

## **Reaction to the PRC comments/advice by the KOLFF research institute**

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### ***General remarks***

The management team of the W.J. Kolff Institute for Biomedical Engineering and Materials Science (Kolff) is pleased with the report of the assessment committee. The assessment shows that recent reorganization and expansion has successfully led to a renovated research institute with a strong research portfolio. Kolff has a recognizable mission of bridging engineering and medical science, the interdisciplinarity of the research topics is a particular strength of Kolff and its new structure puts Kolff in a good position to pursue meaningful societal impact.

The assessment committee also provided clear recommendations for the institute to strengthen its position and increase its viability for the future. Below we discuss these recommendations and provide answers or formulate action points to tackle these items.

### ***Research quality***

- 1. Empower the Institute and increase the strategic instruments that Kolff has at its disposal to realize its aims and to safeguard the continuity and development of its research programs. This empowerment could include giving the Institute more influence on the creation of new research positions and providing the Institute with seed funding to proactively fund new collaborations, for instance in the form of PhD students shared between two departments.*

This is primarily an advice to the UMCG Board. The current mandate of the research institute to appoint new research staff and to strengthen its position is limited, because the main responsibility for appointing new research staff and directing the research strategy lies within the departments. However, UMCG is currently working on a new governance model for its organization (*Koers25*), including research governance. The new governance model will be based on clusters that comprise the departments. The clusters will encompass a representative for research on its' board that will warrant close collaboration and balanced research governance with the research institutes. Kolff will proactively engage in the discussion and development of this new governance model and hopes, in this way, to strengthen the position of the UMCG research organization.

In addition, Kolff researchers recently applied for PhD positions available within HTRIC (the Health Technology and Research Innovation Cluster). These PhD positions were specifically aimed at funding joint PhD projects between UMCG and the Faculty of Science and Engineering. Kolff will most certainly take part in such projects in the future.

- 2. Keep working on the development of the new research programmes, in particular on achieving critical mass in the ROBOTICS programme, and connecting ROBOTICS and PHT with the other programmes in Kolff.*

Kolff fully agrees with the committee's recommendation and will work, in collaboration with the programme leaders, on strengthening the ROBOTICS program, encourage and/or strengthen the connection between ROBOTICS, PHT and all the other programmes of Kolff. Considerable fortification of the Kolff research programs will come from the FSE division of HTRIC.

- 3. Ensure that the missions and strategies of the programs remain aligned with each other and with the overall mission and strategy of Kolff. To set ambitious and realistic goals, this mission and strategy should be benchmarked against Institutes with similar missions*

Kolff has undergone a reorganization recently (two new research programmes added) and is still in the process of aligning the mission and visions of all its research programs. The institute will keep a close eye on developments of *Koers25* and will harmonize the strategy of the research programs accordingly. We will follow the excellent suggestion of the committee to benchmark ourselves against research institutes with similar missions and strategies.

- 4. Remove any administrative obstacles that can hinder research collaborations between UMCG and FSE.*

Kolff is aware of the administrative barriers, which hinder research collaboration. However, we are convinced that the HTRIC organization will substantially facilitate research collaboration and will remove administrative barriers.

- 5. Formulate an impact strategy for new diagnostic and therapeutic approaches and determine what the end goal is with regard to clinical applications.*

After Kolff has aligned its mission and strategies of its research programs, the institute will work on a clear impact strategy for new diagnostic and therapeutic approaches, and application of these in the clinic. UMCG is currently in the process of establishing an innovation (business) center aimed at bringing scientific knowledge and discoveries to the marketplace. At the same time, Kolff is also part of the HTRIC organization, a regional ecosystem for medical technology aimed at development and application of new diagnostic and therapeutic medical technology. Besides the UMCG and FSE also the Universities of Applied Sciences and medical technology companies from the northern region of the Netherlands are involved. This organization will to a great extent address the point raised by the committee.

- 6. Keep working on attracting clinicians to the research programmes. Consider creating incentives such as fellowship or sabbatical programmes to provide sufficient time for clinicians to participate in research.*

Kolff is aware of the challenge involving clinicians in her interdisciplinary research. Whereas financial resources for a fellowship- or sabbatical programme are currently not available, the strong urge for translational medical technology research, with no doubt will strengthen the collaboration with clinicians. At a later stage, within HTRIC, possibly in conjunction with European research project, a fellowship- or sabbatical programme could be envisaged.

### **Societal Relevance**

- 7. Continue efforts to connect with the general public with the aim of increasing the involvement of end users to new medical technologies.*

Kolff will, in collaboration with the UMCG Research Office and communications department, work on a communication strategy ('pipe-line') to better communicate results to her end-users and the general public. Also within HTRIC, connections with the general public will become a prominent issue.

### **Viability**

- 8. Formulate criteria or guidelines for participation in Kolff research programmes to make it easier to evaluate the critical mass and success of each programme.*

The UMCG recognizes two types of researchers (with a permanent appointment): 'Full member' (FM) and 'Affiliated member' (AM). Based on a limited number of criteria and in consultation with the MT of Kolff and the relevant programme leaders, researchers are given one of these two 'labels' and can participate in a research programme of the institute. Having sufficient Full members in the Kolff programmes is something that indeed deserves attention. We anticipate, though, that with initiatives like HTRIC more staff members in the field of medical technology will be attracted, so that the critical mass will increase.

- 9. Give high priority to filling leadership vacancies, ideally with a team consisting of a researcher and a clinician.*

The institute recognizes the problem managing some of its research programmes and this is a high priority as far as the institute is concerned. The institute will try to remedy this aspect as soon as possible, but for this it will also need more mandate relative to the departments.

- 10. Create some form of recognition for participating in the leadership of the Institute, for instance by formally allocating time to this task. Accompany the formal allocation of release time for Kolff leadership efforts by formulating clear expectations of the role and responsibilities of a programme leader and MT member.*

The Kolff board recognizes the vision of the assessment committee regarding formulating clear expectations of the role and responsibilities of a programme leader and MT member. This is, however, an aspect that is addressed by the UMCG governance and is part of the new governance structure that will be proposed in the upcoming Koers25 strategic plan. Being a member of the institute's leadership is indeed something that takes time, but it is also part of an academic career and a way to get experience in a leadership role. As such it is a choice of priorities that is not uncommon in a scientific career.

- 11. Try to increase third-party funding and international (EU) funding.*

As recommended by the committee, Kolff intends to increase third-party funding and international (EU) funding. In parallel with the discussion on the alignment of its mission and strategies, Kolff will initiate discussions with its program leaders how to increase the success rate considering this aspect. For this, a collaboration with the UMCG grant support hub will be

initiated, focused on early identification of research calls at European and national level, identification of suitable applicants and writing support. By taking part in the HTRIC/the national Life Sciences & Health programme, new funding opportunities can also be explored in collaborations with the Universities of Applied Sciences and businesses from the northern region of the Netherlands.

*12. Consider using the Kolff brand in external communication to present UMCG's biomedical engineering research and use the Institute as a platform for external (international) collaboration.*

Kolff does recognize that this is of importance for the institute and will seek advice how to increase its visibility. Especially its position –in the scientific arena- relative to e.g. HTRIC, which is seeking collaboration with the applied universities and/or companies, deserves attention.

*13. Reflect on the composition of the research staff, in particular regarding the participation of junior staff members (PhD students and postdocs).*

Kolff indeed would like to harbor more junior researchers (first as affiliated members) and to support them in their development and their career. This will be addressed in conjunction with the UMCG Graduate School of Medical Sciences and the UMCG postdoc council.

*14. Invest in the support of postdocs, for instance by offering mentorship programmes to junior staff members.*

In conjunction with the UMCG postdoc council a mentoring program will be established

*15. Work on reducing the average duration of a PhD trajectory.*

The GSMS, in collaboration with the research institutes, initiated a PhD support program aimed at better elucidating the requirements of a thesis (which are sometimes aimed too high, by students and/or supervisors) and reducing stress among PhD students. Kolff encourages/supports this new policy of GSMS and UMCG.

NB. We would like to point out that the date of approval by the reading committee should be used as the end date for measuring the duration of a PhD trajectory.

### **Conclusion**

Overall, Kolff appreciates the positive evaluation of the PRC. The recommendations are valid and relevant. Based on the comments outlined above, Kolff will set up a strategic plan to ensure the implementation of the proposed adjustments and progress will be monitored. In this respect, Kolff's strategy connects well with Pillar II ('Innovative Diagnostics & Treatment') of the new UMCG research strategy, that is currently under development (as part of the overall new UMCG strategy, 'Koers25'), and Kolff is well positioned within the regional HTRIC network. Kolff looks forward to the future with confidence.