

## Response by the Faculty of Science and the Institute of Biology to the IBL Research Evaluation report 2017-2022, 22 March 2024

### 1. Introduction

The Institute of Biology (IBL) and the Faculty of Science (hereafter: Faculty) are grateful to the evaluation committee for their assessment of the research at IBL. The Faculty and IBL appreciate the overall positive report, which also became clear in the short summary after the visit from November 9 to 10, 2023. The committee shows appreciation for the fact that IBL had addressed all issues that the previous review committee noted in 2017 in the years thereafter and the fact that they were generally resolved. Important issues at the time were viability and earning power. After a vacancy freeze in 2018, IBL has now been able to retain a large number of top scientists. IBL also played an important role in the development of the Biology Sector Plan. In addition, income from indirect and contract funding has almost doubled, partly due to the establishment of a grant office that supports PI's with their applications, investigates new funding options and proactively discusses them with PI's. In addition, IBL has taken steps in improvement of the guidance and monitoring of PhD students. This benefits the quality and duration of the PhD programs in addition to the well-being of guest PhD candidates in particular. Finally, diversity among the WP has increased significantly.

In their follow-up of the committee's remarks, IBL has involved and will continue to involve its research community. The attached powerpoint slides show that the evaluation report has been discussed widely within IBL during their Scientific Retreat on 29 February – 1 March 2024.

In this response, the recommendations of the committee to IBL are addressed point by point. In addition, some thoughts on how to further improve the institute in the coming evaluation period are offered.

### 2. Recommendations

#### 2.1 General topics

##### Research themes – visibility – strategy

The committee recommended to further capitalize on the research themes by installing scientific advisory boards per theme and creating 'flagships' that showcase the themes to the outside world.

The research themes have become more internally oriented, because IBL has further capitalized on its focus on Biodiversity and Health. These themes are also two of the six major strategic themes of the Faculty of Science, as formulated in its Strategic Plan 2023-2028. This was defined in the leading principle "*Harnessing Biodiversity for Health*". Biodiversity is embedded within the Leiden Biodiversity Network, while Health is embedded within the LED3 network (Leiden Early Drug Discovery and Development). IBL prefers to rely on its Scientific Advisory Board for its internal research strategy, which is aimed to connect the clusters Animal sciences, microbial Sciences and Plant sciences.

At the Scientific Retreat (29 Feb - 1 March 2024) the advice from the peer-review committee was discussed and the following actions were agreed upon.

A group of six Assistant Professors from IBL and SCS will form one joint core group for the Research Themes to redefine the profile of the IBL and SCS research themes, and how they contribute to the

Biodiversity and Drug Discovery and Development pillars of the Faculty of Science. The main topics that will be taken into consideration in the coming months include:

#### *Research Themes Profiling*

- Web and social media presence: Increase visibility, define flagships and improve the content of the research themes on the IBL website
- Activities: seminars should be more diverse, including flash talks or posters from PhDs and postdocs. Organize cross-theme meetings.
- Physical presence of our researchers in Faculty and university-wide activities
- Community managers per theme to onboard new IBL researchers and/or organize activities

#### *Important future topics*

- Data-driven computational Biology/Bioinformatics. Increase collaboration with LIACS, Hogeschool Leiden, LUMC. Professionalize BioIT atelier, improving PhD and PD skills
- Agriculture/sustainability

### Bioinformatics, AI and Data

The committee suggested to create more in-house bioinformatics expertise and structural organization of personnel and infrastructure, as well as a plan for Artificial Intelligence (AI).

Proposed Action: IBL recognizes that the topic is relevant for a variety of research and teaching and has been building a Bioinformatics atelier (BioIT) led by Dr. Paco Barona, and in collaboration with Prof. Marnix Medema (WUR) and Prof. Vera van Noort (Leuven), with the aim of building capacity and data skills among IBL PhD and postdoctoral students. In addition, we will try to endeavour that the sector plan positions that have not yet been filled will have a bioinformatics component, in particular the systems biology position. Furthermore, a working group will start exploring the possibility of collaborating more with LIACS (sharing positions) within Bioinformatics research and teaching. In addition, collaboration with the lectorate Bioinformatics of the Leiden University of Applied Sciences will be investigated.

### HR – Onboarding international staff

The committee emphasized the need for good onboarding of our staff, which is especially important given the large number of international staff that entered IBL.

Proposed Action: IBL has been working on improving the onboarding of international staff. However, more work needs to be done, particularly helping new staff members to integrate within the Dutch research system, and the internal logistics. A committee will be established to look into career counselling and promotions.

### Committees for promotions staff members, including Tenure tracker/Assistant Professors monitoring, guidelines, counselling

Proposed Action: Due to the new CAO regulations, Tenure trackers and Assistant Professors have experienced unclarity in the expectations and career progression, particularly in the area of fixed-term appointments. A clear strategy for promotions will be established. IBL will work together with the Faculty of Science to develop a policy for Assistant Professors/Tenure track with clear guidelines and expectations.

## Building and Facilities

The committee identified the Sylvius building as the major threat for the future of the IBL, as indicated during interviews, their final summary and in the report. The Sylvius building is not only outdated, but the state of the building threatens the science, as exemplified by the huge losses in time following breakdowns of the plant facilities. In addition, the committee judged the Sylvius a risk in terms of health and safety.

We recognize this concern, which has a very high priority for the Faculty of Sciences and IBL together.

Proposed Action: IBL will develop a vision document for a new building, as the viability of research in the future will be compromised by the outdated Sylvius building.

## 2.2 Detailed answers to recommendations

*1. Create more in-house bioinformatics expertise and structural organization of associated personnel and infrastructure (section 2.1).*

IBL recognizes the importance of this recommendation and has taken/formulated actions as described under the heading 'Bioinformatics, AI and Data' above.

*2. Install an international scientific advisory board for each research theme (2.4).*

*3. Use the research themes to present the IBL to the outside world (communication, marketing, storytelling) and for strategy development (2.4).*

*4. Select a number of 'flagships' within the matrix to sharpen the profile and visibility of the institute (2.4).*

IBL welcomes this recommendation and has taken/formulated actions as described under the heading 'Research themes – visibility – strategy' above. A new system will be implemented where a team of young scientists (UD/TT) will work together, instead of each research theme having its own individual coordination team. A separate advisory board for each theme may lead to silos and lack of cross-talk between the themes and is not in line with the chosen strategy. The research themes are more internally oriented, the major external research exposure lies in the two topics Biodiversity and Health (drug discovery).

A core group of scientists, management and communication staff members to create content for website and social media.

*5. For the Evolution & Biodiversity theme: investigate how to improve your focus and showcase how the theme is more than the sum of its parts. In addition, your role in the greater Leiden Biodiversity Network could be communicated more clearly (2.4).*

We acknowledge this fact. By having one group of young talents working on all research themes instead of coordination teams per research theme, we expect a lot more cross-talk and interaction. We expect that this will very effectively improve the impact of Evolution & Biodiversity.

*6. Enhance the interaction between the SCS group and the rest of the IBL. SCS should be more involved in outreach and science communication at the IBL (2.4).*

Firstly, we would like to take away any misunderstanding: SCS is not intended to help with outreach. SCS focuses on communication science and therefore naturally have a close connection to the media. For more scientific connections, an assistant professor on Biodiversity and Society, Dr. Tuomas Aivelo, who will start within SCS from April 1st 2024, will strengthen the links between Science Communication research and Biodiversity research. Furthermore, Dr. Julia Cramer is deeply involved in science communication and aims to strengthen links as member of the new overarching research theme coordination team.

*7. Develop a strong and integrated vision that articulates the need for a new building, especially because the IBL provides the fundamental knowledge basis for the university's eminent biosciences profile (2.4).*

We recognize this concern and refer to the heading 'Building and Facilities' above. See also point 9.

*8. Ensure that there is sufficient funding and support to continue operating the IBL's advanced research facilities such as the CryoEM, metabolomics, and plant facilities (2.4).*

We welcome this recommendation and are optimistic that NeCEN remains viable both in national and international context. IBL will continue to be involved in national infrastructure initiatives and will also make use of the recently awarded Sector Plan and growth fund PharmScalerNL to maintain state-of-the-art metabolomics and fermentation facilities. New plans have been made for NeCEN, with a national and a local facility. In addition, IBL researchers are encouraged to apply for equipment within their grants, such as the Robotics facility that was financed from the ERC Advanced of Van Wezel.

*9. Ensure that the IBL plant research groups obtain greenhouse facilities to accommodate research projects on crop plants (2.4).*

IBL agrees that greenhouses are incredibly important. The growth chambers within the Sylvius building suffer from the deplorable state of the climate systems in the building, frequently resulting in break downs. IBL is therefore looking at short-term possibilities. Through a collaboration with the Hortus Botanicus, some facilities will become available. We currently also make use of facilities at NIOO-KNAW in Wageningen, but this is a temporary solution. For a long term solution we refer to the points made above under the heading 'Building and Facilities' and point 7 above.

*10. Foster a continuous dialogue about the FAIR Data Principles (2.5).*

We agree with this recommendation and have set up a working group within the Faculty of Science on Data Management and Analysis. IBL is part of this working group. In the fall of 2023, a new course was developed together with computational biologists and data stewards to train PhD students on the FAIR Data Principles, among other things.

*11. Actively put issues related to the opportunities and threats of new artificial intelligence possibilities for research and education on the agenda (2.5).*

We refer to point 1 above. Furthermore, as described under the heading 'Bioinformatics, AI and Data' above, a working group will start exploring the possibility of collaborating more with LIACS (sharing

positions) within Bioinformatics research and teaching. In addition, collaboration with the lectorate Bioinformatics of the Leiden University of Applied Sciences will be investigated.

*12. Ensure that PhD supervisors are aligned regarding the anticipated four-year duration of PhD tracks (2.6).*

The committee welcomed the fact that the PhD monitoring has been updated further, with the addition of an external independent expert on top of the two promotors. We recognize that there is room for improvement to ensure all PhD supervisors are aligned as well. IBL will further emphasize on reducing the duration of the PhD trajectories.

*13. Invite alumni to PhD and postdoc events to present non-academic career perspectives (2.6).*

We think this is a very good recommendation and will be taken into consideration for the upcoming events.

*14. Offer a scientific integrity course to postdocs and other staff members depending on the background and awareness level of the scientists involved (2.7).*

PhDs are already required and postdocs will be encouraged to follow the training [Scientific Conduct](#).

*15. Continue striving for a balanced representation of minorities among the staff (2.8).*

IBL management will continue to follow its current practices and closely monitor the wellbeing of staff. IBL has made huge steps in increasing its diversity, with >50% female staff among its UD/TT and the recruitment of many international staff members (UD/UHD/Prof), now including 15 different nationalities, including Asia, Northern, Middle and South America and Africa. Wellbeing will continue to be emphasized during staff meeting sessions, retreat days and specific feedback sessions. IBL will aim to establish a Diversity Equity and Inclusion team.

*16. Install a structured procedure to facilitate the onboarding of scientists from abroad (2.8).*

IBL will create a working group to work on a structured procedure for onboarding of international staff.

*17. Develop a better structured/guided career path for postdocs, including training and coaching opportunities (2.8).*

IBL will create a committee to advice on career paths and promotion of staff members. HRM offers courses, also tailor-made, and we discuss their implementation with our HR advisor. In addition, we will continue to improve the job orientation for PhDs and Postdocs.

*18. Delegate advice about promotion of staff members to dedicated committees so that decisions of the director and the MT about these important topics are broadly covered (2.8).*

IBL will create a committee to advice on career paths and promotion of staff members, and will encourage staff to join the trainings provided by HRM, in consultation with our HR advisor.

*19. Continue developing well-articulated instruments for employees to live up to the goals of the*

*recognition and rewards programme (2.8).*

We fully agree with this recommendation and will look into instruments with regard to recognition and rewards. Development and promotion regulations and guidance are parts of the ongoing discussion on career policy in the faculty and the introduction of a new protocol for Results and Development interviews in the university.

*20. Install a clear and uniform career development system for mid-career scientists (formerly tenure trackers) with clear guidelines, different career path examples, and a good mentoring system (2.8).*

*21. Ensure that all mid-career scientists are treated equally with regards to their career paths and potential promotion to become permanent members of the IBL staff (2.8).*

We recognize this recommendation as well. We refer to the heading 'Committees for promotions staff members, including Tenure tracker/Assistant Professors monitoring, guidelines, counselling' above.

*22. Install a committee that develops the guidelines and oversees monitoring and evaluation of the mid-career scientists and provides advice about their promotion to the IBL management team (2.8).*

IBL will create a committee to advice on career paths and promotion of staff members and will encourage staff to join the trainings provided by HRM, in consultation with our HR advisor.

Kind regards,



Gilles van Wezel  
Scientific Director, Institute of Biology



Jasper Knoester  
Dean, Faculty of Science