Appendix A: Terms of References (ToR)

The board of the Faculty of Health Sciences, UiT the Arctic University of Norway, mandates the evaluation committee appointed by the Research Council of Norway (RCN) to assess Department of Medical Biology (IMB) based on the following Terms of Reference.

Assessment
You are asked to assess the organisation, quality and diversity of research conducted by the Department of Medical Biology as well as its relevance to institutional and sectoral purposes, and to society at large. You should do so by judging the unit's performance based on the following five assessment criteria (a. to e.). Be sure to take current international trends and developments in science and society into account in your analysis.

a) Strategy, resources and organisation
b) Research production, quality and integrity
c) Diversity and equality
d) Relevance to institutional and sectoral purposes
e) Relevance to society

For a description of these criteria, see Chapter 2 of the life sciences evaluation protocol. Please provide a written assessment for each of the five criteria. Please also provide recommendations for improvement. We ask you to pay special attention to the following 4 aspects in your assessment:

1) Develop knowledge and methods that contribute to solving major societal challenges
UiT's strategy "Eallju – Developing the High North: UiT's strategy towards 2030" acknowledges the need for academic environments that *develop knowledge, methods and instruments that contribute to solving major societal challenges.*

One of the major societal challenges is to establish health care strategies that will improve the life of the elderly and those affected by major public diseases such as cancer, cardiovascular dysfunctions, allo- and autoimmunity, and infections. Meeting this challenge requires in-depth knowledge of basic molecular and cellular mechanisms and translate these to clinical problems.
The research activities at IMB are focused on basic biomedical research of high and international quality that will lead to improvement of human health, advance human knowledge, and train new generations of innovative researchers. The research includes molecular mechanisms of basal cellular process such as autophagy, host-microbe interactions and fenestration of endothelial cells, mechanisms initiating tumour formation and tumour progression, immune and autoimmune responses, cardiovascular diseases, and identification of biomarkers for future diagnostic and prognostic tools. The department has a specific task to educate young researchers and various health professionals in biomedicine, providing relevant research-based knowledge and stimulate to innovative and translational activities.
We kindly ask the committee to evaluate how well our research addresses future societal challenges with improvement of human health in an increasing elderly population, increased

risk of pandemics and development of therapeutic strategies for fighting cancer, infections and other major human diseases. We welcome suggestions for reorganization of the research groups to strengthen our research output and ability to meet future challenges, reduce vulnerability and strengthen our position for external research funding.
We also kindly ask the committee to evaluate our ability to develop, attract and retain talented young people, with special focus on research talents with clinical background. During the last 10-15 years it has become challenging to recruit researcher with a clinical background into basic medical research and to our research groups. This will be important for linking our basic research to clinical questions, and for our teaching portfolio.

2) Centres of Excellence, and interdisciplinary collaborations

One of the main strategic goals for IMB is to become a host for a Centre of Excellence. Applications with IMB as host or partner have been submitted, and an application with IMB as host went to the second round (2015) but was not granted in the end. Establishment of such a centre will be of great importance, providing a foundation for high quality interdisciplinary basic research and local synergies, and national and international collaborations. The Department hosts/is partner on several ongoing interdisciplinary research projects that are granted by EU or RCN (NASAR, SECVIR, LUPCON, ImAgeE-D, DeLIVER), showing that IMB hosts research groups that are internationally recognized and have the competence to perform fundamental research of high impact.

We kindly ask the committee to evaluate to what extent the organization of our research activities within the department has allowed for synergies and interdisciplinary collaborations. We welcome suggestions for directions that enable the department to succeed in grant applications for Centre of Excellence.

3) Innovation

The department is involved in innovation-driven research initiatives that has resulted in granted DOFI (disclosure of invention) applications and collaborations with pharma industry. Examples are LYTIX and PROPHYLIX that were established by IMB affiliated researchers, and the establishment of a rapid diagnostic tool for prosthetic joint infections that are taken in use at the University hospital. We ask the committee to evaluate our research activities in light of how well our innovation research translates to business, and how well our research is adapted to contribute to development of better diagnosis and pharmaceutical treatment strategies. Do the committee see future research directions growing out of our current research activities that can further strengthen our ability to contribute with innovative research towards personalized medicine?

4) Infrastructure

The Department has hosted and participate in national infrastructure initiatives (Nor-MIC, NALMIN, NAPI) giving access to two advanced in-house infrastructure platforms; the core facility for Light microscopy, electron microscopy and Flow cytometry (KAM) and the core facility for Proteomics and Metabolomics (PRiME). The facilities are supported by experienced staff that offer training and services to researchers at the University and the University Hospital in Northern Norway. This infrastructure plays an important role for all

researchers at IMB, securing access to advanced technology maintenance of expensive equipment, and transfer of knowledge between the users of the platforms.

We ask the committee to evaluate the importance and quality of our infrastructure platforms. We also welcome suggestions for future directions that will secure development of the platforms, both instrumental and by academic staff, so they are in position to meet coming needs.

In addition, we would like your report to provide a qualitative assessment of Department of Medical Biology as a whole in relation to its strategic targets. The committee assesses the strategy that the administrative unit intends to pursue in the years ahead and the extent to which it will be capable of meeting its targets for research and society during this period based on available resources and competence. The committee is also invited to make recommendations concerning these two subjects.

Documentation
The necessary documentation will be made available by the life sciences secretariat at Technopolis Group.

The documents will include the following:

- a report on research personnel and publications within life sciences commissioned by RCN
- a self-assessment based on a template provided by the life sciences secretariat

Interviews with representatives from the evaluated units
Interviews with the Department of Medical Biology will be organised by the evaluation secretariat. Such interviews can be organised as a site visit, in another specified location in Norway or as a video conference.

Statement on impartiality and confidence
The assessment should be carried out in accordance with the *Regulations on Impartiality and Confidence in the Research Council of Norway*. A statement on the impartiality of the committee members has been recorded by the RCN as a part of the appointment process. The impartiality and confidence of committee and panel members should be confirmed when evaluation data from the Department of Medical Biology are made available to the committee and the panels, and before any assessments are made based on these data. The RCN should be notified if questions concerning impartiality and confidence are raised by committee members during the evaluation process.

Assessment report
We ask you to report your findings in an assessment report drawn up in accordance with a format specified by the life sciences secretariat. The committee may suggest adjustments to this format at its first meeting. A draft report should be sent to the Department of Medical Biology and RCN. The Department of Medical Biology should be allowed to check the report for factual inaccuracies; if such inaccuracies are found, they should be reported to the life sciences secretariat within the deadline given by the secretariat. After the committee has made the amendments judged necessary, a corrected version of the assessment report should be sent to the board of the Faculty of Health Sciences, UiT the Arctic University of Norway and the RCN after all feedback on inaccuracies has been received from the Department of Medical Biology.