Cardiovascular Research Institute Maastricht

Assessment report

EXTERNAL REVIEW

2019 - 2024

October 1st – October 3rd 2025

Preface

This report presents the conclusions of the External Review Committee (ERC) on the Cardiovascular Research Institute Maastricht (CARIM), Faculty of Health, Medicine and Life Sciences, Maastricht University 2019-2024. The review took place from October 1–3, 2025.

The committee greatly valued CARIM's thorough preparation, clear data, and open discussions with staff, administration, and PhD candidates. Their contributions made the evaluation both informative and engaging.

December 2025

1 INDEX

2 INTRODUCTION

This report presents the results of the assessment of the research and PhD programme of CARIM over the period 2019-2024, conducted in October 2025 by an external Review Committee. CARIM is one of seven research institutes of the Faculty of Health, Medicine and Life Sciences (FHML) embedded in the Maastricht University Medical Centre+ (Maastricht UMC+).

1.1 THE EXTERNAL REVIEW COMMITTEE

To assess the research and the PhD programme conducted at CARIM, an international External Review Committee (ERC) was appointed by the Executive Board of Maastricht University. The ERC consisted of the following members:

1. Harry Büller (Chair), Professor of Internal Medicine, specialized in Vascular Medicine at the Academic Medical Center in Amsterdam, The Netherlands.
2. Maarten Uyttenboogaart, Associate professor, Stroke and Interventional neurologist, Department of Neurology and Radiology, University Medical Center Groningen, the Netherlands.
3. Peter Rossing, Head of Research, Chief Physician, Steno Diabetes Center Copenhagen, Denmark. Professor in Endocrinology with focus on vascular complications at the University of Copenhagen, Denmark.
4. Manuel Mayr, British Heart Foundation (BHF) Professor for Cardiovascular Proteomics and Co-director of Imperial's BHF Centre of Research Excellence, Imperial College London, England.
5. Karin Sipido, Emeritus Professor at the Department of Cardiovascular Sciences, KU Leuven, Belgium.
6. Jolien Roos-Hesselink, Professor of Cardiology at the Erasmus MC in Rotterdam, The Netherlands.
7. Jamilla Goedegebuur, medical doctor and PhD candidate at the departments of Clinical Epidemiology and Thrombosis and Hemostasis at the Leiden University Medical Center in Leiden, The Netherlands.
8. Roelinka Broekhuizen, secretary, The Netherlands

All members of the Review Committee signed a statement of impartiality and confidentiality. Additional information on the Review Committee members and their brief *curriculum vitae* can be found in Annex 1.

1.2 Scope of the assessment and documentation

The Review Committee used the methods described in the Strategy Evaluation Protocol 2021-2027 (SEP). This protocol aims to ensure a transparent and independent assessment.

The Dean asked the Review Committee to

1) Assess the quality, relevance to society, strategic targets of CARIM as well as the three divisions ('Blood', 'Vessels' and 'Heart').
   a) Judge the performance of CARIM on the main assessment criteria and offer its written conclusions as well as recommendations based on considerations and arguments. The main assessment criteria are:
      i) Research quality
      ii) Relevance to society
      iii) Viability of the unit
   b) Incorporate four specific aspects:
      i) Open Science: availability of research output, reuse of data, involvement of societal stakeholders;
      ii) PhD Policy and Training: supervision and instruction of PhD candidates;
      iii) Academic Culture: openness, (social) safety and inclusivity; and research integrity;
      iv) Human Resources Policy: diversity and talent management.

1.3 Working procedure of the Review Committee

The assessment was informed and substantiated by two principal sources of evidence:

- **Self-evaluation reports** outlining the organisation, management, research activities, output, and SWOT analysis of the research institute. These reports followed the structure prescribed by the national Strategy Evaluation Protocol.
- **Interviews and discussions** with members of the boards, management, principal investigators, heads of department, PhD candidates, technical and support staff, postdoctoral researchers, and both junior and senior academic staff, aimed at exploring and clarifying the information provided.

The **site visit** took place from **1 to 3 October 2025** and comprised several elements, summarised below (see Annex 3 for the full programme):

- A plenary introduction to FHML and Maastricht UMC+ by the Dean of the Faculty of Health, Medicine and Life Sciences, *Prof. Annemie Schols*, and an introduction to CARIM by *Prof. Tilman Hackeng* (Scientific Director) and *Mr. Danny Luciana* (Financial Director).
- Presentations by the three division leaders
- Meetings with the CARIM Executive Board, Strategic Board, and Advisory Board.

- A poster session, including discussions with PhD candidates and postdoctoral researchers presenting their work, with a total of 13 posters
- Dedicated meetings with PhD candidates.
- Meetings with scientific and support staff, postdoctoral researchers, and assistant, associate, and full professors.
- A meeting with the Research Council.
- A meeting with staff responsible for Scientific Integrity and Social Safety.
- A closing session with representatives of the FHML Board (dean and vice-dean FHML).

The Review Committee had the opportunity to engage with all levels of the CARIM organisation, from PhD candidates to the Dean of the FHML. The poster session, in particular, was highly valued for the opportunity it provided to speak directly with researchers about their work.

The visit concluded with an **oral feedback session**, during which the Review Committee presented its preliminary findings to CARIM staff, representatives of the FHML Board, and the CARIM Scientific Director.

A **draft report** was subsequently submitted to the Dean of the Faculty of Health, Medicine and Life Sciences and CARIM for verification of factual accuracy.

2 ASSESSMENT OF THE SCHOOL CARIM

2.1 QUALITATIVE EVALUATION

2.1.1 Research quality

CARIM has a comprehensive research portfolio addressing major challenges in cardiovascular diseases and is an institute of high international standing, including world leading experts. Recognition of the research quality is seen in participation in highly visible impactful collaborative research, and leadership in large national and international research projects, with the Leducq program as a major example. Success in the national VENI/VIDI/VICI program is testimony to excellence of CARIM investigators.

Since the last ERC report in 2019, CARIM has continued to deliver a strong research output, across the different domains of its three divisions. The scientific publications of CARIM are excellent in terms of quantity and quality. However, in the presentation of some of the achievements, most notably ESC guidelines, there is still predominantly a metrics-based approach, i.e. based on impact factors of journals and citations, that puts forward the most highly-cited and visible papers in more clinical cardiovascular research. While CARIM members have contributed to these, they were not necessarily the leaders of the research in all of these, and the selection creates some bias against highly valuable basic research within CARIM. The ERC felt that more emphasis could be given to the core research achievements, where CARIM is leading, across basic, translation and clinical research, and across the three divisions. The annexes list of, amongst others, lectures and journal activities, likewise would benefit from highlighting 'peaks' in the landscape. In compensation, the ERC appreciated the case studies and poster presentations which showcased some interesting and highly exciting ongoing research, ranging from mechanistic studies in perivascular fibrosis, population data from the unique Maastricht cohort study, and public-private collaborations.

CARIM operates in a well-organized structure. The structure into three divisions supports and facilitates research within each division, but also creates boundaries that no longer align with the evolving insights into cardiovascular diseases. Heart failure is not a purely 'heart' disease and organ cross-talk, with kidney disease, diabetes and metabolic liver disease, demands more integrated research. The ERC received examples of cross-division collaborations, and encourages further development. The logo with three separate division is outdated, a more schematic approach that reflects the present and future interactions is needed. At international level, the Interreg program and collaborations with RWTH Aachen is an appreciated example of more integrated research beyond the cardiovascular system.

Leading research aligning with progressive insights requires investments in people and their expertise. The ERC appreciated the presence of high-level international experts in CARIM, as part-time appointments or visiting professor. Nevertheless there are some concerns that the actual involvement of part-time appointments may not be sufficient. On the other hand, the ERC much appreciated the investment in highly trained support staff for continuity. During the interviews, the ERC noted that the staff is strongly committed to learn and introduce the latest methodology, and is supported by CARIM in this endeavour.

State-of-the-art infrastructure is another essential element for staying at the forefront. The ERC gathered from the interviews that access to data processing can be slow or difficult, and lack of advanced equipment is hampering progress. Complementing the infrastructure, investment in novel research methodology, such as non-animal models (NAMS) and computational models is commendable.

In the presentations of CARIMs future plans the ERC appreciated the commitment to the Lighthouse project as a new RESEARCH flagship, next to the continuation of excellent research and recent strategic priorities. Nevertheless the ERC felt the aims seemed more focused on addressing challenges rather than fuelled by clearly enunciated ambitions.

2.1.2 Societal relevance

Research at CARIM aims *'..to contribute to advances in cardiovascular medicine, through excellent research and translation of research into better prevention strategies*'. The mission for translation into clinical practice is facilitated by a close interaction with clinical departments in the hospital, recently formalized as CARIM+HVC. The ERC saw this as a very positive evolution and the synergy between the Directors Prof. Vernooy and Prof. Hackeng as a major asset.

CARIM researchers lead and participate in large clinical international trials that have major impact in cardiovascular medicine and hence patients' lives. Uptake of findings in guidelines and citations in policy documents are important evidence for impact, but here as well, a more clear distinction on the role of CARIM within the consortium is important. Ambitious projects for advancing clinical care led by CARIM like The Netherlands Heart Tissue Bank, The Aneurysm Cohort and Human iPS Cell Line Project and others are to be particularly commended.

With regard to innovation, several patents are listed. CARIMs engagement with society is also evident in projects engaging with patients and with the public. The excellent quality of the Maastricht study owes much to this engagement.

On a minor note, the entry portal of the CARIM website is not very appealing or engaging, while it could provide an excellent channel for communication with the public about ongoing research and activities.

2.1.3 Viability

The viability of CARIM depends on adequate funding and attracting and maintaining excellent scientists.

Funding

The financing of CARIM is complex and a steady non-competitive stream of public funding from the government is the essential foundation to extend with external competitive funding. The ERC is concerned about this first funding stream to be stable, which, in view of the rising costs, is equal to being in decline. The discussion on the allocation model pointed to the potential of growing the number of PhD candidates to increase CARIM's share in the allocation of funds. While there may be room for further increasing the number, the ERC points out the risk of endangering quality of PhD training and the vulnerability of such a strategy, if copied by all.

The ERC noted that since the 2019 report, CARIM has invested in encouraging and supporting European grant applications, with some success in the collaborative grants, e.g. MAESTRIA, but less so in the personal grants of the European Research Council. The support structure for such applications is presently weak. Intensifying the use of experienced grantees and former evaluators is a strategy successfully employed by other institutions and could be introduced at CARIM. The support structure for national grants seems to be working well, but the supporting committee could be strengthened.

Maintaining excellence in research teams

To maintain and grow (where possible) its research faculty, CARIM has a long-term plan for replacement of positions that are vacated by retirement. The ERC noted that this plan is very focused on recruiting from an internal pool of excellent researchers, often returning after a successful international mobility.

While internal recruitment and nurturing of promising young researchers is a sound approach, external recruitment is important as well. CARIM may be at a disadvantage in this recruitment as the expectations for teaching imply less time for research. This can also be a handicap for clinicians aspiring to a joint clinical and faculty research appointment, and other internal candidates.

Recommendations for improvement:

- The part-time appointments of distinguished (inter)national researchers constitute a highly valuable strategy. It is, however, recommended that measures be taken to ensure that their expertise and skills are more effectively embedded within CARIM, thereby strengthening continuity and knowledge transfer to future generations of researchers.
- To improve success rates in securing European and other complex, large-scale (inter)national grants, it is recommended that a comprehensive analysis of recent unsuccessful applications be undertaken. Furthermore, an institutional framework should be established to proactively identify and support potential applicants, involving colleagues with a proven record of success in obtaining such prestigious funding.
- To enable high-potential postdoctoral researchers and assistant professors to dedicate greater time to research and grant acquisition, it is recommended that a formal mechanism be introduced to allow for a temporary reduction in teaching responsibilities.
- The Development Board tool is viewed positively by researchers affiliated with CARIM. Efforts to systematically extend this tool to all postdoctoral researchers, assistant and associate professors are encouraged.

2.2 Additional Areas of Evaluation

2.2.1 Open Science

In recent years, UM and FHML have made significant investments to promote Open Science. A research code is documented in 'Open Science @ UM', which is accessible to all CARIM researchers. The proportion of open access publications has risen from below 60% in 2015 to nearly 80% in 2024. Data reuse is actively encouraged, with databases designed to facilitate seamless reuse. This is well exemplified by the Maastricht Study cohort, which operates under a clear policy outlining the conditions and requirements for both internal and external parties to access the data.

Societal stakeholder involvement is present within CARIM. All three divisions—Blood, Vessels, and Heart—offer internationally recognized postgraduate programmes. CARIM's research output demonstrably impacts society; however, several impactful publications are guideline papers, which do not fully reflect the broader societal impact of CARIM's research. There is close collaboration with industrial partners and robust internal cooperation. The involvement of patient representatives as stakeholders has not been reported.

Recommendations for improvement:

- The establishment of a Patient Representative Advisory Board is recommended to ensure the inclusion of this important stakeholder group in research planning and evaluation processes.

2.2.2 PhD Policy and Training

General Impression

The ERC is positive about the PhD trajectory at CARIM. Onboarding is well-organized, with both a Training and Supervision Plan (TSP) and a Personal Research Plan (PRP) in place; the latter includes a publication plan and a feasibility assessment, requiring approval from the PhD coordinator. Progress is monitored via an online system (PhD Track), for which PhD candidates receive an introductory course. Students are required to complete three mandatory courses on ethics and integrity, open science, and science communication, in addition to a broad array of voluntary courses at institutional, national, and international levels.

Each PhD candidate is supervised by two to four (co-)supervisors, all of whom are required to undertake competence development courses to ensure responsible supervision and mentorship. Additionally, a voluntary PhD buddy system is offered including a coach from another division for non-content-related matters.

The research environment is considered open and collaborative, fostering both cooperation and personal growth. PhD candidates appreciate the institution's commitment to diversity, inclusion, social activities, and opportunities for input into decision- and policy-making. The ERC commends the allocation of funds for thesis printing and post-defence receptions.

During the last six years, CARIM has implemented further improvements, including a clear onboarding guide, advancements to the PhD Track system, and enhancements to the TSP and PRP.

Internal and External PhDs

The self-evaluation report distinguishes between internal and external PhD candidates, noting that external candidates are also affiliated with other institutions. The ERC observes that internal and external PhDs receive different guidance, obligations, and benefits, for example in access to mental health support and IT systems.

Progress Monitoring and Wellbeing

Due to the voluntary nature of the buddy system, its potential is not fully realized, as PhDs seldom use it. It is recommended that every PhD student is assigned a buddy prior to starting, to facilitate a smooth transition into the department. The ERC also notes the absence of an independent external participant (such as from another institution) in regular evaluations to promote open discussions on personal and supervisory matters. Career path reviews should be formalized and supervisors made aware that such discussions should occur regularly, for example, annually.

Graduation

Twelve percent of PhD candidates discontinued their programme, a rate consistent with national averages. In addition, 17% (15 out of 89) of students who began before 2019 had not graduated by the end of the review period. In total, 26% completed their PhD in year six or later.

Recommendations for improvement:

- It is advised that a more equitable approach be adopted for the PhD trajectory, ensuring comparable opportunities, supervision, and assessment for both internal and external PhD candidates.
- It is recommended that the Training and Supervision Plan (TSP) be developed prior to the commencement of the PhD programme and assessed for feasibility by an independent senior staff member. Particular attention should be given to ensuring that the TSP is completed and approved within the first six to twelve weeks of the PhD trajectory to prevent early-stage delays.
- A buddy system for new PhD candidates is in place, assigning each student a peer contact prior to their start, to facilitate early integration and introduction to the department. This system should be vividly encouraged for each PhD candidate.
- The ERC expresses concern regarding the duration of PhD completion. It is therefore advised that completion times be benchmarked against comparable institutions and,

if necessary, that an analysis be conducted to identify contributing factors, followed by the formulation of measures to reduce the duration where appropriate.

- The inclusion of an independent external member on the Guidance Committee of a PhD candidate is recommended to enhance impartiality and broaden the range of perspectives.

2.2.3 Academic Culture

The ERC found the CARIM institute to foster a supportive and safe atmosphere, as reflected in interviews with PhD candidate, postdocs, faculty, and management. An external advisory board, as previously recommended, has been installed but currently comprises only one member, Prof. Frits Roosendaal. For PhD candidates, a central coordinator (Prof. Eline van der Kooi) provides guidance throughout the PhD trajectory. Social activities are regularly organized and highly valued by PhDs. All PhD candidates must complete a course in scientific integrity; however, the ERC notes that such certification is not mandatory for supervisors. There is currently no systematic evaluation for plagiarism. Although the dean places this responsibility on supervisors, unchecked plagiarism may have significant consequences for the institute; therefore, a structured plagiarism screening should be considered for all theses and manuscripts produced at CARIM.

Recommendations for improvement:

- All supervisors should be required to complete the Scientific Integrity Course.
- It is advised that plagiarism screening procedures be strengthened and systematically applied to all manuscripts submitted by investigators affiliated with CARIM.

2.2.4 Human Resource Policy

Interviewees uniformly report a positive working environment in CARIM, and the proactive engagement of CARIM leadership is highly appreciated. Technical support staff actively contribute to each research group, but unlike other personnel, they do not undergo structured annual performance evaluations.

Talent classes are available for select members, but postdocs and assistant professors expressed a desire for structured career development support, including guidance on non-academic career paths. Initiatives such as a Development Board could support all postdocs and assistant professors. Although FHML hosts a grant support office, the responsibility to seek assistance rests with applicants, and there is no active scouting of talent for targeted grant applications.

Despite previous ERC recommendations, there remains an important gender imbalance among full professors, albeit improved from 14% to 26% female representation. The figure for female associate professors has reached 50%. CARIM has taken specific initiatives, such as the Anna Maria van Schurman Stipendium, to address these gaps, but a comprehensive action plan is still lacking. Also, among CARIM's 21 principal investigators (PI), only 2 are women. During the site visit, it was clarified that not all research group leaders are designated as PIs, as this role focuses primarily on financial management. The gender imbalance situation makes CARIM less attractive to many potential female candidates, who make up a substantial fraction of the younger researchers. Something must be done: CARIM must establish a positive approach to DEI and how stereotyped expectations hinder inclusion. Consideration should also be given to inclusion of other diversity dimensions.

Recommendations for improvement:

- The establishment of a structured mentoring and career development framework for postdoctoral researchers and associate professors is recommended to facilitate systematic monitoring and guidance of career progression.
- The ERC notes a lack of clarity in the distinction between Principal Investigators and senior investigators who do not hold this title. It is therefore recommended that a transparent and consistent framework be developed for defining roles, responsibilities, and designations.
- The ERC strongly recommends the implementation of a comprehensive and proactive plan to address gender imbalance, particularly at the levels of Principal Investigator, associate professor, and professor. This plan should include measurable objectives and regular monitoring. Consideration should also be given to inclusion of other diversity dimensions.

2.2.5 Research Infrastructure

CARIM benefits from robust, established laboratory facilities that underpin high-quality cardiovascular research. Nonetheless, maintaining international competitiveness will require sustained, strategic investment in research infrastructure. The adoption of high-performance computing for data storage and analysis is a critical and timely advancement, enabling management of increasingly complex, large-scale datasets. Recent equipment acquisitions reflect some progress, but overall technological renewal remains modest relative to CARIM's aspirations. A comprehensive, forward-looking infrastructure strategy is essential to support interdisciplinary collaboration, data-driven research, and recruitment of top scientific talent. As biomedical research grows more technologically intensive, maintaining state-of-the-art infrastructure is imperative for CARIM's long-term excellence and sustainability. Investment

priorities should include omics, implementation of artificial intelligence, imaging, and computational technologies.

Recommendations for improvement:

- It is advised that a strategic plan be developed for large-scale investments, potentially in collaboration with other research institutes and the FHML, focusing on data collection and high-performance computing, support for analytic and generative AI, and omics facilities.

3 ASSESSMENT OF THE DIVISIONS

3.1 BLOOD

3.1.1 General remarks

The Blood Division is organised in two programmes: Programme 1 'Blood, coagulation, venous thrombosis and bleeding' and Programme 2 'Atherosclerosis , arterial thrombosis and stroke'. The latter has clear interdisciplinary links with the other divisions, and while this structure provides a clear thematic focus, it also carries the risk of creating silos if stronger integration between the programmes is not actively pursued.

3.1.2 Research quality

Overall, the division's scientific output reflects a high level of excellence, with higher than world's average citation rates and publications in high impact journals. The Blood Division's commitment to integrating fundamental science with clinical applications is highly commendable and demonstrates strong potential to advance molecular insight and foster personalised therapy in blood-related cardiovascular disease.

Despite the decline in research staff fte, the number of published papers has increased with almost 80%. An impressive 90% of the articles is published in open access journals.

Notable achievements include the clinical and societal impact of endovascular thrombectomy as demonstrated in the Mr CLEAN LATE and DISTAL trials, the prestigious Vici grant received by Prof. Judith Sluimer for her internationally recognised work on fibroblasts in atherosclerosis, the Maastricht developed prediction model for stroke recurrence awarded with the ZonMW Doelmatigheid grant, and CARIM's active participation in major international consortia such as MegaCardiocyte and Foundation Leducq. These accomplishments highlight the strong translational capacity and international visibility of CARIM's research.

In the self-evaluation report and during the site visit, there was less focus for programme 1's work. The recently established Thrombosis Expertise Center seems promising for collecting data and centralizing patient-care, and research output as a result is expected the upcoming years. The addition of the Intensive Care department adds large scale clinical data and research opportunities.

To sustain and enhance this research quality, greater integration between the two programmes is recommended. Closer collaboration would accelerate discovery and strengthen translational outcomes. This requires strategic, long-term investment in joint initiatives, shared supervision, and collaborative research platforms. The steps already taken (improving representation, communication, and inclusion of early career researchers) are

positive but should be expanded to build genuine synergy across the programmes. Developing this internal critical mass should be a strategic focus over the next few years to maximise the division's scientific potential.

3.1.3 Relevance to society

The Blood Division's work has significant societal and clinical relevance. CARIM's contribution to the CONTRAST consortium , with its direct influence on stroke management and patient outcomes, exemplifies the translation of research into clinical practice.

Likewise, the division's focus on mechanisms of thrombosis and atherosclerosis addresses major causes of cardiovascular morbidity and mortality, aligning closely with public health priorities.

The division's aim to bridge fundamental and clinical science directly supports CARIM's mission to deliver impact in diagnosis, prevention, and personalised treatment of cardiovascular disease. This translational strength, coupled with international partnerships, reinforces CARIM's contribution to both national and global cardiovascular health agendas.

Support from Prof. Monika Stoll in genetic epidemiology and statistical genetics effectively links the division's molecular and data-driven research with broader population and clinical relevance. The involvement of other external professors adds further value and should be leveraged to ensure continued knowledge transfer and sustainable expertise within CARIM.

3.1.4 Viability

The Blood Division is well positioned for continued success but must take strategic steps to strengthen its long-term viability, especially since the total research staff has decreased from 72.4 fte to 51.4 fte (not fully explained by the move of one of the PIs to Division Vessels). The leadership transition to Prof. Sluimer represents a positive and encouraging move toward greater gender balance within CARIM's leadership team. Adding another division leader from programme 2 ensures proper representation of both programmes in the division lead.

The current *principal investigator (PI)* structure offers limited alignment between scientific responsibility and financial authority. A clearer and more transparent governance structure would enhance accountability and empower scientific leaders.

The recently obtained grants are a good impulse for the further viability of the unit, but larger, international grants are needed to further solidify the division's position.

To remain at the forefront of international research, CARIM must invest decisively in advanced technologies, particularly in large-scale data analysis and high-performance computing infrastructure. Reliance on outsourced data processing underscores the need to strengthen internal computational capacity. Recent acquisitions, such as the Cytek Aurora

spectral cytometer and updated single-cell sequencing platforms, are valuable steps forward but limited in scale. A broader and more ambitious investment strategy, especially in omics and computational technologies, will be vital to attract and retain top talent and to ensure an internationally competitive research environment.

The Blood Division demonstrates high research quality, strong societal relevance, and promising long-term viability. The division has delivered internationally recognised achievements and clinical impact while maintaining a clear commitment to translational science. With its strong scientific base, emerging leadership, and clear potential for more cross-disciplinary collaboration, the Blood Division has the foundations for long-term viability and continued growth.

3.1.5 Recommendations for improvement

- The ERC recommends that a clear plan be developed to describe how the current decline in research staff FTE will be stabilised or reversed. This should include well-defined strategies for recruitment, career development, and long-term staff sustainability to ensure the continued viability of the unit.
- Strengthening interdisciplinary collaboration is recommended, for instance by building upon the strong existing work on the basic mechanisms of cerebral small vessel disease and its relevance to stroke. Expanding (international) collaborations in this area would further enhance the division's visibility and impact.
- It is advised that a clear vision for Intensive Care data research be developed, outlining how omics approaches could be integrated to complement and expand the division's current research portfolio.

3.2 VESSELS

3.2.1 General remarks

The Vessels division comprises two primary programmes: “Vascular Complications of Diabetes and Hypertension” and “Regenerative and Reconstructive Cardiovascular Medicine.” Both initiatives have a strong translational emphasis, aiming to elucidate the mechanisms underlying vascular ageing, aneurysm formation, and the specific effects of hypertension and diabetes on these processes. There is close collaboration between clinical departments (such as Internal Medicine, Vascular Surgery, and Thoracic Surgery) and basic science departments (including Vascular Biology, Biomedical Engineering, and Biochemistry).

3.2.2 Research quality

The overall research quality within the Vessels division has been positively evaluated by the ERC. The Maastricht Study represents a unique registry, characterized by comprehensive data collection in a well-defined cohort, enabling various high-quality research projects. A further strength is the development of a human iPSC cell line, which is unique in the Netherlands and provides excellent opportunities for pioneering translational research. Greater emphasis on translating fundamental research findings into clinical applications is recommended, as this could result in more practice-changing outcomes, given the division’s strong scientific foundation.

The number of completed PhD projects within the division has grown over recent years, as has the number of peer-reviewed publications, which also feature acceptable category-normalized citation impacts. While the university currently incentivises PhD candidate recruitment, introducing initiatives for larger and more clinically impactful trials may be considered. The division has secured substantial funding, with a notably high proportion from industrial partners. As such, focused attention to valorisation is warranted.

Despite earlier recommendations from the ERC in 2016, there remains a lack of clarity regarding structural collaboration between Vessels and the Heart and Blood divisions. Additionally, the ERC observed that the role of vessel imaging could be more prominent, or at least its integration within the division should be explicitly described.

3.2.3 Relevance to society

The research produced by the Vessels division has considerable societal impact. Through collaboration with various stakeholders, including the Dutch Diabetes Foundation, the division actively contributes to increasing awareness of cardiometabolic diseases. To further improve societal impact, the involvement of patient representatives in research and communication activities could be enhanced.

The annual European Vascular Course plays a significant role in the education and training of nurses, technicians, and physicians working in cardiovascular medicine, and receives substantial (inter)national attention. The top 10 publication list, ranked by altimetric scores, predominantly consists of published guidelines, which are not solely the achievement of the Vessels division. It may be beneficial to separately highlight high-impact publications primarily coordinated by Vessels.

3.2.4 Viability

The Vessels division possesses significant research potential due to its unique programmes, such as the Maastricht Study and the development of iPSC cell lines. With the recent launch of the “Aneurysma NL Consortium,” the division’s role and prominence could be incorporated into future strategic planning. Assuming a leading position within this consortium could further strengthen the division's viability. Additional investments in the Maastricht Study are considered valuable. As acknowledged in their report, a primary challenge lies in replacing retiring principal investigators. A clear strategy for attracting new principal investigators, with attention to diversity, should be formulated, as new appointments are currently predominantly internal. Consideration should also be given to actively recruiting talented researchers from outside CARIM, or developing a strategy to retain the top 10% of talent within the division.

3.2.5 Recommendations for improvement

- Continued efforts to translate basic and observational research findings into clinical applications are strongly encouraged.
- It is recommended that interdivisional and interdepartmental collaboration be further enhanced to promote interdisciplinary research output.
- The opportunities for valorisation arising from ongoing studies, particularly those associated with the Maastricht Study, should be systematically and professionally explored.
- The development of a comprehensive strategy aimed at retaining talented researchers within the division, as well as attracting external talent, is strongly encouraged to safeguard the division’s long-term excellence.

3.3 HEART

3.3.1 General remarks

The division Heart in CARIM is well positioned with clinical research embedded in the hospital and in international networks, translational research including large animal models, and more mechanistic basic research. Translation is both forward and reverse. The division presents two programmes: 'Structural heart failure' and 'Complex arrhythmias', with emphasis is on an integrated approach to cardiac disease, under the flag of electromechanical function. The Heart group has successfully navigated transition of leadership, with consolidation of a diverse team leading the division, PIs with high visibility and strong links to the hospital.

3.3.2 Research quality

The research quality is very high, especially in the fields of structural heart failure and complex arrhythmias and also on the combination of these 2 topics. The publication output is excellent and stable over the past years with bibliometric indices of excellence. The division highlights its participation in landmark clinical studies and guidelines writing, with high standing leaders in the field of atrial fibrillation, pacing and heart failure. The international recognition of CARIM Heart is further visible in the many invited keynote lectures. The number of PhD candidates is very high, and the group is highly successful in competitive international collaborative funding.

There is some variety with some specific topics with less high research quality and output, but also transformative research exemplified in the 'Lighthouse' project to develop repair of inherited arrhythmias through genome editing, which is a very impressive project. Furthermore the group has set up several beautiful cohort studies. The ERC appreciates the ambitious approach and how the group is building on opportunities, e.g. in the national biobank.

The fundamental research is also excellent, although attention should be paid to keep the needed infrastructure (for instance for proteomics) state of the art. There is some mentioning of starting additional prospective cohorts of key-patient populations, but this was not completely clear. There is a lot of translational research with the hospital and it seems that the collaboration between clinical and preclinical researchers is very good. This should be further intensified.

3.3.3 Relevance to society

The societal relevance of the group's research is very high, especially heart failure being a tremendous problem for society. The hospital beds are filled with patients suffering from

heart failure and this will increase further in coming years. This is not sustainable and therefore attention to treatment of heart failure, but also for treating patients more at home is very relevant. The division Heart of Carim is actively engaged in this area of immense societal burden, and the group's research and translation of findings into practice guidelines result in societal impact. Further relevance is generated by the public engagement and outreach. Via work at charities and professional societies as well as by participation in and organisation of local and national events for patients, the division connects well with the general public. Some further improvement is possible through a structured embedding of patient engagement beyond the area of rare disease research.

Towards innovation for society, the ERC sees the industry partnerships as another strength of the Heart group societal relevance. These partnerships include device development, in particular, but also pharma.

3.3.4 Viability

Most research lines are up to date and have good outlook for the future. The ERC was impressed by the large numbers joint projects and nice partnership with large medical device industry. This is already in place for many years and therefore seems sustainable. Yet it is important to monitor closely the evolution and changes in industry focus.

In addition there are a number of huge personal grants, which is fantastic but might be difficult to sustain. More scouting for opportunities in a changing world for funding, with more emphasis on translation will be necessary but the group is in a good position to do so.

It seems logical that also the city and region around Maastricht benefit from the ongoing large cohort studies. Especially in longer follow-up, results will be very meaningful and important to the community. Therefore (financial) support from local or regional authorities seems logical. A small remark is the ambition of the division: Vision for 2030: continue what we are doing now. Is that a solid and innovative vision? It could be a bit more ambitious. Additional high profile projects need to be identified and brought to fruition, with attention to long-term funding for initiatives like the lighthouse project.

3.3.5 Recommendations for improvement

- The continued identification and development of high-profile projects, such as the Lighthouse Initiative, are strongly encouraged. The ERC considers that several ongoing activities within the division have the potential to evolve into flagship projects with long-term strategic relevance.
- It is further recommended that the translation of basic scientific research into clinical application be fully exploited and, where feasible, further intensified

Recommendations to the Research Institute

- The part-time appointments of distinguished (inter)national researchers constitute a highly valuable strategy. It is, however, recommended that measures be taken to ensure that their expertise and skills are more effectively embedded within CARIM, thereby strengthening continuity and knowledge transfer to future generations of researchers.
- To improve success rates in securing European and other complex, large-scale (inter)national grants, it is recommended that a comprehensive analysis of recent unsuccessful applications be undertaken. Furthermore, an institutional framework should be established to proactively identify and support potential applicants, involving colleagues with a proven record of success in obtaining such prestigious funding.
- To enable high-potential postdoctoral researchers and assistant professors to dedicate greater time to research and grant acquisition, it is recommended that a formal mechanism be introduced to allow for a temporary reduction in teaching responsibilities.
- The Development Board Tool is viewed positively by researchers affiliated with CARIM. Efforts to systematically extend this programme to all postdoctoral researchers and associate professors are encouraged.
- The establishment of a Patient Representative Advisory Board is recommended to ensure the inclusion of this important stakeholder group in research planning and evaluation processes.
- It is advised that a more equitable approach be adopted for the PhD trajectory, ensuring comparable opportunities, supervision, and assessment for both internal and external PhD candidates.
- It is recommended that the Training and Supervision Plan (TSP) be developed prior to the commencement of the PhD programme and assessed for feasibility by an independent senior staff member. Particular attention should be given to ensuring that the TSP is completed and approved within the first six to twelve weeks of the PhD trajectory to prevent early-stage delays.
- A buddy system for new PhD candidates is in place, assigning each student a peer contact prior to their start, to facilitate early integration and introduction to the department. This system should be vividly encouraged for each PhD candidate.

- The ERC expresses concern regarding the duration of PhD completion. It is therefore advised that completion times be benchmarked against comparable institutions and, if necessary, that an analysis be conducted to identify contributing factors, followed by the formulation of measures to reduce the duration where appropriate.
- The inclusion of an independent external member on the Guidance Committee of a PhD candidate is recommended to enhance impartiality and broaden the range of perspectives.
- All supervisors should be required to complete the Scientific Integrity Course.
- It is advised that plagiarism screening procedures be strengthened and systematically applied to all manuscripts submitted by investigators affiliated with CARIM.
- The establishment of a structured mentoring and career development framework for postdoctoral researchers and associate professors is recommended to facilitate systematic monitoring and guidance of career progression.
- The ERC notes a lack of clarity in the distinction between Principal Investigators and senior investigators who do not hold this title. It is therefore recommended that a transparent and consistent framework be developed for defining roles, responsibilities, and designations.
- The ERC strongly recommends the implementation of a comprehensive and proactive plan to address gender imbalance, particularly at the levels of Principal Investigator, associate professor, and professor. This plan should include measurable objectives and regular monitoring. Consideration should also be given to inclusion of other diversity dimensions.
- It is advised that a strategic plan be developed for large-scale investments, potentially in collaboration with other research institutes and the FHML, focusing on data collection and high-performance computing, support for analytic and generative AI, and omics facilities.

To Division Blood

- The ERC recommends that a clear plan be developed to describe how the current decline in research staff FTE will be stabilised or reversed. This should include well-defined strategies for recruitment, career development, and long-term staff sustainability to ensure the continued viability of the unit.
- Strengthening interdisciplinary collaboration is recommended, for instance by building upon the strong existing work on the basic mechanisms of cerebral small

vessel disease and its relevance to stroke. Expanding (international) collaborations in this area would further enhance the division's visibility and impact.

- It is advised that a clear vision for Intensive Care data research be developed, outlining how omics approaches could be integrated to complement and expand the division's current research portfolio.

To Division Vessels

- Continued efforts to translate basic and observational research findings into clinical applications are strongly encouraged.
- It is recommended that interdivisional and interdepartmental collaboration be further enhanced to promote interdisciplinary research output.
- The opportunities for valorisation arising from ongoing studies, particularly those associated with the Maastricht Study, should be systematically and professionally explored.
- The development of a comprehensive strategy aimed at retaining talented researchers within the division, as well as attracting external talent, is strongly encouraged to safeguard the division's long-term excellence.

To Division Heart

- The continued identification and development of high-profile projects, such as the Lighthouse Initiative, are strongly encouraged. The ERC considers that several ongoing activities within the division have the potential to evolve into flagship projects with long-term strategic relevance.
- It is further recommended that the translation of basic scientific research into clinical application be fully exploited and, where feasible, further intensified

5 ANNEXES

5.1 ANNEX 1: EXTERNAL REVIEW COMMITTEE

5.1.1 Harry Büller (Chair)

Professor of Internal Medicine, specialized in Vascular Medicine at the Academic Medical Center in Amsterdam, The Netherlands.

Prof. dr. Büller has earned his MD and PhD at the University of Amsterdam. After graduating, he completed his research fellowship in hemostasis and thrombosis in the Departments of Medicine and Clinical Epidemiology and Biostatistics at McMaster University in Hamilton, Ontario, Canada in 1981 – 1982.

Prof. dr. Büller has authored and coauthored almost 900 scientific articles concerning topics in his field. He has been Co-Chairman for the Amsterdam Institute for Cardiovascular Research and is Chairman of the Vascular Medicine Working Group. He is a reviewer for The New England Journal of Medicine, The Lancet, Archives of Internal Medicine, and European Journal of Clinical Investigation, among others. He is a past member of the editorial Board of The Annals of Internal Medicine.

Prof. dr. Büller is the recipient of the Established Investigator Award presented by the Dutch Heart Foundation (1993 – 1998) and received the Dutch Society for Vascular Medicine 2005 Award. Since 2008 he is Honorary Professor of the Royal Netherlands Academy of Arts and Sciences. In 2022 he was awarded the Knight of the Order of the Netherlands Lion.

5.1.2 Maarten Uyttenboogaart

Associate professor, Stroke and Interventional neurologist, Department of Neurology and Radiology, University Medical Center Groningen, the Netherlands.

Dr. Uyttenboogaart is a neurologist and neuro-interventionalist at the University Medical Center Groningen. His areas of expertise include the diagnosis and treatment of acute ischemic stroke, (symptomatic) carotid stenosis, cerebral aneurysms, and other cerebrovascular and spinal vascular malformations. He serves as the principal investigator of the CASES trial (cases-trial.eu) and is an active member of the CONTRAST consortium.

5.1.3 Peter Rossing

Head of Research, Chief Physician, Steno Diabetes Center Copenhagen, Denmark. Professor in Endocrinology with focus on vascular complications at the University of Copenhagen, Denmark.

Prof. Rossing began his career as a research fellow at the Steno Diabetes Center (1991-1996) and served as Course Coordinator for the Steno Education Center (1995-1996). After defending his DMSc thesis in 1998, he completed clinical training at the University of Copenhagen Hospitals, earning his specialist degree in internal medicine and endocrinology in 2004. Since 2007, Prof. Rossing has been head of research and chief physician at the Steno Diabetes Center, leading studies on the complications of diabetes.

Prof. Rossing has authored over 800 publications, including 19 reviews and invited chapters, with an h-index of 102. His research has been widely presented at international meetings. He has received numerous accolades, including the Minkowski Prize (2005), Novartis Young Investigator Diabetes Prize (2009), and Golgi Prize (2016).

5.1.4 Manuel Mayr

British Heart Foundation (BHF) Professor for Cardiovascular Proteomics and Co-director of Imperial's BHF Centre of Research Excellence, Imperial College London, England.

He qualified in Medicine from the University of Innsbruck (Austria) in 1999. He then moved to London to undertake a PhD on combining proteomics and metabolomics. Upon completion of his PhD in 2005, he achieved promotion to Professor in 2011. In 2017, he was awarded a BHF Personal Chair, which he moved to Imperial College London in 2023.

His group uses proteomics in combination with other -omics technologies to integrate biological information in disease-specific networks that drive pathophysiological changes. While studying molecular interactions has been a research focus for many years and has provided important insight into biology, the attention has now shifted towards a more integrative network biology approach (Nat Rev Cardiol. 2021;18(5):313-330). He has published more than 300 peer review scientific papers. He is Consulting Editor for Circulation and JMCC, Associated Editor for Atherosclerosis and Cardiovascular Research and serves on the editorial boards of Circ Res, ATVB, Proteomics and Mol Cell Proteomics.

His academic achievements have been recognised by the inaugural Michael Davies Early Career Award of the British Cardiovascular Society (2007), the inaugural Bernard and Joan Marshall Research Excellence Prize of the British Society for Cardiovascular Research (2010), the Outstanding Achievement Award by the European Society of Cardiology (ESC) Council for Basic Cardiovascular Science (2013) and most recently the President's Distinguished Lecture of the International Society for Heart Research (ISHR, 2022).

5.1.5 Karin Sipido

Emeritus Professor at the Department of Cardiovascular Sciences, KU Leuven, Belgium.

Karin Sipido, MD, PhD, is Emeritus Professor at the Department of Cardiovascular Sciences, KU Leuven. She trained in internal medicine and cardiology, and continued a career in basic and translational research, with focus on cellular mechanisms of heart failure and arrhythmias, in an interdisciplinary collaboration. She is an elected member of the Academia Europaea, Fellow of the International Society for Heart Research, and Fellow of the ESC. She was Editor-in Chief of Cardiovascular Research and serves on the editorial board of leading international journals. She takes an active interest in research policy, serving in various positions at KU Leuven, at European and international level. She has chaired the European Commission's Scientific Panel for Health, and she is member of the Scientific Advisory Board of ORE, the European Commission's Open Research Platform. She acts as advisor to the ESC's Advocacy Committee. She is member of the Ethics Committee Research at UZ Leuven.

5.1.6 Jolien Roos-Hesselink

Professor of Cardiology at the Erasmus MC in Rotterdam, The Netherlands.

Jolien Roos-Hesselink is Professor of Cardiology at the Erasmus MC in Rotterdam, The Netherlands. She is director of the Department of Adult Congenital Heart Disease. Her clinical work and research involves Congenital Heart Disease, Aortic disease and Pregnancy and maternal cardiac disease.

She has authored and co-authored over 300 scientific publications and mentored 15 PhD students. She is chair of the ESC working group on Adult Congenital Heart Disease. She initiated and chairs, together with Prof Roger Hall (UK), a large prospective worldwide Registry On Pregnancy And Cardiac disease. Furthermore, she was the co-chair of the Taskforce on ESC guidelines on Pregnancy and Cardiovascular disease. She is principal investigator of a multicentre study on the impact of gender on heritable thoracic aortic disease. She has been appointed as the managing-director of the DCVA in 2022.

5.1.7 Jamilla Goedegebuur

PhD Candidate at Leiden University Medical Center, departments of Thrombosis and Hemostasis and Clinical Epidemiology

Jamilla Goedegebuur completed her medical training at Leiden University Medical Center in 2021. During her PhD trajectory and Epidemiology training, she is studying antithrombotic treatment patterns and complications in specific patient populations using large-scale, nationwide data. She will start her residency in Internal Medicine in 2026, while continuing to contribute to research and guideline development as a member of the ISTH Scientific and Standardization Committee on Thrombosis and Anticoagulant treatment.

5.1.8 Roelinka Broekhuizen (secretary)

Independent secretary

After getting her PhD in Nutrition and Health in Wageningen, Roelinka did her PhD in Maastricht at the school NUTRIM on the role of unsaturated fatty acid in pulmonary cachexia. She now works as an independent consultant and SEP secretary for almost 20 years.

5.2 ANNEX 2: CRITERIA OF SEP 2021-2027

The main goal of an SEP evaluation is to evaluate a research unit in light of its own aims and strategy

Research quality

The quality of the unit's research over the past six-year period is assessed in its international, national or – where appropriate – regional context. The Review Committee does so by assessing a research unit in light of its own aims and strategy. Central in this assessment are the contributions to the body of scientific knowledge. The Review Committee reflects on the quality and scientific relevance of the research. Moreover, the academic reputation and leadership within the field is assessed. The committee's assessment is grounded in a narrative argument and supported by evidence of the scientific achievements of the unit in the context of the national or international research field, as appropriate to the specific claims made in the narrative. The protocol explicitly follows the guidelines of the San Francisco Declaration on Research Assessment (DORA)2 adopted by KNAW, VSNU and NWO.

Societal relevance

The societal relevance of the unit's research in terms of impact, public engagement and uptake of the unit's research is assessed in economic, social, cultural, educational or any other terms that may be relevant. Societal impact may often take longer to become apparent. Societal impact that became evident in the past six years may therefore well be due to research done by the unit long before. The Review Committee reflects on societal relevance by assessing a research unit's accomplishments in light of its own aims and strategy. The Review Committee also reflects, where applicable, on the teaching-research nexus. The assessment is grounded in a narrative argument that describes the key research findings and their implications, while it also includes evidence for the societal relevance in terms of impact and engagement of the research unit.

Viability

The extent to which the research unit's goals for the coming six-year period remain scientifically and societally relevant is assessed. It is also assessed whether its aims and strategy as well as the foresight of its leadership and its overall management are optimal to attain these goals. Finally, it is assessed whether the plans and resources are adequate to implement this strategy. The Review Committee also reflects on the viability of the research unit in relation to the expected developments in the field and societal developments as well as on the wider institutional context of the research unit.

The three main assessment criteria 1) research quality, 2) societal relevance and 3) viability are central in the assessment of the research unit. These three criteria include several aspects depending on the aims and strategy of the research unit. Among all relevant aspects, the

research unit addresses at least the following four specific aspects: 1) Open Science, 2) PhD Policy and Training, 3) Academic Culture and 4) Human Resources Policy in concert with the main assessment criteria. The Review Committee should also take these into account.

5.3 ANNEX 3: PROGRAMME EXTERNAL REVIEW CARIM – CARDIOVASCULAR RESEARCH INSTITUTE MAASTRICHT, MAASTRICHT UNIVERSITY

Wednesday 1 October 2025

Time	Activity	Location	Attendants
18.00-22.00	Committee dinner at Harry's		Committee and secretary Short welcome by Prof. T.M. Hackeng and drinks with MT

Thursday 2 October 2025

Time	Activity	Location	Attendants
07.50	Taxi to CARIM		
08.15-09.30	● 08.15: Word of welcome and introduction by Dean FHML (10 min) ● 08.30: Introduction CARIM by Prof. T.M. Hackeng (15 min + Q&A) ● 09.00: Introduction financial management CARIM by D. Luciana (15 min + Q&A)	C2.557A	Prof. A. Schols, dean FHML Prof. T.M. Hackeng, Scientific Director CARIM D. Luciana, Managing Director CARIM **CARIM Executive Board members** + **Chair Advisory Board**
09.30-12.30	Meeting with CARIM Executive Board, including presentations from: ● 09.30: Division leader Blood (15 min + Q&A)	C2.557A	**CARIM Executive Board members:** Prof. T.M. Hackeng D. Luciana T. de Koster

	● 10.00: Division leader Heart (15 min + Q&A) ● 10.30: Division leader Vessels (15 min + Q&A) ● 11.00: Break ● 11.30: Chair Strategic Board (10 min + Q&A) ● 11.50: Medical Director HVC (10 min + Q&A) ● 12:10: General discussion		Prof. J. Sluimer Prof. J. Lumens Prof. M. Brouwers Prof. U. Schotten Prof. K. Vernooy L. Skiba Dr B. Spronck **Chair Advisory Board:** Prof. Frits Rosendaal
12.30-13.15	Lunch (ERC Internal)	C2.578	
13.15-14.00 14.00-14.15	Meeting with PhD candidates Internal committee discussion	C2.557A	Internal/external/scholarship PhDs: Nina Beelen, Matteo Cesario, Ilse Huijberts, Stan Muitjens Margarita Pencheva, Minke Rijpkema, Pepijn Saraber
14.15-15.00 15.00-15.15	Meeting with scientific staff Education Programme Committee Internal committee discussion	C2.557A	Prof. Eline Kooi, Dr Matthijs Blankesteijn, Dr Marleen van Greevenbroek, Dr Boy Houben
15.15-16.00	Travel to Kasteel De Hoogenweerth		

16.00-22.00 Committee can return to hotel after dinner	Poster session (n=12) and buffet dinner open for all CARIM staff members (6 min. presentation, 4 discussion)	Kasteel De Hoogenweerth

Friday 3 October 2025

Time	Activity	Location	Attendants
08.10	Taxi to CARIM		
08.30-09.00	Internal committee meeting	C2.578	
09.00-09.30 09.30-09.45	(technical) Support staff Internal committee meeting	C2.557A	Roel Spätjens, Niko Deckers, Mick Gagliardi Jolanda Gulpen, Stella Thomassen, Vicky Vermeulen
09.45-10.15 10.15-10.30	Junior staff: Postdocs & Assistant Profs Internal committee meeting	C2.557A	Stijn Agten, Sabine Daemen, Martijn Hoes, Uyen Chau Nguyen, Philippe Vangrieken
10.30-10.45	Break		
10.45-11.15 11.15-11.30	Senior staff: (associate) profs Internal Committee meeting	C2.557A	Elham Bidar, Bas Boukens, Bas van Bussel, Vanessa van Empel, Koen Reesink, Julie Staals
11.30-12.00	Research Council	C2.557A	Members RC

12.00-12.15	Internal committee meeting		
12.15-12.45	Session Scientific Integrity & Social Safety Internal committee meeting	C2.557A	Esther Goethart, Tammo Delhaas, Frits Rosendaal, Judith Cosemans, Magdolna Nagy
12.45-14.00	Lunch (ERC Internal)		
14.00-14.30	Meeting with Dean and Vice-Dean FHML	tbd	Prof. A. Schols, Dean FHML Prof. S. Kremers, Vice-Dean FHML
14.30-15.15	Internal committee meeting		
15.15-15.30	Presentation of findings by committee chair Prof. H. Büller	tbd	Prof. A. Schols, Dean FHML Prof. S. Kremers, Vice-Dean FHML CARIM Executive Board CARIM Office & panel members
15.30-16.00	End of visit and drinks		Prof. A. Schols, Dean FHML Prof. S. Kremers, Vice-Dean FHML CARIM Executive Board CARIM Office & panel members