

## Executive Board

Navigation address: De Zaale, Eindhoven  
P.O. Box 513, 5600 MB Eindhoven  
The Netherlands  
Internal address: 5 MetaForum  
www.tue.nl

5 MetaForum , P.O. Box 513, 5600 MB Eindhoven, NL

**Date**  
28 August 2017

**Contact**  
R.E. Schalkx M.A.  
r.schalkx@tue.nl

## Position of the Executive Board of Eindhoven University of Technology regarding the assessment of the department Biomedical Engineering

In May 2017 an international review committee assessed the quality and relevance of research conducted in the period 2009-2016, the viability of the department Biomedical Engineering, its research strategy and the quality of the research training, research integrity and diversity. The assessment was carried out using the Standard Evaluation Protocol 2015-2021 for the research assessment of public organizations in the Netherlands.

The assessment committee consisted of:

- Professor Douwe Breimer, Leiden University, The Netherlands (chairman)
- Professor Georg Duda, Julius Wolff Institute, Berlin Charité, Germany
- Professor Ursula Klingmüller, German Cancer Research Center, Heidelberg (DKFZ), Germany
- Professor Annemieke Madder, Ghent University, Belgium
- Professor Sebastien Ourselin, Centre for Medical Image Computing, University College London, United Kingdom
- Professor Carlie de Vries, Academic Medical Center, Amsterdam, The Netherlands
- Petra Uittenbogaard, MSc, Surplace Advies, The Hague, The Netherlands, appointed secretary to the review committee.

We list the most important findings of the committee:

*According to the committee research quality of the department as a whole is very good to excellent. The department has a strong position in its chosen research fields, a high impact, is internationally well recognized, evidenced by the considerable number of published papers in highly cited journals, by the above world average citation score and the number of prestigious awards and grants obtained by the scientific staff.*

*The committee considers the overall subject matter of research of the department of great relevance to society. Numerous research results may sooner or later contribute to applications in the field of biomedical technology and advanced health care. The committee judges the viability of BME in principle as very healthy.*

The committee also made the following recommendations:

Date  
28 August 2017

Page  
2 of 3

### **1. Strategy**

- a. Further conceptualization of research aims, methods, funding and implementation of research results should be part of a 'second phase' research strategy of the department, also taking the overall strategy of TU/e in the area of 'Health' into account.
- b. Intensifying structural collaboration with medical departments and biology should be given high priority.
- c. Strengthen the research areas that are already prospering rather than to set up a new, complex research line (e.g. Neuro-immunology, which is a very competitive research area.) On the other hand the committee strongly supports the development of immune-engineering as an essential component of regenerative medicine and tissue engineering.
- d. Considering the strong potential in terms of economic and societal value of the research conducted, a more active patent policy should be pursued and professionally supported. It should also be possible to obtain more funding through public – private partnerships, like InSciTe and RegMedXB.

### **2. Organization and infrastructure**

- a. The department should reconsider its current organizational research structure by, for example, putting the research themes more at the front.
- b. The continuous need for renewing of the technological facilities and advanced instrumentation should be a point of discussion with the University Board being responsible for research infrastructure.
- c. The teaching load of staff members requires urgent department's attention. It is important to have protected research time, especially for young staff members that have to build up an own track record or have to compete for large research grants.
- d. Issues of scientific integrity and good academic research, although formally well organized, require continuous attention and discussion (e.g. publication pressure, competitive grant application etc.)

### **3. Training and education**

- a. To restore the balance between education and research, the committee considers the department's strategy to increase the numbers of staff members as a necessary measure.
- b. Despite an improvement of the duration of the BME PhD trajectories in recent years, the committee recommends that this should be carefully monitored.
- c. Individual career development plans and academic career coaching are to be more formalized within the department.

### **4. Diversity**

- a. To prevent inbreeding, it is of great importance that talent and expertise from elsewhere is being attracted.
- b. It is of urgent management attention that an active policy on promoting women towards higher scientific positions is being developed.
- c. Female role models should be supported, since their example will encourage others to take up the same path in science.
- d. Opportunities for dual careers should be facilitated and advice should be continuously offered.

Date  
28 August 2017

Page  
3 of 3

### **5. Clinical interaction**

- a. Stronger structural interaction and collaboration with clinical medicine should be pursued.
- b. To further facilitate and ensure a continuous flow of scientific interaction, installing a structured Clinical Science program that mirrors the graduate program for engineers is suggested.

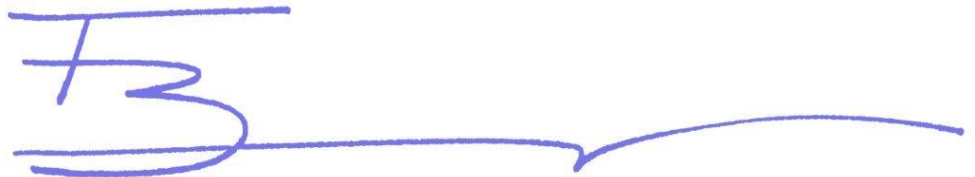
### **6. Societal relevance**

- a. The department should exhibit greater awareness of its great potential societal relevance and impact.
- b. It is strongly recommended that the department, together with the University Board, develop a proactive IP-strategy and infrastructure to support valorization of the research.

The Executive Board highly appreciates the work of the committee and the recognition of the quality of the research of TU/e's department Biomedical Engineering. It is equally appreciative of the many practical and to the point recommendations of the committee. The Executive Board will discuss these with the Department Board. The recommendations will help the department to not only maintain its quality, but also improve in the future.

The Executive Board of TU/e has accepted the report and its recommendations and wishes to thank the assessment committee for the considerable time and effort it has spent on this assessment.

On behalf of the Executive Board,

A handwritten signature in blue ink, consisting of a stylized 'F' and 'B' followed by a long horizontal line that ends in a small flourish.

Prof.dr.ir F.P.T. Baaijens  
Rector Magnificus Eindhoven University of Technology