

Research Assessment 2014

University Medical Center Utrecht

June 2014

Contents

1	Introduction	3
1.1	The Netherlands System of Quality Assessment of Research	3
1.2.	Organization of the review of the University Medical Center Utrecht	4
1.3.	The Review Panel	4
1.4.	Scope of the Assessment	5
1.5.	Data provided to the Committee	5
1.6.	Procedures followed by the Committee	5
1.7.	Aspects and Assessment Scale	5
2	Assessment of the UMCU	7
2.1	Mission, goals and research activities	8
2.2	Assessment of the Institute	10
3	Conclusion and recommendations	13
Appendix	Program of the site visit	15

1 Introduction

1.1 The Netherlands System of Quality Assessment of Research

This quality assessment of research is part of the assessment system for all public Dutch university research, as organised by the Universities and University Medical Centers (UMCs) in the Netherlands.

The aims of the assessment system are:

- Improvement of research quality based on an external peer review, including scientific and societal relevance of research, research policy and research management.
- Accountability to the board of the research organisation, and towards funding agencies, government and society at large.

Universities and UMCs in the Netherlands have agreed to carry out a self-evaluation every three years and an external review every six years. This process is guided by the Standard Evaluation Protocol (SEP). For this evaluation the SEP 2009-2015 is used.

The present external research evaluation has the following objectives:

- To assess the quality of the research and graduate PhD programs carried out at the UMC Utrecht during the period under review (2007-2012) compared to an international benchmark (not a comparison within UMC Utrecht);
- To identify research areas that have the potential to stimulate innovation and have societal impact;
- To identify excellent research groups and young researchers with high research potential;
- To identify research areas that are currently of the highest international standard, how these may be strengthened and suggest conditions for their continued development.
- To identify research areas that have the potential to develop towards the highest level of international research and to determine what is necessary to ensure such development.
- To identify research areas that are not internationally or nationally competitive and lack evident development potential.

- To identify research areas that are missing and that could be considered to be essential for the UMC Utrecht.
- To identify the need for infrastructural support that would facilitate development towards greater excellence.

1.2. Organisation of the review of the University Medical Center Utrecht

The Board of the UMCU invited six expert panels to assess the research conducted at the UMCU in the newly established six strategic programs (Brain, Infection & Immunity, Circulatory Health, Personalized Cancer Care, Regenerative Medicine & Stem Cells, and Child Health). The six specific expert panels received a self-evaluation report and key publications and visited the UMC Utrecht to assess the specific strategic research programs. These program reviews took place between February 6th and April 11th 2014. All panels produced a draft assessment report. Additionally the six panel chairs were invited to participate in a main panel to review the UMCU research institute. For this institutional review a separate site visit was organised and a separate assessment report is conducted.

1.3. The Review Panel

The Main Panel was appointed 22 November 2013 and consisted of the chairs of the respective program assessment panels:

- Bert van der Heijden: Child Health
- Anthony Hollander: Regenerative Medicine and Stem Cells
- Florian Holsboer: Brain
- Rene van Lier: Infection and Immunity and chair of the main panel
- Rob Reneman: Circulatory Health
- Josep Tabernero: Personalized Cancer Care

Barbara van Balen was the secretary to the Review Panel.

For the curriculum vitae of the panel members see the Appendices in the respective program assessment reports.

1.4. Scope of the Assessment

In 2010 a midterm self-evaluation was prepared by the UMCU of its activities for the years 2007, 2008 and 2009. The results of this midterm review were the basis for the development of a new research strategy for the UMCU: Strategy UMCU Utrecht 3.0. The implementation of this strategy started in 2010.

This external review covers the period 2010-2012. The panel was asked to evaluate the success of the strategy, to identify aspects that can be improved and to provide the Board of the UMCU with comments and recommendations. The panel realises that the strategy has been launched relatively recently and that the results and the impact of the strategy in terms of scientific productivity and societal relevance can not be fully measured yet. The assessment is therefore for a large part based on discussions with the UMCU staff on strategic and organizational aspects and less on standard scientific output measures.

1.5. Data provided to the Committee

The Review Panel has received a self-evaluation report provided by the UMCU. The panel also received the report on the Mid Term Review 2007-2009 and additional information about the PhD training programs.

1.6. Procedures followed by the review panel

The assessment was based on the documentation provided by the UMCU and the interviews during the site visit. The interviews took place on 24 and 25 April 2014. The program of the site visit is included in Appendix 1.

The panel members had all read the Self Evaluation Report and the six preliminary program assessment reports.

The site visit started with an internal panel meeting, which was used to exchange the experiences with the program assessments and to prepare the interviews for this site visit. The panel interviewed a variety of groups: research managers of the divisions, representatives of the Graduate School of Life Sciences, PhD candidates, representatives of the Utrecht Life Sciences and the Hubrecht Institute collaboration, and Valorization and Quality ambassadors,

On the second day of the site visit, the panel discussed the assessment of and the recommendations for the institute. Finally, a meeting with the representatives of the UMCU was arranged, in which the main impressions of the panel were reported.

1.7. Aspects and Assessment Scale

The Protocol requires the Evaluation Committee to assess the research on the four main criteria-of the *Standard Evaluation Protocol*:

- Quality, including:
 - Leadership
 - Academic reputation
 - Organisation
 - Resources
 - Research facilities
 - PhD training and supervision
- Productivity
- Societal relevance
- Vitality and feasibility (flexibility, management and leadership)

The ratings used are: Excellent (5); Very good (4); Good (3); Satisfactory (2); Unsatisfactory (1). This five-point scale used in the assessment is described in the *Standard Evaluation Protocol* as follows:

Excellent (5)	Research is world leading. Researchers are working at the forefront of their field internationally and their research had an important and substantial impact in the field.
Very Good (4)	Research is internationally competitive and makes a significant contribution to the field. Research is considered nationally leading.
Good (3)	Work is competitive at the national level and will probably make a valuable contribution in the international field. Research is considered internationally visible.
Satisfactory (2)	Work adds to our understanding and is solid, but not exciting. Research is nationally visible.
Unsatisfactory (1)	Work that is neither solid nor exciting, flawed in the scientific and or technical approach, repetitions of other work, etc.

2. Assessment of the UMCU

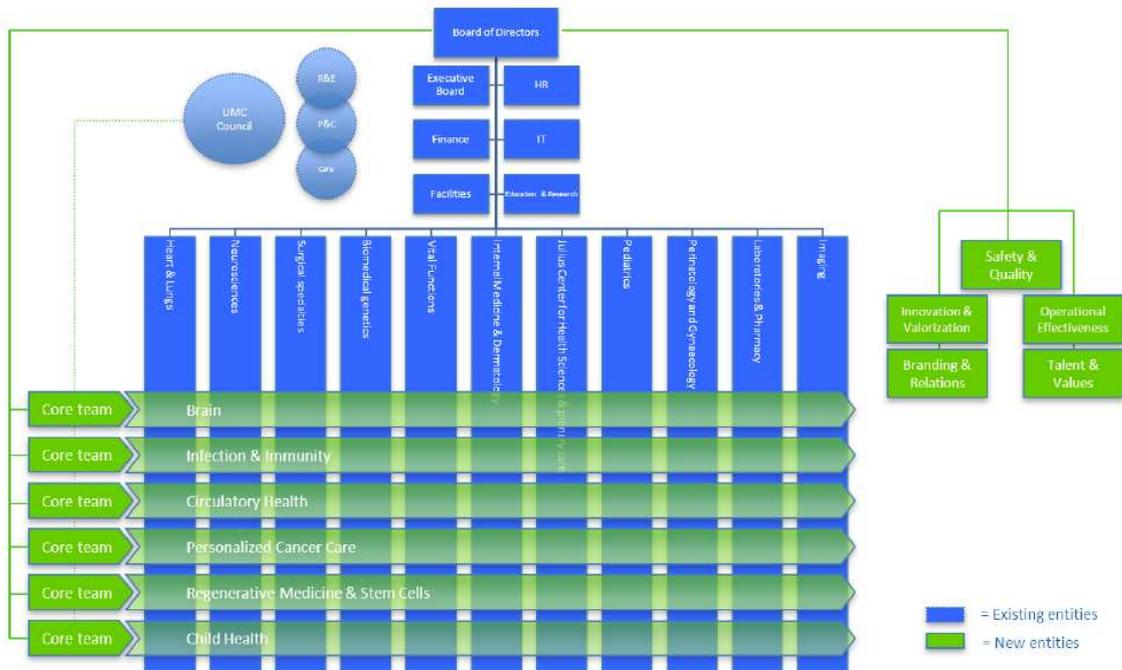
Research staff in 2012:	925 fte (# 2401)
Executive board of the UMCU:	Prof.J.L.L. Kimpen president Prof. F. Miedema, vice president and dean Mrs. M.H. van Velthuisen-Lormans, member Mr. A. Bek, member

The UMC Utrecht is organized in eleven decentralized units, known as divisions, led by a management team. These divisions have their own budgets and policies. All divisions operate in the areas of direct patient care, education and research. The research managers of the divisions advise the Board on issues concerning research and PhD training programs. The Board and the division research managers meet on a monthly basis.

The strategic research programs are managed by a core team and headed by a chair. The chairs of the strategic programs meet with the Board to discuss relevant topics.

The six strategic research programs and the divisions form a semi-matrix structure. See figure 1

Figure 1 Research matrix UMC Utrecht



2.1. Mission, goals and strategy of the UMCU

The mission statement as provided in the self-evaluation report: The University Medical Center Utrecht is a leading international academic medical center where knowledge of health, illness and care is generated, evaluated, shared and applied for the benefit of patients and society.

Core activities are:

- to provide state-of-the-art healthcare that requires special knowledge and expertise.
- to carry out cutting edge scientific research.
- to offer excellent healthcare programs and training to students, doctors, researchers and other healthcare providers.

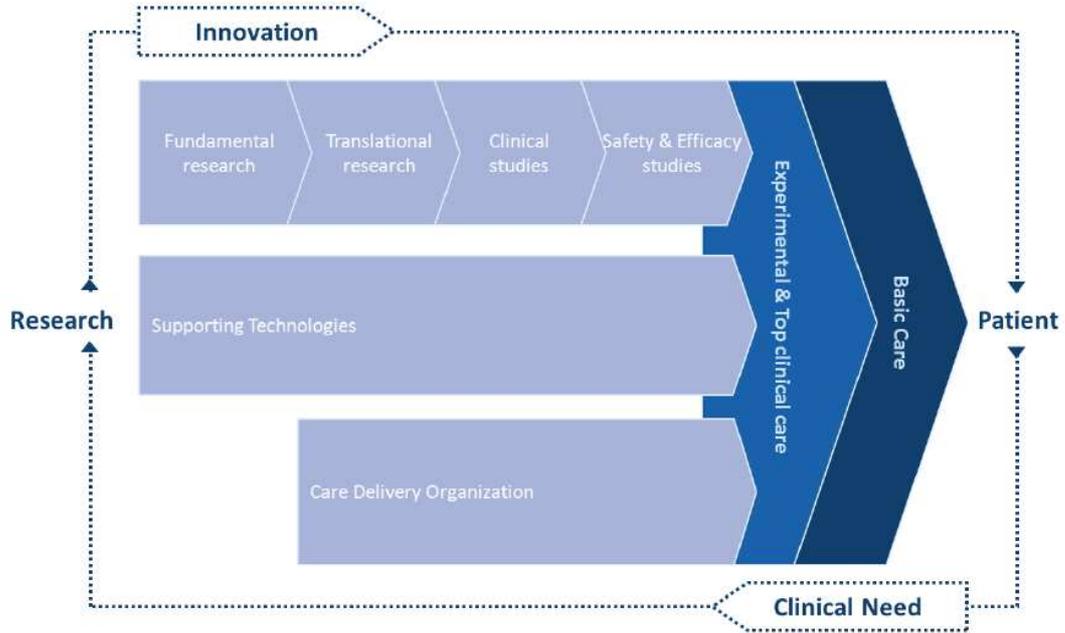
Research is concentrated in six strategic programs with a limited number of target diseases each. Patient care and education are integrated in these programs. A multidisciplinary approach should guarantee patients to benefit from state of the art medical expertise and innovative technological solutions. Interactions with patients and other stakeholders from society creates an 'innovation loop' where medical and societal issues help to direct scientific research and to ensure that scientific results quickly move between bench to bedside.

Information about the six strategic research programs can be found in the respective assessment reports. Complementary to the strategic programs broad "Strategic Themes" have been identified:

- Quality and Patient Safety
- Innovation & Valorization
- Branding & Relations
- Talent & Values
- Operational Effectiveness.

The UMCU strategy can be illustrated by the 'Clinical need innovation loop' (see figure 2). Identified clinical needs form the starting point for the research that will be performed for the clinical syndromes defined within the strategic programs. Research and innovation are induced by connecting basic research, preclinical developments, clinical trials and finally applied research. New clinical care will be developed and can eventually be implemented into standard care.

Figure 2



2.2. Assessment of the institute

General remarks

The Board of the UMCU made a wise decision to implement the Strategy UMCU Utrecht 3.0. The main panel applauds the strategy for defining multidisciplinary research programs, determining a portfolio and in particular for making selections: 'not doing everything'. Most researchers believe in the new mission, support this strategy and seem very happy and enthusiastic. Not surprisingly the strategy is not yet fully implemented. The panel saw a system in transition and a number of managerial decisions still have to be made. The panel noticed that the strategic research programs can be found in different stages of development. E.g. the Circulatory Health program only started in 2012 and still has to find a way to manage the 63 cross lines of patient groups and research themes. The panel advises to tune this program down to a limited number of research lines to be able to make this program a success. The Brain program on the other hand was organised as an institute right from the beginning, has a clear focus and internationally and nationally visible research topics.

Given the recent start of the strategic research programs the panel had limited possibilities to assess the academic and societal impact. The panel, however, could identify clear and obvious benefits from the new strategy. The decision to specialise on particular areas creates focus which potentially gives power to the research in that field. That, for instance, all Dutch ALS patients are seen in the UMCU is very stimulating for the quality of the research in this area, which in the end will also give a boost to the quality of the ALS patient care.

The panel finds it very positive that the matrix system enforces the staff to cooperate across division borders. It observed a successful combination of top down and bottom up strategy in the implementation of the Strategy 3.0. Nevertheless the panel would advise to give the research program directors more steering possibilities. They should become directors instead of coordinators.

The UMCU board made the decision to provide the review panels with self-evaluation reports and a limited number of key publications for each of the strategic research programs; no full publication lists and no citation analyses were provided. This decision is understandable in the light of the UMCU strategy to focus on the translational part of the research and not on the numbers of publications. All review panels, however, faced the problem that they needed more information about the past performance of the researchers to be able to assess the programs according to the criteria of the SEP. Furthermore it was even harder to assess the impact of the research on patient care, since there are no criteria developed to measure this impact. Therefore, for the next review, the panel recommends to provide the external

evaluation panel with more information about the research quality and to search for criteria to measure the translational part of the research.

Quality 4

The main panel appreciates the courage of the UMCU Board to make strategic choices. The Strategy 3.0. is widely supported by staff and students who showed a high commitment during the site visit.

The environment of the UMCU is very stimulating and supportive to reach high standards of research. The UMCU Board strategically invested in the cooperation with the Hubrecht Institute, an internationally recognized top institute. The panel concluded that this cooperation is very productive and attracts excellent researchers to the UMCU. The stimulating rich environment of the Utrecht Science park and the Utrecht Life Sciences Network should also be mentioned.

The panel was impressed by the quality of the PhD programs in the Utrecht Life Sciences Graduate School. The benefits of the cooperation with the (Life) Sciences faculties of Utrecht University are visible in these PhD programs. The panel was impressed by the way PhD students are monitored and guided. The teaching in the PhD program is excellent. The panel in particular appreciates the fact that the PhD students have substantial influence on the teaching program.

The panel was impressed by the way changes in research management are led in a complex organization. Furthermore the board shows good leadership in using opportunities to stimulate the research. The investment in the Hubrecht Institute should be mentioned in this regard, as well as the cooperation with the Prinses Maxima Centrum and the NKI (Netherlands Cancer Institute).

Productivity 4.5

For all research programs the panels could establish that the output in terms of publications is increasing and that a considerable number of PhD theses have been completed in the assessed period. The earning capacity in general is very good, several remarkable large personal and project grants have been acquired. For some programs a stronger focus on high prestigious programs (ERC and VICI) is recommended.

The relationship between input and output judged in relation to the mission and resources is excellent.

Societal Relevance 4.5

Meetings with the patient groups and (industrial) stakeholders showed that these were very supportive on the mission of the UMCU. Research done is highly relevant (as was also confirmed by discussion with the patient groups). At the present state of development, however, the panel could not evaluate the impact of

the new strategy on the quality of the patient care. The panel advises to develop criteria for measuring the translational part of the research and the impact on patient care. The successes of this aspect should also form part of the job evaluation procedures to guarantee a balance between the demands put on junior researchers to contribute to translational research and the criteria for promotion and tenure. The panel also recommends to substantially invest in basic research to guarantee a good balance between exploration and application.

Vitality and Feasibility 3.5

The implementation of the Strategy UMCU Utrecht 3.0 is not yet fully completed. As mentioned the panel applauds the strategy for defining multidisciplinary research programs, determining a portfolio and in particular for 'not doing everything'. The panel is also convinced that most researchers believe in the new mission and subscribe the strategy. However whether the strategy will be manageable in all aspects in all research areas and themes could not as yet be assessed by the main panel. The system is in transition, a number of managerial decisions still have to be made.

3. Conclusions and recommendations

The UMCU is a research organisation in transition. Important decisions have been made by the Board to restructure the research organisation. The main panel is of the opinion that now it is the moment to take this one step further, make the choice who is running the research and give more steering power to the research directors.

The main panel felt a mismatch between the exiting new structure aimed at translational research on the one hand and the criteria used for career steps on the other hand. Translational science should be part of the promotion criteria.

It would be wise to not have two scientific boards (research managers and program directors). The Board of the UMCU should consider establishing one scientific board that reflects the new structure. Next to the internal scientific board the panel recommends to establish an external scientific board to provide bi-annual feed-back on the content of research.

Overlap in the programs should be mapped and reconsidered, some overlap can be beneficiary, but decisions regarding the accommodation of research subjects are necessary to avoid scattered energy leading to a low performance in certain research areas.

Continue the PhD program as it is, the quality is very good.

If the UMCU Board wants to have valuable feedback from an elaborate site visit procedure, extensive information about the past performance of the research lines is mandatory.

Appendix

Site visit program main panel

24 April 2014

10.00-13.00	Preliminary discussion main panel
13.00-14.00	Meeting with UMC Utrecht Executive Board
14.00-15.00	Meeting with research management Divisions Prof. Carla Bruijnzeel (Internal Medicine and Dermatology) Prof. Carl Moons (Julius Centre) Prof. Marc Vos (Heart and Lung)
15.00-15.30	Break
15.30-16.30	Meeting with Graduate School of Life Sciences representatives Prof. Jos van Strijp (PhD program director I & I, vice chair Board of Studies) Prof. Marian Joels (PhD program director Clinical & Experimental Neurosciences) Prof. Susanne Lens (PhD program director Translational Oncology) Dr. Saskia Ebeling (secretary to the Board of Studies GS-LS)
16.30-18.00	Meeting with PhD candidates Ewoud Compeer, Genoveva Keustermans, Sjoerd van Gorp, Branko van Hulst, Diana Papazova
19.00-22.00	Diner

25 April 2014

09.00-10.00	Utrecht Life Sciences and Hubrecht Institute collaboration Prof. Alexander van Oudenaarden (scientific director HI) Dr. Freek van Muiswinkel (managing director ULS)
10.00-11.00	UMC Utrecht Valorisation and Quality ambassadors Drs. Jan Vos van Marken and Dr. Lucas Beekman Dr. Esther van Tienhoven
11.00-12.00	Internal discussion
12.00-13.00	Lunch
13.00-14.00	Preparation of advice Research Evaluation
14.00-15.00	Preliminary report and reception

