not involve particle physics research or nuclear research. Ulli comments that MEDICIS would not be possible without the more than 40 years of experience on ISOL beams that CERN has developed .

Sean Freeman comments: is there an understanding why external contributions have decreased. If we could know that we would have a better view.

Simone finished by saying that the next step is to do the exercise together on the future of the facility up to 2029.

PRISMAP and MEDICIS program – 2022 & 2023

Review 2022, by Laura Lambert

Laura gives a review of the collections performed in 2022. The last board happened at the end of April 2022. The first beam arrived right after the date of the board. The list of separation run and external sources received have been presented.

MEDICIS program 2023 and inclusion of PRISMAP projects, by Charlotte DUCHEMIN

The CERN-MEDICIS yearly technical stop is taking place and include the yearly maintenance of the controls, hardware & Labview updates, broken target evacuation to the Radioactive Waste Treatment Center, MELISSA laser beam path check, new extraction electrode design and replacement, the front-end inspection, the upgrade of the new double collection system following commissioning tests last year, the recalibration of the gas system and the calibration and installation of a 2nd Kromek detector below the collection chamber. New targets are being built, including target for external sources, Ti & V rolls target for Sc development, Ta rolls for Tb, Tm, Ba/Cs radionuclides, ThC target for Ra/Ac-225.

The last part of the technical stop still to be done before getting the beam permit for 2023 includes the yearly electrical inspection, the Departmental Safety Officer (DSO) visits for re-start, the ventilation tests and maintenance (3 weeks), the montrac rails maintenance, cleaning and adjustment, the robot trajectories tests, new collection foils making (Al coated Au and salt foils), the Access system yearly maintenance, the Radiation Protection detectors maintenance and verification and the final Safety tests for re-start (plan for Friday 24/03).

Regarding the MEDICIS projects and the inclusion of the PRISMAP user projects: all not-yet completed MEDICIS projects are still running and considered for the yearly planning. Two PRISMAP user projects will receive radionuclides from MEDICIS before mid-June. MEDICIS will contribute to the PRISMAP user projects involving Ac-225 supplies.

MEDICIS operation will span from beginning of April till middle of December. With the use of external sources over the year and especially in November and December since the protons will stop end of October 2023.

Some irradiation possibilities have been identified for MEDICIS and validated with the ISOLDE physics coordinator: one irradiation per week foreseen until mid-June. For the rest of the year, the MEDICIS planning is dependent of the release of the ISOLDE one to plan irradiations and collections accordingly.

Raising interest in the medical field. Michael Lassman introduced by Thierry who will keep his role of expert and adviser. External sources are a big part of the program.

New projects submitted to the board

MED-034: TECocolios has observed Ac-227 without having to wait for a long time. He asks what is the added value of this study in comparison with the existing KUL proposal. IRA has the mandate from the confederation for incorporation studies and measurements and Frank commented that they are really looking into the radiochemical separation part. TEC would be happy to have a cross comparison between IRA and KUL from a same collection.

MED-033

TECocolios asks for the timeline: 3 to 4 months.

June octobre decembre February, see the timeline according to the first results.

MED-035

Clinical application taking place in Heidelberg (Germany).

Toxicity kidney or bone marrow toxicity: preliminary dosimetry was performed with ^{90}Y

2023: We will need to see the capabilities on SCK CEN side. Need GBqs activities for patient treatment.

Project received support by TECocolio, FHaddad and UKoester and was therefore approved.