Report of the Scientific Advisory Board Visit to BioCity Turku and Turku Bioscience Centre, 21–23 September 2026

1. Context of the visit

The Scientific Advisory Board (SAB) of Turku Bioscience Centre and BioCity Turku visited Turku on 21–23 September 2026. Four members of the SAB appointed for the 2025–2029 term took part: Olli Kallioniemi (University of Helsinki, SciLifeLab and Karolinska Institutet), Taina Pihlajaniemi (University of Oulu), Ellen Rothenberg (California Institute of Technology) and Mikael Rydén (Karolinska Institutet and Steno Diabetes Centre in Copenhagen). This was the SAB's first visit in its term and its first meeting with the Turku leadership in person.

The visit was hosted by Klaus Elenius, Scientific Director of BioCity Turku, Riitta Lahesmaa, Director of Turku Bioscience Centre, and Maija Lespinasse, Coordinator. The programme comprised an evening orientation session with the Directors on 21 September; a morning session on 22 September with the joint Board of BioCity Turku and Turku Bioscience, including presentations by the Directors and by four faculties of the University of Turku and Åbo Akademi University; a lunch with twenty doctoral researchers; presentations of the Turku Bioscience Centre core facilities; a review of the history of the BioCity Turku Research Programs and of the evaluation guidelines; and, on 23 September, interviews with the chairs of the eleven applicant Research Programs for 2027–2031.

The formal task set for the SAB by the leadership was to evaluate the eleven applications and to recommend to the Board which should be selected for the next five-year term, including any that overlap and might be consolidated. The SAB has also taken the opportunity of a first visit to form a view of the wider organisation, and offers that view here as context for the programme recommendations rather than as a separate exercise.

In addition to the presentations and discussions, the SAB had before it the eleven applications with supplementary information, the call text, the guidelines for reading the applications, a feedback survey of current programme members (27 respondents), the BioCity Turku 2030 vision white paper (2020), and the report of the previous SAB visit of February 2020.

2. Strengths and positive developments

The SAB found in Turku a vibrant, collaborative and scientifically productive life-science community. Across two days the SAB met researchers at every career stage who were engaged, willing to collaborate and visibly interested in being part of a shared community. The doctoral researchers it met at lunch spoke of the programmes chiefly in terms of cross-disciplinary exposure, mentoring and community, which is exactly what the structure is designed to deliver. That is not a given in any research environment, and it is the foundation on which everything else in this report rests.

A compact campus as a strategic asset. The Turku academic community is unusual in that its two universities, the faculties, research units and the university hospital sit on one campus, within walking distance of each other. Larger environments rarely have this: in Helsinki, for instance, medicine, biosciences, technology and the natural sciences are spread across separate campuses, each with its own capabilities and its own culture. Proximity makes interdisciplinary interaction,

shared infrastructure and informal collaboration happen in practice rather than on paper. This is an opportunity where an academic community of Turku's size can sustain international recognition: not by covering every field, but by becoming an interdisciplinary leader in the fields it chooses strategically. Life science is a natural place to start, because it is where technology, biology, medicine, chemistry, environmental science, ecology, data science and AI now converge on shared goals, and few places are as well placed to see that convergence happen. The choice of fields should be guided by where multidisciplinary research and education are heading, rather than by any one faculty's view of its own teaching needs. The presentations by the deans and vice-rector on 22 September described a powerful but complex organisation candidly and reflected this potential clearly.

A joint structure that has lasted. BioCity Turku is close to forty years old. It has held two universities together in life science through several changes of leadership, funding model and scientific fashion, and it has done so while remaining bottom-up in character. The SAB congratulates the current and previous Directors on establishing this structure, keeping it funded, and renewing it. The 2022 programme call demonstrably brought in new themes and new, younger leadership, as the 2020 SAB had recommended. The time has come to build on this record and evolve its research programmes, organisational structure and main functions for the coming decade.

Core facilities of national and, in imaging, international standing. The presentations of the Turku Bioscience Centre core facilities were among the most convincing parts of the visit. The facilities are technically up-to-date, well led, heavily used locally, and several serve national users through Biocenter Finland. Turku BioImaging's hosting of the Euro-BioImaging ERIC headquarters and its leadership of the Euro-BioImaging Finland node give Turku a European role that few Finnish institutions hold in any field. This infrastructure is the single most distinctive asset of the Turku life-science unit and should be treated as such.

Recognised scientific and translational strongholds. Turku's strengths in PET and bioimaging, immunology, and drug development were evident both from the applications and from the faculty presentations. The presentations and applications also showed that Turku's life-science community is strengthening beyond biomedicine, notably through technology and engineering in the recently established Faculty of Technology, as well as plant and environmental sciences. The SAB was told that 21 of the 22 drugs developed in Finland have at least some connection to work done in Turku. The nature and extent of Turku's contribution vary by drug, but its drug-development tradition is significant, and the pharmaceutical and diagnostics industry remains present in Turku. These strengths validate the concept on which BioCity was built.

Value returned to the two universities and the participating faculties. The SAB wishes to record a point that is easily lost in discussions of structure. A cross-faculty life-science unit is not a competitor to the faculties; it is a mechanism through which the faculties are kept dynamic. Many of the most productive faculty members in Turku have a root or a current link in Turku Bioscience Centre or in a BioCity programme, and several of the strongest recruitments of the past two decades entered Turku through the Centre before taking faculty positions. That pattern is a credit to the faculties and a benefit to them, and the evidence for it across the years is considerable.

3. Nomenclature and organisational clarity

The names in use do not tell an outsider, or many insiders, what they refer to. The SAB discussed this at length and returns to it because it is not cosmetic. Three different things currently share similar words and semantics:

- BioCity, a leased building on Tykistökatu that houses part of the community and the core facilities.
- BioCity Turku, an umbrella organisation of the University of Turku and Åbo Akademi University that is not a unit in the line organisation of either university, is not visible in either university's organisation chart, and has a small direct budget.
- Turku Bioscience Centre, a physical research and service centre with its own staff, space, infrastructure and budgetary identity.

The two organisations share one Board and one Scientific Advisory Board, but their roles, resources and reporting lines differ substantially. In practice, BioCity Turku requires a page of explanation before a newcomer understands how it differs from Turku Bioscience Centre, how the two relate to the faculties, and why a single Board serves both. When a researcher says "BioCity", a listener cannot tell whether a building, an umbrella organisation, a Board or a research programme is meant.

This matters at three levels. Inside the community it dilutes identity: the 2020 SAB observed that few programmes presented themselves under a BioCity banner, and the current feedback survey asks for "a clear structure of all the bio-umbrellas". At the level of university leadership, it makes the unit hard to profile strategically, at precisely the moment when national funding is being redirected toward cross-faculty and consortium-shaped instruments. And to the public and to taxpayers it is simply opaque.

The previous SAB recommended in 2020 that the cluster present one face under one name. The SAB repeats that recommendation and adds that the beginning of a new programme term and the coming leadership transition make this a natural moment to act. The SAB does not prescribe the name, though it notes that "life science" language would be more inclusive than the present "bio" names of the technology, chemistry and environmental disciplines now involved. It does recommend that the number of separately named organisational units in Turku life science be reduced rather than increased, and that the simplification extend to how the research programmes, the doctoral programmes, the Flagship and the other thematic structures within life sciences are described in relation to one another. A single published map of the campus structures would be a cheap and immediate first step.

4. The future role of a life-science unit in Turku

The SAB offers the following as background to its programme recommendations, and as a direction forward rather than a blueprint. It draws on the discussions of both days and on the BioCity Turku 2030 vision, whose four objectives it closely resembles.

The changing shape of science. Science and innovation have become thematically motivated, rapidly changing, and dependent on multi- and interdisciplinary approaches. The questions that attract talent, funding and public attention today — in health, sustainability, data and technology — rarely

sit inside one discipline or one faculty, and the instruments that fund them increasingly assume consortia rather than departments. An organisation built for a faculty-shaped world needs a layer that can respond to a theme-shaped one. That is the context for what follows.

An organising principle. Life science in Turku is organised primarily along faculty lines: faculties carry the teaching mission, award the degrees and hold the budgets. But a good deal of what makes a life-science environment competitive cannot properly be done inside any single faculty and is therefore under-provided by all of them. A useful test for what a joint life-science unit should encompass is exactly this: the capabilities that no one faculty can carry alone. Stated that way, the unit takes nothing from the faculties; it holds the layer they cannot hold themselves.

On that test, four capabilities should be planned and coordinated together through a clear joint life-science mandate agreed by the two universities.

Joint research infrastructure. Turku Bioscience Centre already provides this, and it is the unit's most distinctive asset: co-funded instrumentation, shared staff, and platforms that serve users regardless of faculty. That model should continue, apparent duplication elsewhere on campus should be reviewed for shared provision or consolidation where that improves access and quality, and the unit should hold the overall picture of infrastructure across campus, including platforms owned by faculties and the hospital. The programmes have a role here. Most use several facilities, so the useful question is not whether each has a facility of its own but whether the infrastructure as a whole supports the portfolio and where the gaps are. Asking each programme to state its infrastructure needs and to nominate a representative to infrastructure planning would give the Centre an organised view of demand it does not have today. One gap was raised repeatedly in the interviews: computational and bioinformatics expertise falls short of need, particularly outside human genomics. It is most effective when embedded in specific research domains while remaining open to exchange across them.

A cross-faculty research community. The seminars, symposia, prizes and programmes that BioCity Turku runs are the most visible and highly valued part of its work. The BioCity Symposium, now held annually for 35 years, and the Frontiers of Science series are assets in their own right. The community-building function should continue and should carry a single, recognisable identity.

Systematic recruitment of new group leaders. SAB regards this as the recommendation with the largest long-term consequence. Turku has recruited well: through the national profiling programme, through individual appointments, and through Turku Bioscience Centre, several of today's leading groups arrived this way. Yet there is no consistent, jointly agreed pathway connecting thematic recruitment, initial hosting and a long-term faculty position. Without such a pathway, a young group leader in a new field may arrive into an environment with no critical mass, few international colleagues at the same career stage, and little multidisciplinary interaction, so that the appointment may not gain university-wide significance or appear attractive to international candidates. The SAB suggests that thematic life-science group-leader recruitment be planned jointly, with an early-career phase hosted within the joint structure and a faculty tenure-track or equivalent long-term route agreed at the point of recruitment. HiLIFE in Helsinki illustrates one way of building such a shared entry point. Furthermore, Academy Fellows and corresponding faculty appointments available through Flagship programs often face a serious gap in career opportunities after their short externally funded fellowships. Ensuring that tenure-track or other opportunities will be available for

mid-career scientists is important for the long-term success of the community at large and for all the participating faculties. The retirements expected among senior staff over the coming five years, and the planned new building, offer a natural window in which to begin to address these concerns.

Doctoral training. Degrees and credits remain with the faculties. But the training that turns a doctoral student into a scientist — cross-disciplinary exposure, thesis advisory committees drawn from more than one field, mentoring, a peer community — is a campus-level benefit, and the doctoral researchers the SAB met valued precisely this. The Faculty of Medicine alone runs nine doctoral programmes for some 900 doctoral researchers. The current landscape of doctoral programmes should be simplified around the life-science community, and cross-disciplinary thesis committees meeting at least annually should become standard practice rather than the aspiration of individual programmes. The national doctoral pilot expansion makes this timely. It is a strength of some of the research programme proposals that they offer plans to implement this. The doctoral researchers the SAB met identified differences in doctoral degree requirements across faculties as their most pressing concern.

Independence with a defined scope. For these four capabilities to be delivered, the unit needs an independent function and a clear mandate and budget, while working in collaboration with the faculties and both universities and remaining accountable to them through its Board. Its purpose is to complement the faculty structure, and over time to feed people and capabilities into it, not to grow in parallel to it. The SAB's impression is that Turku currently has too many separately named units around life science, and that the direction should be toward one coherent, jointly governed structure connecting the centre and community functions, not toward additional bodies. The universities should assess whether this calls for administrative consolidation.

Why now. Three things that normally move independently are aligned over the coming years: a new programme term from 2027, an anticipated leadership transition, and a national funding environment in which the doctoral pilot has been expanded, the RDI target of 4% of GDP by 2030 has been set, and further targeted funding instruments are expected. Many of those instruments favour cross-faculty consortia. Faculties can bid on their own where eligible, while a joint life-science structure can help assemble and coordinate stronger bids. The SAB's suggestion to the universities is that Turku's joint unit be positioned as a coordinating body for these opportunities where possible, and as a recipient where appropriate, with the faculties' active consent.

5. The Research Programs: general considerations

The Research Programs are the part of BioCity Turku most visible to researchers, and the SAB has evaluated them seriously. Six general observations frame the individual recommendations in section 6.

What is being evaluated. In the current term, each programme receives about €8,000 a year; its researchers may also apply for separate central collaborative grants, typically up to about €10,000 each. At that level the programmes are thematic networks: their value lies in organised opportunities for researchers to meet, present, mentor and form collaborations that lead to external funding, not in research they fund directly. The SAB has evaluated them on that basis. Applications have not been penalised for ambitions that exceed what the funding can buy, nor credited for them; what counts is whether the community is real, active, cross-boundary and useful to its members,

especially early-career members. The SAB notes that the current programme members themselves, in the feedback survey, repeatedly described the word “programme” as misleading at this funding level. The leadership may prefer to keep the word for its standing; if so, the Board should say clearly what the instrument is, and consider whether it should be funded to match the name.

The value of the instrument and its funding. The interviews strengthened the SAB’s view that the instrument works. Research grants rarely cover community-building, and faculties seldom hold discretionary funds for cross-disciplinary activity; the programmes fill exactly that gap. Comparable research-community programmes funded elsewhere have shown that relatively modest sums can have an impact, but SAB considers that the present level per programme should be increased. Several applicants also made clear that formal recognition as a BioCity programme matters to them as much as the money, because it makes a scattered community visible to itself and to newcomers. BioCity Turku’s direct annual allocation from the University of Turku, about €153,000, is lower in nominal terms than the one million markka (about €168,000) granted around 1989, and far lower in real terms. Because the faculties are the main beneficiaries of the programmes, the SAB suggests that the universities restore the real value of the central allocation and consider faculty-level co-funding, for example matching contributions for programmes led by a faculty’s members or contributions to the collaborative grant pool. Infrastructure-linked communities could likewise be co-funded through the infrastructure they serve.

Two kinds of programmes. The applications fall into two types that should perhaps be treated differently. Some are infrastructure-linked user communities: they organise the use, development and applications of a technology platform, and their natural role includes an active part in the development of the infrastructure itself. Imaging is the clear case; the computational and immunological-methods communities have elements of it. Others are scientific application domains, built around a shared research question, with no direct role in infrastructure development. Both are legitimate. But the first type sits close to the Centre’s core mission and may merit a different funding and governance arrangement from the second, and the Board is invited to consider whether one instrument should serve both.

The five-year cycle. A programme that presents its case suboptimally but represents a real community must currently wait five years to try again, which is long relative to the pace of the science. The SAB suggests that the Board introduce a mid-term review at roughly the half-way point, with the possibility of a resubmission window for programmes not selected in 2026 and of adjustments to programmes that have merged or changed direction. A mid-term review in 2028–2029 would also coincide with the end of the present SAB’s term, allowing the Board to check implementation rather than for a new SAB starting anew.

Uneven feedback. The member survey received responses unevenly across programmes and its response counts cannot be used comparatively; one programme produced nearly half the replies and another none. The SAB has used the survey for what it says and not for how many said it. It does note that programmes which engaged their members in reflecting on the past term, and which addressed that reflection in their applications, were generally the more convincing. None of the re-applying programmes, however, accounted clearly for what the previous funding had made possible, and future calls should ask for this.

Infrastructure needs. As noted in section 4, the SAB suggests that each selected programme identify the facilities and platforms on which it depends — typically several — and nominate a representative to campus infrastructure planning. This gives the programmes a standing function beyond their own events, and gives the Centre an organised, portfolio-wide picture of demand.

6. Evaluation of the 2027–2031 applications

All eleven applicants were interviewed on 23 September. Each gave a five-minute pitch answering four questions set by the leadership — why the programme is needed, its common scientific aim, what member groups gain, and where the genuine synergy lies — followed by discussion with the SAB. The interviews changed the SAB's view of several applications, in most cases for the better. The SAB has evaluated the applications against the criteria the call stated; its suggestions for future calls are in section 5.

The SAB's overall conclusion is that the Turku community has produced a strong set of applications and that most are individually fundable. At the present funding level, supporting all eleven as separate programmes would dilute the resources and attention available to each. The SAB recommends eight programmes, with the tick-borne disease consortium invited to develop a visible theme within MIND and relevant ONE-X groups invited to discuss affiliation with TREMENDO or other suitable programmes. It places CompLifeSci as a lower priority. These are recommendations; the decision rests with the Board, and the SAB recommends inviting the affected applicants to discuss the proposed affiliations and revise their plans before decisions are final.

Application	Recommendation	Main condition or comment
CellCom	Fund	Extend cross-programme activity and cross-disciplinary supervision.
Field of View	Fund	Consider future co-funding through the imaging infrastructure.
CO2-to-X	Fund	Keep separate from FutureCrops.
BioMed	Fund	—
MIST	Fund	Immunology, not the methods toolbox, should remain the defining identity.
FutureCrops	Fund	Condense the plan; develop links to Åbo Akademi.
TREMENDO	Fund	Discuss affiliation with interested ONE-X groups working on relevant cohort or metabolic questions.
MIND	Fund; invite TBD-Turku collaboration	Discuss a visible tick-borne disease theme with both applicant teams; reconsider the acronym.
TBD-Turku	No separate programme recommended	Propose a visible theme and its own events within MIND, subject to agreement.

ONE-X	Not as a separate programme	Offer relevant groups links to TREMENDO; help other groups find suitable affiliations.
CompLifeSci	Lower priority; reconsider a revised plan if resources allow	Improve recognition of needs by other fields. Secure explicit links to other programmes' computational needs.

The statements below summarise what each programme sets out to do, the SAB's assessment after interview, and its recommendation.

CellCom — Cell Communication Research Program

The programme. Brings together basic, translational and clinical researchers studying cellular signalling in health and disease, across five interacting themes: cancer, inflammation, immunity, regeneration and homeostasis. Its 34 PIs are spread across both universities, the university hospital and four or five buildings. Activities centre on monthly PI lunches, invited speakers and the annual Cell Talks symposium, which has drawn more than 200 participants.

Assessment. One of the strongest and best-structured applications, from one of the most active current programmes. It gives a large and heterogeneous community a coherent frame, has good UTU–ÅAU balance, cites explicitly collaborative publications, and spans the continuum from basic research to clinicians, core facility staff and start-up founders. Its self-assessment is candid about limited interaction with other programmes. The SAB encourages CellCom to extend the co-organisation with Field of View begun this year to other programmes, and to use its breadth to strengthen cross-supervision and cross-disciplinary thesis committees. **Recommendation:** fund.

Field of View — Turku Biological and Medical Imaging Research Program

The programme. Connects the imaging community across Turku PET Centre, Turku BioImaging, the Advanced Imaging Core, the Euro-BioImaging ERIC headquarters and the international master's programme in biomedical imaging. Its scope runs from molecular to whole-organism scales and beyond health into agroecology, marine biology and drone imaging, with image analysis, data and AI as cross-cutting themes. Activities include Turku Imaging Day (about 200 participants on each of three occasions), PI and junior-researcher lunches, and a small catalyst fund.

Assessment. A highly successful and popular programme, with notable reach to students and junior researchers and a strong record in the internal collaborative calls: half of the 2024 collaborative funding went to its members. The SAB questioned whether it is a research programme or rather an infrastructure outreach function. The interview persuaded the SAB that extracting scientific insight from images is an academic field in its own right, and that community-building in imaging has almost no other source of funding. The structural question remains and is addressed in section 5. **Recommendation:** fund; the Board may wish to consider co-funding through the imaging infrastructure in future.

CO2-to-X — Carbon Capture and Utilisation

The programme. Aims to turn Finland's roughly 30 million tonnes a year of biogenic CO2 from forestry and bioenergy into food, feed, chemicals, fuels and carbon-storing materials. It combines

the University of Turku's biological route (photosynthesis, cell factories, bioreactors and machine-learning automation) with Åbo Akademi University's chemical route (capture, activation and industrial implementation), and seeks to build a national carbon capture and utilisation hub centred in Turku.

Assessment. One of the strongest applications: coherent, strategically significant and likely to grow into a new profile area for Turku. As the successor to SmartBIO, it has responded directly to earlier criticism that SmartBIO was diffuse, narrowing its focus and renewing its membership. Its UTU–ÅAU balance is outstanding and its industry links, including industry-based theses and doctoral graduates moving into industry, are the strongest in the portfolio. The group already holds some €12 million in related national and European projects; the BioCity funding serves as the glue for student and community activity. The SAB agrees that it should remain separate from FutureCrops. **Recommendation:** fund.

BioMed — Biomaterials and Medical Devices Research Program

The programme. Around twenty groups spanning dental materials, implants, fibre-reinforced composites, tissue and bone engineering and healthcare sensors at the University of Turku, and materials production from biomass, nanoparticles, functional printing and bioprinting at Åbo Akademi University. Activities include Turku Biomaterial Days (100–120 participants), a spring seminar, open-door events at the facilities, and early-career workshops.

Assessment. The collaboration between the two universities is unusually balanced and genuinely shared, the field is intrinsically multidisciplinary, and the programme has already contributed to commercialised products. Most tellingly, members brought together through the programme secured €6 million in national research infrastructure funding (FIRI), shared across four universities, for printing, polymer and nanoparticle analysis and microscopy. The applicants were candid that the value lies less in the money than in official recognition, which makes a dispersed field visible to its own new PIs. **Recommendation:** fund.

MIST — The Multiverse of the Immune System

The programme. Brings together researchers in immune regulation across disease areas, cell types and methods. It has two layers: a scientific community, and a shared methodological toolbox of established methods, disease and animal models, histology and in situ methods, and analysis pipelines, intended to give members faster and more flexible access than standardised core services can offer. Activities include annual meetings with international speakers and laboratory exchanges for doctoral and postdoctoral researchers.

Assessment. MIST is now the only programme with a clear immunology identity, which matters given immunology's reach across medicine and its historical standing in Turku. Its meetings remain well attended and its membership includes many young group leaders. The SAB makes two points. First, the programme's value should not be reduced to a methods toolbox or to single-cell omics; its purpose should remain the immunology research community. Second, its relationship with the InFLAMES Flagship should be made explicit. The SAB accepts that the two are complementary, and notes that with InFLAMES due to end in 2028, MIST may become an important vehicle through which a new generation sustains immunology in Turku. **Recommendation:** fund, with the request that immunology remain the programme's defining identity.

FutureCrops — Future Crops for Climate Resilience, Sustainable Protein and Healthy Diets

The programme. Links plant biology, food science, nutrition, ecology, technology, economics and consumer research around three questions: how climate change affects crop productivity and resilience, how photosynthesis can be harnessed for sustainable production, and how processing, nutrition and consumer behaviour can accelerate the shift to plant-based food. The aim is a continuum from climate to consumer.

Assessment. An enthusiastic new application with strong publications and a notable number of young PIs, including five new Academy Researchers in molecular plant biology. It broadens the portfolio beyond human-centred biomedicine toward carbon, food and plants, which the SAB regards as a valuable signal. The written plan is broad and should be condensed and clarified, and the programme is almost entirely based at the University of Turku; links to Åbo Akademi, for example in sensor technology and electrochemistry, should be developed. The applicants noted that bioinformatics support is oriented toward human genomics, a point for infrastructure planning. **Recommendation:** fund, with a sharper plan.

TREMENDO — Etiology, Prevention and Treatment of Metabolic, Endocrine and Developmental Disorders

The programme. Established in 2022 to connect two strengths of the campus that were not communicating: long-running, multigenerational human cohorts and experimental disease models. Its focus is non-communicable disease — cardiometabolic, reproductive and developmental — across the life course and across generations, with prevention as a central aim.

Assessment. The interview addressed the SAB's concern about member engagement, although the written plan lacked specificity. The member survey had no TREMENDO responses. The programme does collect feedback internally through its annual meetings, and its leadership described a community whose members now identify with it and increasingly design projects translationally from the outset. TREMENDO was a deliberate fresh start after LIFESPAN, which worked on paper but not in practice, and it has visibly learned from that experience. Its science and publications are among the strongest in the portfolio, and the SAB is careful not to recommend any restructuring that would weaken its momentum. **Recommendation:** fund; discuss affiliation with relevant ONE-X groups without disrupting TREMENDO's existing programme.

ONE-X — One Health Exposomics

The programme. Proposes to trace environmental exposures and chemical contaminants across society, the environment, wildlife and human health through the life course, combining chemical measurement, spatial and temporal modelling, field observation and human cohorts such as FinnBrain and DIPP, and to help establish exposomics as a recognised field.

Assessment. The ambition is interesting and timely, since exposomics is likely to feature in future European priorities, and the programme would bring into BioCity groups, notably from biodiversity sciences at the University of Turku and marine biology at Åbo Akademi, that have not previously been part of it. But the SAB was not convinced that the communities it seeks to connect, from field ecology to human neurodevelopment, yet share a common language, or that there is a plan for shared quality standards, data exchange and interpretation across disciplines. The proposal also rests heavily on a single chair. Its metabolic and cohort-based human health research components

overlap substantially with TREMENDO. **Recommendation:** not funded as a separate programme. The SAB recommends that interested groups working on cohort and metabolic questions discuss a place in TREMENDO, where exposomics could become a future theme. Its environmental and ecological groups should be helped to find suitable links with other programmes and BioCity activities.

MIND — Microbes, Infections and Diagnostics

The programme. The successor to MIRP, with 21 full and 12 associate PIs from both universities, four faculties and twelve departments. It aims to connect a strong but fragmented base of basic microbiology, microbiome research, omics technologies and clinical infection research at Turku University Hospital, and to link it with diagnostics companies. Distinctive features are an early-career design, with exchanges between groups, researcher-led events and hospital visits; two-way engagement with industry; and annual feedback tracking of emerging collaborations.

Assessment. An excellent and well-developed plan with broad buy-in across career stages. Its commitment to measuring its own impact is exemplary and could usefully be adopted by all programmes. The SAB accepts the decision to focus on microbes and diagnostics while collaborating with immunology through other programmes. The application would have been stronger had it presented itself explicitly as a response to feedback on MIRP, and the acronym suggests neuroscience rather than microbiology and should be reconsidered. MIND showed a positive attitude to integrating the tick-borne disease consortium. **Recommendation:** fund; discuss a visible tick-borne disease theme with the TBD-Turku applicants.

TBD-Turku — Tick-borne Diseases Turku

The programme. Would formalise a consortium active for about three years, spanning tick biology and epidemiology, pathogenesis, diagnostics and clinical medicine. It has built exceptional resources: citizen-science tick collections (some 30,000 ticks in 2026, with a 2015 campaign for comparison) and the Punkkilive reporting service, with about 700,000 observations since 2021. Breakthrough infections despite tick-borne encephalitis vaccination are an emerging and poorly understood problem it addresses.

Assessment. Important, high-quality and nationally visible work, with genuine public engagement and a collaborative base that predates the call. The application does not yet show enough added cross-campus value from a separate programme alongside MIND; its highlighted publications are concentrated in one laboratory, and its science, spanning bacteria, viruses, immunology and diagnostics, could be well served through MIND, with which it already shares members. **Recommendation:** do not fund as a separate programme; invite the applicants to develop a recognised and visible theme with its own events within MIND, subject to agreement.

CompLifeSci — Computational and Molecular Methodologies for Life Sciences

The programme. A network of 11 full and 9 associate teams building on more than ten years of activity, aiming to promote collaboration, shared best practice, open research and methods across life-science fields. It has organised Finland’s National Bioinformatics Day and the European Bioconductor Conference in Turku (about 150 participants), and its coordination team is drawn from both universities and several career stages.

Assessment. The presentation was stronger than the written application, and computational life science is an important research discipline in its own right. The SAB was nevertheless unconvinced that this proposal defines the right role for it in Turku. Computational advances are most valuable when developed and tested against substantive biological questions; analysis detached from those questions risks misinterpreting the biology. Several other applicants identified computational challenges, but the proposal did not show how its members would tackle them together. AI makes this weakness urgent. It is giving biologists rapidly improving abilities to write code, assemble analyses and explore their own data. Routine bioinformatics and coding roles may be among the first scientific roles substantially displaced by these tools. Computational scientists will remain essential where they create new methods, establish what AI outputs can be trusted, and connect analysis to biological insight and vice versa—but the programme must make that scientific contribution explicit. The interview addressed AI and machine learning, yet neither the application nor the discussion offered a convincing account of how the programme would change its research agenda, training or collaborations in response. This is a defining question for a programme proposed for 2027–2031. **Recommendation:** lower priority in its present form. A revised proposal should identify biological problems it will address with other Turku groups, the computational advances needed to solve them, and how it will respond to AI's transformation of both biology and bioinformatics. If the Board introduces a mid-term review, it could reconsider a substantially revised proposal at that time.

7. Recommendations and requested follow-up

The SAB's recommendations fall to different decision-makers, and it lists them accordingly.

For the Board of BioCity Turku and Turku Bioscience

1. **Consider the recommended portfolio in section 6, invite affected applicants to respond to proposed changes, and then decide the 2027–2031 programmes.**
2. **State clearly what the Research Program instrument is, and either fund it to match the word or describe it as the network it is.**
3. **Introduce a mid-term review of the programmes in 2028–2029, with a resubmission window and a mechanism for programmes to adjust.**
4. **Require each selected programme to identify the infrastructure on which it depends and to nominate a representative to campus infrastructure planning.**
5. **Require future calls to report how previous funding was used and what it made possible, and consider extending MIND's annual impact tracking to all programmes.**
6. **Treat programme leadership and membership as marks of distinction, carrying clear expectations of collegiality, open science, collaboration and fair personnel practices.**
7. **Ask the universities to add a field to annual publication reporting recording which core facilities were used, so that the facilities' contribution is tracked automatically.**
8. **The board should begin a process to simplify the organization structures and confusing names as discussed in sections 3 and 4.**
9. **Take up the renewal of the Elias Tillandz prize as a concrete, low-cost means of recognising early-career researchers. Consider offering three prizes in each year, in**

separate categories such as i) basic molecular and cell biology, ii) translational biomedicine, and iii) environmental, ecological, and evolutionary science.

For the Rectors of the University of Turku and Åbo Akademi University

1. **Define the level of ambition for Turku life science — national, Nordic, European or global, and in which fields — so that the SAB and the Board can advise on how to reach it.**
2. **Commission a joint UTU–ÅAU plan for delivering the four capabilities described in section 4, including a coordinated recruitment route with a pre-agreed faculty tenure-track or equivalent pathway for new life-science group leaders.**
3. **Position the joint life-science structure to coordinate cross-faculty bids and, where appropriate and eligible, hold funding, with the active consent of the faculties.**
4. **Restore the real value of BioCity Turku's central funding allocation, and consider faculty-level co-funding of the programmes and the collaborative grant pool, as outlined in section 5.**
5. **Consider improvements to the career opportunities of the infrastructure scientists, this was flagged as a threat already in 2020.**

On the use of the Scientific Advisory Board

The SAB considers this visit an introduction. Its members were asked chiefly to evaluate eleven research programme applications; that task has been done with care, but an international board is most useful when it can advise on strategy, recruitment, infrastructure and organisation, and when its advice is followed up. The SAB has no formal role in local decisions, but it can help a discussion begin. It therefore suggests that the leadership and the Board consider the following:

- **a written response from the leadership to this SAB report by the end of 2026;**
- **publication of the SAB-approved final report, the leadership's response and the Board's resulting plans, however preliminary, to the Turku life-science community, so that the discussion reaches beyond the Board and the community can take part in shaping the direction;**
- **a return visit in autumn 2028, before the end of the SAB's term, focused on implementation and on the strategic questions above, with private discussions with principal investigators as part of the programme. The SAB notes that no earlier visit took place between the February 2020 SAB visit and this September 2026 visit.**

Closing remarks

The SAB thanks the leadership of BioCity Turku and Turku Bioscience Centre, and in particular Klaus Elenius, Riitta Lahesmaa and Maija Lespinasse, for an exceptionally well-prepared and warmly hosted visit. It also thanks the Board members, deans and vice-rector, the core facility leaders, the doctoral researchers who met the SAB at lunch, and the chairs and members of all eleven applicant programmes, whose applications and interviews reflected a great deal of work and genuine commitment to their community.

The SAB leaves Turku with a strong impression. The questions raised in this report concern how an already excellent environment can make the most of its strengths. The SAB congratulates the Turku life-science community on what it has built and looks forward to supporting its next steps, and remains available to discuss any of its suggestions with the leadership and the Board.

Turku, Sep 23, 2026

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