ASSOCIAÇÃO BIOPOLIS

Annual Activity Report

2024

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SUMMARY

This document presents the BIOPOLIS Association's Activity Report for 2024, as the institution responsible for managing CIBIO – Centre for Research in Biodiversity and Genetic Resources. It provides an overview of the core areas of BIOPOLIS/CIBIO's activity throughout the year, including scientific achievements, education and advanced training, research facilities, knowledge and technology transfer and services, communication and dissemination initiatives, as well as fundraising efforts and sustainability measures.

INITIAL CONSIDERATIONS

The year 2024 marks the third full year of activity of the BIOPOLIS Association, following its establishment in July 2021 and the European Commission's approval in April 2019 of the project "BIOPOLIS – Teaming to Upgrade to Excellence in Environmental Biology, Ecosystem Research and Agrobiodiversity", submitted to the Horizon 2020 Widespread – Teaming Programme.

In 2024, BIOPOLIS faced the challenges of transitioning between funding programmes, including the Research Unit Funding (FUI) to be attributed by the Foundation for Science and Technology (FCT), as well as the transfer of unspent resources within the CCDRN funds complementary from the Portugal 2020 to the new Portugal 2030 Framework. While these transitions created a demanding financial environment, the Association ensured continuity through a diversified funding strategy that included international scientific service contracts, namely in Saudi Arabia, and interim financing instruments. These measures proved decisive in maintaining the Association's financial stability while preparing for future growth.

The year was also marked by important milestones. The rehabilitation of the Quinta do Crasto facilities was successfully completed, providing new technical and laboratory spaces, including Portugal's first ancient DNA laboratory. This infrastructure hosted the 31st meeting of the Governing Board of the Global Biodiversity Information Facility (GBIF), one of the world's leading intergovernmental platforms on biodiversity. At the national level, the partnership with the newspaper Público, through the initiative "Diário de um Cientista", substantially amplified the visibility of BIOPOLIS-CIBIO's research excellence and the work of its researchers.

Equally significant in 2024 for the Associação BIOPOLIS was the recognition of the scientific nature of its activities (by Order No. 3952/2024, issued in April 2024 by the Office of the Minister of Science, Technology and Higher Education and the Office of the Secretary of State for Fiscal Affairs). These recognitions that have strengthen Associação BIOPOLIS institutional position and autonomy, by providing public acknowledgment of its social mission as a non-profit entity, privileged access to both public and private funding, notably through Scientific Patronage and tax benefits for patrons, under the Portuguese applicable legislation.

To comply with the legal requirements of this statute, BIOPOLIS also restructured its governance model, reducing the number of directors from four to three, and reinforcing its scientific programme and thematic lines, which were positively validated by the European Commission during the third periodic review of the TEAMING project.

These developments consolidate the organisational structure of the Association and demonstrate, once more, the articulation between BIOPOLIS activities and its statutory purposes of general, regional and local interest. Scientific research and innovation initiatives carried out in 2024 contributed directly to advancing knowledge in biodiversity, ecology and sustainability, addressing issues of global concern and informing public policies in areas of general interest. Investments in infrastructures such as the Quinta do Crasto headquarters, the Biological Station of Mértola and the Branda Científica of S. Bento do Cando reinforced regional cohesion and created opportunities for territorial development, while training programmes, doctoral education and outreach actions contributed to building human capital of strategic importance for society. Partnerships with municipalities, schools, cultural institutions and the media further promoted scientific culture and biodiversity awareness at the local level, fostering active citizenship and community engagement.

GOVERNANCE

The governance and decision-making structures of Associação BIOPOLIS underwent some adjustments in 2024, including amendments to the Association's Statutes and changes in the composition of certain governing bodies. These adjustments were driven by the resignation of a member of the Board of Directors and the increase in the number of Associates. A summary of the governance arrangements and related changes is provided below:

- **Statutes:**

  As communicated in the activity report of 2023 BIOPOLIS's Statutes were amended by decision of the General Assembly on 17/05/2024. These changes primarily aimed to enhance representativeness, operational effectiveness, and the independence of the Scientific Council and the International Advisory Board. This amendment was motivated by the need to clearly separate the functions and roles of the members of the Board of Directors who exercise executive responsibilities in the management of Associação BIOPOLIS (Executive Directors) from those entrusted, due to their expertise and experience, with specific high-level missions within the institution, carried out in close collaboration with BoD, in its collegiate capacity, and the SB (Associate Directors). With this new configuration, that need is fully addressed, while also reducing the costs associated with a larger Board of Directors and thereby supporting the organisation's long-term financial sustainability. This amendment will thus strengthen governance, enhance transparency and representation, streamline decision-making, and better position BIOPOLIS for effective and financially sustainable operation beyond the conclusion of the Teaming project.

- **Board of Directors (BoD)**

  At the start of 2024, the Board of Directors comprised Nuno Ferrand (President) and Executive Directors Pedro Beja, Gabriel Marais and Luís Folhadela. On 27/05/2024, Gabriel Marais submitted his resignation, effective 31/08/2024. From 01/09/2024 onwards, the Board operated with three members — Nuno Ferrand, Pedro Beja and Luís Folhadela — in compliance with the Association's Statutes, which stipulate a Board of three or five members.

- **Executive Committee (ExComm):**

  During 2024, the ExComm was composed by Pedro Beja, Luís Folhadela and Gabriel Marais. With the resignation of Gabriel Marais from the Board of Directors, the ExComm operated only with the other two members from 01/09/2024. The ExComm steered the daily operations of BIOPOLIS, meeting a total of 8 times during 2024: 18/04/2024,

26/06/2024, 16/07/2024, 06/08/2024, 12/09/2024, 18/10/2024, 21/11/2024, 12/12/2024)

- **General Assembly (GA):**

  The Ordinary General Assembly was held on 17/05/2024, with the participation of the Promoter Founding Associates present (University of Porto, ICETA and Porto Business School) and, for the first time, other Founding Associates (SONAE SGPS, *Fundação Belmiro de Azevedo*, EDIA and the Municipality of Vila do Conde; REN participated in items 4 to 7). In brief, the meeting re-elected the GA Board, appointed the Statutory Auditor for 2023 to 2025, endorsed the process for renewing or nominating SB representatives, unanimously approved the 2023 Management Report and Accounts, authorised the BoD to invite 16 new Founding Associates, approved partial amendments to the Statutes and their legalisation, and approved the addition of CAE codes (5-digit code system used in Portugal to identify and classify the economic activities) to enable a canteen.

- **Supervisory Board (SB):**

  During 2024, the SB operated with representatives of the four Promoter Founding Associates: Chair, Luís Filipe Reis (Porto Business School); Vice-Chair, Pedro Rodrigues (University of Porto); François Pierrot (University of Montpellier); and Baltazar Romão de Castro (ICETA). The SB met four times during this year, on 12/04/2024, 17/05/2024, 12/10/2024 and 12/12/2024. As in previous reporting periods, SB meetings were attended by BoD members and included updates on BIOPOLIS activities, approval of the annual activity plans and budgets for 2025, review of the 2023 and 2024 management reports and accounts, and approval of BIOPOLIS's participation in other organisations, among other items of regular governance.

- **Science Council (SC):**

  The composition and functioning of the BIOPOLIS Science Council underwent major changes in 2024, following the approval of the revised statutes by the 6th General Assembly held on 17/05/2024. These changes brought the Science Council of BIOPOLIS into alignment with national legal requirements for scientific institutions (Article 23 a) of DL no. 63/2019, of 16th May) and led to the establishment of a Science Council in which all PhD researchers are represented, and a Coordination Committee of the Science Council composed of all Group Leaders. During 2024 both structures became operational. Key activities included the election of the Thematic Line speakers and contributions to the first review of the Strategic Research Programme, that will be submitted as a project TEAMING deliverable D4.2 in 2025. Thematic Line speakers served as the main channel for Group Leader input during the strategy revision

process, which included structured surveys covering a SWOT analysis and the identification of emerging scientific areas and societal challenges relevant to BIOPOLIS.

- **International Advisory Board (IAB):**

  Significant adjustments were also done to the structure of the International Advisory Board (IAB). To enhance independence and clarify remit, BIOPOLIS' Chairman of the Board was removed from the IAB, and the chair is now elected from among its members. The advisory interface with the Board of Directors and the Science Council was formalized to ensure transparent follow-up of IAB recommendations. These reforms were discussed within the IAB on 17/03/2023 and incorporated into the revised statutes approved by the 6th General Assembly on 17/05/2024. During 2024, the IAB operated through its two components: Business and Science; with the former meeting on 27/06/2024 and the latter on 10/07/2024. Meeting minutes were recorded and shared to guide the implementation of activities in 2024. IAB provided valuable advice on a range of topics, including internationalization priorities, the BIOPOLIS Affiliates Programme, infrastructure development at *Quinta do Crasto* and field stations, as well as strategies for funding diversification and partnerships for the future. Furthermore, IAB members contributed to the mid-term evaluation of BIOPOLIS presented to the European Commission in the project TEAMING Deliverable D10.8.

- **Membership of Associação BIOPOLIS**

The initial membership of Associação BIOPOLIS consisted only of four Promoter Founding Associates, namely ICETA, the University of Porto, the University of Montpellier, and Porto Business School. In 2023, at the Ordinary General Assembly held on 07/06/2023 the integration of additional Founding Associates was unanimously approved. This decision was subsequently formalised by the respective institutions, which included: REN – Redes Energéticas Nacionais[1], SONAE SGPS[2], Fundação Belmiro de Azevedo (FBA)[3], EDIA[4] - Empresa de Desenvolvimento e Infraestruturas do Alqueva, S.A., and the Municipality of Vila do Conde[5]. In 2024, at the annual General Assemblies held on 17/05/2024 and 21/05/2024, further Founding Associates were approved and then formally confirmed by the institutions, namely INEGI – Instituto de Ciências e Inovação em Engenharia[6]; CBMA – Centro de Biologia Molecular e Ambiental da

[1] https://www.ren.pt/en-GB
[2] https://www.sonae.pt/en/

[3] https://fundacaobelmirodeazevedo.pt/
[4] https://www.edia.pt/pt/
[5] https://cm-viladoconde.pt
[6] https://www.inegi.pt/pt/

Universidade do Minho[7]; FLAD – Fundação Luso-Americana para o Desenvolvimento[8]; I3S – Instituto de Investigação e Inovação em Saúde da Universidade do Porto[9]; Palombar – Associação de Conservação da Natureza e do Património Rural[10]; SONAE MC[11]; and Ciência Viva[12].

[7] https://cbma.uminho.pt/
[8] https://www.flad.pt/
[9] https://www.i3s.up.pt/
[10] https://www.palombar.pt/en/
[11] https://mc.sonae.pt/
[12] https://www.cienciaviva.pt/

SCIENTIFIC ACTIVITIES AND ACHIEVMENTS

Highlights

2024 was a pivotal year for BIOPOLIS-CIBIO, consolidating scientific excellence and institutional recognition. A landmark achievement was the international evaluation of R&D units by FCT, with BIOPOLIS (CIBIO + CEABN) being assessed following submission on 17 April 2024 and an extensive review process that included online sessions and a site visit in October. The external panel ultimately assigned an "Excellent" rating of 4.8/5 and awarded a multi-annual budget of €7,187.89 k for 2025–2029, commending the unit's scientific output, international profile and doctoral training. Notably, Criteria A and B received the highest possible score of 5/5, highlighting the quality, relevance and internationalisation of past research and the strength of the team; Criterion C was rated 4/5, with suggestions to clarify coordination across research areas and to reinforce administrative capacity to support projected growth. This outcome confirmed BIOPOLIS as a top-performing unit in Portugal and strengthened the scientific base underpinning the revised Strategic Research Programme (further details in Deliverable D4.2).

Alongside this evaluation, BIOPOLIS continued to deliver excellent research with high scientific impact. Work spanned the three strategic pillars defined in the DoA of BIOPOLIS: (1) Ecology Assessment & Monitoring, (2) Ecosystem Function, Services & Restoration, and (3) Agrobiodiversity & Sustainable Food Systems. Its scope extended from genes to ecosystems, and from fundamental to applied research. The excellence of this research is evidenced by the publication of more than 370 papers during 2024, including 62 articles were published in high-impact journals (IF>6) – a decrease from the 79 published in 2023 – with 12 articles published in top journals (IF>12), such as Science, Nature, Nature Climate Change, Nature Ecology & Evolution, and Science Advances. Among these, a study published in *Science* in collaboration with HKU uncovered a molecular "dial-switch" mechanism that regulates colour variation in parrots, shedding new light on evolutionary genetics. Another high-profile article in *Current*

Biology demonstrated how performance-based habitat choice can drive rapid adaptive divergence and reproductive isolation.

In 2024, BIOPOLIS-CIBIO researchers also earned recognition for both research quality and science communication. Luís Seabra (ENVARCH team) received the Eduardo da Cunha Serrão Prize from the Association of Portuguese Archaeologists for the best PhD thesis in Archaeology, developed under the doctoral programme in Biodiversity, Genetics & Evolution (FCUP), exploring agricultural and storage practices, environmental conditions and human dynamics from the Iron Age to the early medieval period in northern Portugal. Meanwhile, Diogo Ferreira won the U.Porto 3MT® competition with the presentation *"Chocolate bats: Promoting sustainable cacao through bat ecosystem services"*, in which doctoral students must explain the significance of their research in just three minutes. At the science–society interface, the initiative *"Diário de um Cientista"*, a partnership between BIOPOLIS and the newspaper *Público*, mobilised 26 researchers to share their projects through daily articles, podcasts and quizzes during August 2024. This outreach effort reached over 200,000 readers and placed its podcast at the top of Apple's science podcast ranking.

Finally, and as previously mentioned, during 2024 the process of revising the scientific strategy of BIOPOLIS-CIBIO and reorganising its research groups into the three previously established thematic areas was completed. In this context, 2024 marked the first year of activity for 14 newly created research groups.

Table 1 – Research groups established in 2024

Biodiversity, Ecology & Conservation
• *ANGOBIO - Biodiversity and Evolution in Angola and South-Central Africa (https://www.cibio.up.pt/en/groups/biodiversity-and-evolution-in-angola-and-south-central-africa-angobio/)* • BEPE - *Biogeography and Evolution of Plants and Ecosystems (https://www.cibio.up.pt/en/groups/biogeography-and-evolution-of-plants-and-ecosystems-bepe/)* • TRACE - *Ecological Monitoring and Conservation (https://www.cibio.up.pt/en/groups/ecological-monitoring-and-conservation-trace/)*

- *NATHIST - Natural History, Collections and Taxonomy (https://www.cibio.up.pt/en/groups/natural-history-collections-and-taxonomy-nathist/)*
- *POPECO - Population Ecology and Conservation (https://www.cibio.up.pt/en/groups/population-ecology-and-conservation-popeco/)*
- *WILDEcol - Wildlife Conservation Ecology (https://www.cibio.up.pt/en/groups/wildlife-conservation-ecology-wildecol/)*

Evolution, Genetics & Genomics

- *AquaGenPhy - Aquatic Genetics and Physiology (https://www.cibio.up.pt/en/groups/aquatic-genetics-and-physiology-aquagenphy/)*
- *CompBio - Computational Biology (https://www.cibio.up.pt/en/groups/computational-biology-compbio/)*
- *SEAGEN - Seascape Genomics & Speciation (https://www.cibio.up.pt/en/groups/seascape-genomics-speciation-seagen/)*

Sustainability, Ecosystems & the Environment

- *ECOINFRA - Infrastructure Ecology (https://www.cibio.up.pt/en/groups/infrastructure-ecology-ecoinfra/)*
- *FRESHCODE - FRESHwater COnservation, Diversity and Evolution (https://www.cibio.up.pt/en/groups/freshwater-conservation-diversity-and-evolution-freshcode/)*
- *GlobalECO - Global Ecological Challenges under Socio-Environmental Change (https://www.cibio.up.pt/en/groups/global-ecological-challenges-under-socio-environmental-change-globaleco/)*
- *ROCKINBIO - Ecology for the conservation of Cultural Heritage (https://www.cibio.up.pt/en/groups/ecology-for-the-conservation-of-cultural-heritage-rockinbio/)*
- *SES&ES - SocioEconomic Systems and Earth Systems (https://www.cibio.up.pt/en/groups/socioeconomic-systems-and-earth-systems-ses-es/)*

Collaborative Research and Capacity Building in Africa

During 2024, BIOPOLIS significantly advanced its agenda of fostering scientific capacity in Africa, particularly in Portuguese-speaking countries, thereby reinforcing Portugal's ability to conduct high-level research on biodiversity and conservation challenges in tropical regions. A key achievement was the launch of a new international MSc programme in Biodiversity and Conservation, held in Lubango in partnership with the Universidade

Mandume ya Ndemufayo. The programme selected 15 students from over 100 applicants and is already helping to train a new generation of scientists and environmental professionals in Angola and to create a locally rooted pipeline of talent engaged with Portuguese-led research.

The impact of this effort is already evident in the establishment of a new training and research hub in southern Angola, which builds on the long-term engagement of BIOPOLIS-CIBIO in the region. In parallel, the CEBiCNA initiative continued to provide African researchers with the opportunity to pursue doctoral training in Portugal, under the BIODIV programme, directly reinforcing national capacity by integrating these researchers into Portuguese teams, infrastructures, and supervision frameworks.

BIOPOLIS also reinforced its collaboration with international conservation organisations working in Africa, including Conservation International, African Parks, Frankfurt Zoological Society, Peace Parks Foundation and Rainforest Trust. A major new initiative was launched in Equatorial Guinea, aiming to create a new national park, supported by a 1.6 million euro grant from Rainforest Trust. The project is being developed in partnership with the Universidad Nacional de Guinea Ecuatorial (UNGE), the Afro-American University of Central Africa (AAUCA) and INDEFOR-AP, the national agency responsible for forests and protected areas. This demonstrates BIOPOLIS's capacity to mobilise significant international funding and to lead science-based policy and planning in complex conservation contexts.

In Angola, the collaboration with Universidade Onze de Novembro in Cabinda was strengthened through the expansion of the twinlab dedicated to the ecology, conservation and restoration of the Mayombe forest. Fieldwork in this region now includes studies on gorillas, chimpanzees and other threatened species, supporting both evidence-based conservation and local researcher training. These actions deepen institutional ties and consolidate Portugal's leadership in tropical forest conservation science. These capacity-building efforts are already translating into tangible scientific impact, with high-profile publications in prestigious international journals such as Science Advances, BioScience, One Earth, Ecosphere Biological Conservation, Biodiversity and Conservation, Biotropica, and American Journal of Biological Anthropology, among many others. These outputs reflect research carried out in countries including Namibia, Cameroon, Angola, Mozambique, São Tomé e Principe and Guinea-Bissau, among others. In May 2024, BIOPOLIS also published the book Ecologia de Angola by Brian John Huntley. Together, these peer-reviewed outputs and

outreach activities provide visible evidence of impact, expanding BIOPOLIS's scientific reach and reinforcing Portugal's role as a hub for tropical biodiversity research.

Importantly, the impacts achieved by BIOPOLIS have been significantly enhanced through its articulation with the ERA Chair project TROPIBIO (2019 to 2025), both funded under the Widening programme. While BIOPOLIS led the structural transformation of CIBIO through investments in infrastructure, governance, and institutional development, TROPIBIO reinforced its scientific capacity in tropical biodiversity. The ERA Chair team was fully integrated into BIOPOLIS's research and training strategy, contributing to the expansion of TwinLabs, advanced doctoral and postdoctoral training, and successful international fundraising. This synergy ensured complementarity, avoided duplication, and delivered a coherent and high-impact institutional transformation.

EDUCATION AND TRAINING

BIOPOLIS-CIBIO is a host institution for several doctoral students from different programmes at the University of Porto and other national universities, notably students from the Doctoral Programme in Biodiversity, Genetics and Evolution (BIODIV), given the number of students and the fact that BIOPOLIS -CIBIO is the main research unit associated with this doctoral programme.

During the academic year that began in 2024, 27 new students enrolled in this doctoral programme, 16 of whom were international students from 10 different countries (Angola, Austria, Benin, Brazil, Spain, France, India, Italy, Mozambique and São Tomé and Príncipe).

We would also like to highlight that during 2024, 15 BIODIV students completed their doctorates.

Table 2 – BIODIV Programme Students

BIODIV	2018/19	2019/20	2020/21	2021/22	2022/23	2023/2024	2024/2025
TOTAL (registered)	**94**	**83**	**101**	**110**	**123**	**136**	**149**
New students	18	14	25	21	26	29	27
New International Students (%)	39%	14%	40%	29%	42%	48%	59%
Concluded	11	9	14	7	14	15*	--

**year 2024*

Table 2 – Students from other doctoral programmes

Other Programs	2019	2020	2021	2022	2023	2024
TOTAL (registered)	9	13	13	16	19	30
New students	2	4	3	3	3	9
Concluded		2	1	0	2	3

On 31 December 2024, the total number of doctoral students enrolled at BIOPOLIS-CIBIO was divided between 149 BIODIV students and 30 students from other programmes.

With regard to doctoral scholarships, in the academic year beginning in 2024, 27 candidates applied for the FCT individual doctoral scholarship competition, with BIOPOLIS-CIBIO as the host institution, and scholarships were awarded to 11 of the applications submitted. In addition to the FCT individual competition scholarships (41% success rate), 21 doctoral scholarships were also awarded under other competitions and protocols (Table 3).

Table 3 – Doctoral Scholarships

Funding Source	**BIOPOLIS-CIBIO**					
	2019/20	**2020/21**	**2021/22**	**2022/23**	**2023/24**	**2024/25**
National Grants FCT	15	15	21	24	25	11
Structural Funds (CCDR-N)	-	-	10	-	6	-
Research projects (FCT)	-	-	1	1	3	2
Own Funds (FUI/FCT)	2	-	3	2	5	2
CEBICNA	-	-	6	4	4	6
Othet Funds	3	5	5	-	4	11
TOTAL	20	20	44	31	38	32

BIOPOLIS-CIBIO also hosts the Master's Degree in Biodiversity, Genetics and Evolution of the Faculty of Sciences of the University of Porto (M BGE). Classes are held at the BIOPOLIS-CIBIO facilities, and most students develop their final master's thesis as part of ongoing research projects. It should be noted that, in 2024, 15 students completed their master's degree, 18 began their dissertation (research project) and 17 began their master's degree. In 2024, we welcomed 50 M BGE students.

Also in 2024, the first edition of the Master's Degree in Biodiversity, Genetics and Conservation was launched, in association with Mandume ya Ndemufayo University (UMN). This first edition is considered a success, having received 99 applications for 15 places. The master's degree programme runs for the first year entirely in Angola, at the UMN facilities, and involves the participation of several CIBIO/BIOPOLIS researchers as lecturers. It should be noted that all 15 admitted candidates are Angolan nationals.

The education and training unit's activities also include the organisation and management of seminars and advanced courses within the BIODIV doctoral programme.

In 2024, 48 seminars on biodiversity and evolution were held, most of which were hybrid events, as participation did not require prior registration. Nineteen Advanced Courses on Biodiversity and Evolution were also held, attended by 373 participants, most of whom (57%) were BIODIV students. It should be noted that of the 373 participants, 56% were foreigners.

BUILDING AND FACILITIES

The main highlight during 2024 was the rehabilitation of Quinta do Crasto, with the inauguration scheduled for 2025. Quinta do Crasto become a flagship infrastructure for BIOPOLIS, providing modern laboratories, offices, and meeting spaces. In addition, progress was made on the rehabilitation of the Estação Biológica de Mértola and the Branda Científica Field Station, while IT services and equipment were further upgraded to support the expanding needs of researchers. These developments are briefly described below.

Management of the IT Infrastructure

During 2024, the IT Office continued implementing the BIOPLIS IT roadmap. In this period, there were significant developments, marked by substantial infrastructure rollouts, service enhancements, and policy implementations, alongside managing increasing support demands and addressing various operational challenges.

The Gaia High-Performance Computing (HPC) cluster progressed from an initial testing phase with user training (Q3 2024), to full production status (Q4 2024), later gaining a new usage dashboard and containerised application support. Cloud Shares of 1TB for Research Groups were implemented, and research groups shared folders, following the IT-03 Storage policy. A critical achievement was the successful migration of approximately 450 @cibio.up.pt email accounts to a new mail server at the University of Porto (UP) in Q4 2024. Network services were significantly enhanced with the implementation of RCTS/AAI services and the full deployment of EDUROAM. The ITU also launched a new, secure BIOPOLIS Wi-Fi SSID and decommissioned an outdated, insecure network. IT and audiovisual equipment were installed and configured in Quinta do Crasto, and Wi-Fi access points were installed in Centro de Competências and reallocated in the main building to improve signal coverage. Other developments included the backoffice application for the PAD system, continuous development of the ITU information portal, new digital registration forms and management application for BIOPOLIS members and visitors, a new app for space management by the ECU, and printer upgrades (new printers and printing system).

Field Stations

The rehabilitation of the future headquarters of the Estação Biológica de Mértola (EBM), located in the historic EPAC grain silos in Mértola, is now in its final stages and close to completion. Most of the furniture and laboratory equipment has already been installed, and the IT infrastructure is currently being prepared. The building, co-financed by the Alentejo 2020 Programme and the Municipality of Mértola, will host animal health, ecology, and

molecular biology laboratories, as well as offices, workrooms, accommodation facilities for research teams, and social areas designed to promote interaction with the local community. A dedicated training and demonstration space will also support capacity-building activities and knowledge transfer. In parallel, works are ongoing in the Gallery of Biodiversity, which will serve as a public dissemination space fully aligned with the mission of EBM. The rehabilitation of this landmark building, once a symbol of agricultural modernisation in the Alentejo and later abandoned for decades, represents not only the recovery of a unique heritage site but also its transformation into a cutting-edge research and outreach hub that will strengthen the scientific, educational, and social role of BIOPOLIS in the region. The works are expected to be fully concluded soon. In addition to the building, EBM includes an experimental and demonstration area of 504.72 hectares, owned by the Municipality of Mértola, composed of six plots of land located in the surroundings of the town within the Perímetro Florestal do Couto de Mértola (PFCM). This area is characterised by plantations of stone pine, along with stands of eucalyptus, acacia, and patches of oaks, and is fully integrated into the Mértola Municipal Hunting Zone.

Regarding the Field Station of Branda Científica, significant progress was achieved during 2024. On 22/05/2024, the municipality of Arcos de Valdevez signed a Horizontal Cooperation Agreement with the Faculty of Architecture of the University of Porto to produce the execution projects for the buildings and landscape of the Branda Científica of S. Bento do Cando in the Peneda-Gerês National Park, with a contract value of €149,000 under the Portuguese Public Contracts Code. The intervention comprises eight buildings, seven owned by the Church and one by the Institute for Nature Conservation and Forests (ICNF). The masterplan is structured in three phases. Phase one foresees the rehabilitation of one building to create scientific residences and the conversion of the former Forest Guard House into a multipurpose dissemination space with an auditorium. Phase two provides for the conversion of the pilgrims' quarters into wet laboratories to host the Peneda-Gerês biodiversity and natural resources monitoring centre, as well as the rehabilitation of the former hotel to create dry lab workspaces. Phase three includes the rehabilitation of two buildings for artistic and scientific residences and dormitories for pilgrims, and the adaptation of a third building as a coworking space. In December 2024, the project secured one million euros from the Portuguese Environmental Fund to support the initial interventions, with half allocated to the municipality of Arcos de Valdevez and half to BIOPOLIS. Together, these developments provide a solid foundation for launching construction and for establishing Branda Científica as a flagship research, training, and outreach facility in the Peneda-Gerês region.

1.6.4. Equipment upgrade and management

Building on the description of action and the re-equipment plan (D3.2), the equipment upgrade of BIOPOLIS has focused on seven research platforms that are key to the development of its activities: (i) Computational Platform; (ii) Omics Platform; (iii) Plant and Microbiology Platform; (iv) Animal Platform; (v) Environmental and Ancient Genomics Platform; (vi) Ecology Platform; and (vii) Storage Platform. Most of the work was completed during 2023 and 2024, when nearly one million euros of complementary funds were invested, largely directed to the acquisition of equipment for the ancient and environmental DNA lab. Significant investments were also made to modernise the molecular and genetic labs in the main BIOPOLIS building, the cold storage facilities, and the IT infrastructure.

In parallel with the purchases documented above, considerable effort was made to raise additional funds to further improve the equipment available to the seven platforms. This effort was based on surveys of researchers' equipment needs, the most recent of which was completed in 2024 and has been regularly updated since then, serving as the basis for new applications to equipment funding programmes. Specifically, BIOPOLIS requested a total of €750,000 in the application to the FCT R&D UNITS EVALUATION 2023/2024[13]. Of this amount, €700,000 were awarded.

[13] https://www.fct.pt/en/avaliacao-das-unidades-de-id-2023-2024/

KNOWLEDGE, TECHNOLOGY TRANSFER AND SERVICES

In 2024, 50 new contracts were signed for technology transfer activities in the areas of consulting, applied ecology and environmental monitoring, representing a total contracted amount of approximately €5.3 million. Of this total, the activity carried out in the Kingdom of Saudi Arabia, where three new contracts were signed with two nature reserve management entities and two other existing contracts were extended, represented a budget of approximately €4.0 million. Also noteworthy is the strengthening of cooperation with companies in the energy sector, where five new contracts were signed, representing a total of €492,000.

With regard to the provision of genetic analysis services by the Molecular Testing Centre (CTM), which are diverse in nature but exclusively involve molecular biology techniques routinely performed in the laboratory, in 2024 a total of 198,000 euros in services were contracted to the CTM by 18 clients, the vast majority of which were entities or individuals residing in Portugal.

Finally, it is also worth highlighting the collaborations established with non-academic entities that directly finance research projects to be developed by BIOPOLIS researchers. In this category, seven new contracts were signed in 2024, representing future revenues totaling €559,000, which include, among other things, environmental impact assessment and minimization activities, genetic studies of various bird species, and the definition and evaluation of SBTN (Science-Based Targets for Nature) goals. It should be noted that one of the contracts involves providing biodiversity advice to REN, succeeding the Chair established with that company, which has since been completed, under the FCT Guest Chair programme.

COMMUNICATION AND DISSEMINATION

In 2024 Biopolis published a total of 374 articles in peer-reviewed international scientific journals (ISI) in 2024, representing a decrease compared to the previous year's scientific output (450 articles). Despite this reduction, BIOPOLIS researchers published the same number of articles in the prestigious international scientific journals Science, Nature and PNAS.

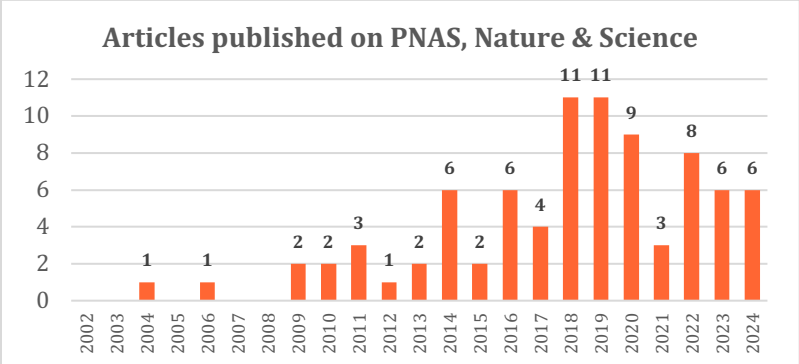

Figure 1 – Total number of articles published in Science, Nature and PNAS

In 2024, 62 articles were published in high-impact journals (IF>6) – a decrease from the 79 published in 2023 – with 12 articles published in top journals (IF>12), such as Science, Nature, Nature Climate Change, Nature Ecology & Evolution, and Science Advances.

At the same time, a total of 48 seminars were held in 2024, 45 of which focused on Biodiversity and Evolution.

Table 4 – Total number of seminars held

Seminars	BIOPOLIS-CIBIO				
	2020	2021	2022	2023	2024
Seminars in Biodiversity and Evolution	17	27	28	39	42
Seminars for students	10	8	8	9	8
Total	**27**	**35**	**36**	**48**	**50**

Among these events, it is worth highlighting the 13th edition of TIBE, an annual meeting organised by BIOPOLIS-CIBIO and the University of Montpellier, which this year was dedicated to the themes of Ecology and Conservation in the African tropics, constituting the

final event of ERA-Chair TROPIBIO. Also noteworthy was the participation of five BIOPOLIS-CIBIO researchers in MISTRAL – Montpellier International School on ion and water transport in plants – a summer course aimed at training young researchers in the theory and analytical techniques for studying the function of water and ion transport in plants.

On 5 December, the BIOPOLIS Association, in partnership with Porto Business School, organised the event *"Nature-Based Solutions: Scaling Sustainable Impact through Science and Business Innovation"*, an initiative of the Innovation X Hub. This event addressed the role of Nature-based Solutions (NbS) in tackling global challenges such as climate change and food security, while creating opportunities for sustainable growth and innovative business strategies. It also showcased BIOPOLIS-CIBIO's contribution to advancing NbS, the sustainability initiatives of Porto Business School, and the launch of a new support service designed to transform R&D into market-ready solutions.

Last October, BIOPOLIS-CIBIO and the University of Porto hosted the 31st meeting of the Governing Board of the Global Biodiversity Information Facility (GBIF), the worldwide research network funded by governments around the world that aims to make data on all forms of life on our planet freely available. This meeting – the first event of its kind to take place at the new Quinta do Crasto facilities – was attended by 92 delegates from 30 countries and, among other initiatives, included the symposium 'Using GBIF to mainstream biodiversity in governments, the private sector and society'.

Finally, among the Scientific Dissemination activities carried out by BIOPOLIS-CIBIO in 2024, the following are noteworthy:

- The Diary of a Scientist, a partnership between the BIOPOLIS Association and Público newspaper, which led to the publication of 26 articles in August by that newspaper on stories reported by BIOPOLIS-CIBIO researchers and students in the context of their research projects, accompanied by a daily podcast. This initiative had a high media impact, accumulating a total of 200,000 reads by the end of August and placing the podcast at the top of Apple's science podcast ranking.

- The Northern Biomaraton, a citizen science event focused on the biodiversity of the northern Portuguese coast, which included several excursions to collect data in the intertidal zone of that coast, to be used by researchers from BIOPOLIS-CIBIO and around the world. This initiative was organised by the COASTALWARMING research group, with the support of several local entities.

BIOPOLIS maintained a strong digital presence through multiple social media platforms, including Facebook, YouTube, Twitter, LinkedIn, and Instagram, which were extensively used to disseminate the center's activities and achievements.

Regarding the non-technical publications by its publishing house, "Arte & Ciência," in 2024 BIOPOLIS published several books aimed at promoting scientific culture and awareness of biodiversity. Among these were Ecologia de Angola by Brian Huntley and the Portuguese and English version of Sob Mares Frágeis/ Under Fragile Seas by Pedro Ponces Camanho.

FUNDRAISING

Complementary matching funding to the BIOPOLIS Teaming project was awarded by the Comissão de Coordenação e Desenvolvimento da Região Norte (CCDR-N), supported by structural funds, as detailed in previous Implementation Reports. Briefly, the funds were awarded through three complementary projects that together contributed to the transformative change of CIBIO into a Centre of Excellence anchored in the North Region of Portugal. The first project (NORTE-01-0246-FEDER-000063) had a total budget awarded by CCDR-N of €8,271,733.14 and supported capacity building and research and innovation activities at BIOPOLIS, including the hiring of human resources, purchase of consumables, support for travel such as fieldwork, and participation in congresses and other events. The second project (NORTE-01-0246-FEDER-000071) had a total budget awarded by CCDR-N of €6,728,266.88 and enhanced BIOPOLIS infrastructure and equipment, including the rehabilitation of Quinta do Crasto to create new office and laboratory facilities, the upgrade of the Fito-labs building, the deployment of a state-of-the-art laboratory for the analysis of ancient and degraded DNA, and the purchase of equipment to upgrade the Animal, Computational, Ecology, Omics, Plant and Microbiology, and Storage platforms. Finally, the third project (NORTE-01-0145-FEDER-000046) had a total budget of €2,000,000 and supported research and innovation activities related to the TwinLab network in Africa, including hiring, consumables, and fieldwork and travel. These projects were co-financed by the European Regional Development Fund (ERDF) through the Norte 2020 Regional Operational Programme, within the Portugal 2020 framework.

Because these structural funds followed the 2014–2020 programming period, with financial execution required by 30/11/2023, a timing mismatch arose with the BIOPOLIS Teaming project, which runs until 30/09/2027. Therefore, the Board of Directors of BIOPOLIS negotiated with the Portuguese authorities to launch a second cycle of matching funding under NORTE 2030 (Portugal 2030), equivalent to any unspent balances from the earlier projects and aligned with the remaining Teaming timeline. Following these negotiations, CCDR-N committed to a new cycle of support under NORTE 2030, with eligible expenditures from 01/12/2023 until at least 30/09/2027, thereby aligning the structural funds with the Teaming funds provided directly by the European Commission. Due to the complexities of the transition from Portugal 2020 to Portugal 2030 and changes in the Portuguese Government,

the formal award process for this second phase began in the end of 2024, with a call by invitation opened on 03/12/2024 (NORTE2030-2024-78) and a maximum amount of €4,067,305.40. The application was submitted by BIOPOLIS on 20/12/2024, followed by several requests for clarification. The operation is now under evaluation.

In addition to this and during 2024, Associação BIOPOLIS submitted 99 research project proposals, distributed between FCT calls (75 applications) and European Union programs (24 applications). It is worth noting that the FCT applications still referred to the 2023 programs/edition. Of the 75 applications submitted to FCT, BIOPOLIS saw 15 approved and the remainder rejected, corresponding to a 20% success rate. In the case of European programs, the 24 applications submitted resulted in 6 new projects awarded (25% success rate).

Among the European projects approved, the ones listed in Table 6 stand out. It should be highlighted that the LAFERIA project is coordinated by BIOPOLIS, marking the first time the Association has coordinated a Research and Innovation Action (RIA) project.

1. LAFERIA - LAndscape FEatures Reintroduction in Intensive Agricultural land	
Funding:	*Horizon Europe (call HORIZON-INFRA-2022-TECH-01-01).*
Execution Period:	01/01/2025 a 31/12/2028
Total budget:	5,0 million Euros
BIOPOLIS budget:	729 thousand Euros

2. OneSTOP - OneBiosecurity Systems and Technology for People, Places and Pathways	
Funding:	*Horizon Europe (call HORIZON-CL5-2022-DI-02-05)*
Execution Period:	01/01/2025 a 30/06/2028
Total budget:	6,0 million Euros
BIOPOLIS budget:	451 thousand Euros

3. RISE-IN - Resilient Investment for Sustainable Environments	
Funding:	*Horizon Europe (call HORIZON-MISS-2024-CLIMA-01-06)*
Execution Period:	01/01/2025 a 31/12/2029
Total budget:	9,0 million Euros
BIOPOLIS budget:	528 thousand Euros

HUMAN RESOURCES

During 2024, BIOPOLIS further consolidated and professionalised its Human Resources (HR) function, with changes that directly improved support to researchers and staff and strengthened institutional compliance. The HR Office continued to implement the Human Resources Strategic Plan of BIOPOLIS, while expanding its remit to cover HRS4R implementation, EDI, occupational health, and the coordination of Quality of Life at Work (QoL) actions.

A major milestone was reached on 5 April 2024 with the submission of the HRS4R process to the certification agency, as part of the application for the "HR Excellence in Research" recognition.

Staff consultation and QoL mechanisms were further embedded. The 2024 institutional survey replicated the 2022 instrument to enable like-for-like comparison, its results were circulated to all staff, and both survey datasets are now available on the HR intranet. The QoL Committee, composed of elected representatives across staff categories, met regularly, on 09/05/2024, 07/06/2024, 11/07/2024 and 19/09/2024, to review the evidence and prioritise actions aligned with HRS4R. During 2024, the committee helped secure a residents' kitchen ("copa") and a public fridge, proposed the installation of a drinking water fountain, and initiated planning for an annual retreat. It also advanced suggestions to improve transit schedules between Mindelo and the campus, provided inputs to space allocation during the move to Quinta do Crasto, and flagged connectivity issues affecting students. In parallel, the committee followed up on the revision of the Gender, Equality, Diversity and Inclusion plan and channelled all agreed actions to HR and the Executive Committee for implementation and monitoring.

Information access and day-to-day support were strengthened with the roll out of the HRU intranet[14], developed with the IT Office, which now serves as a single-entry point for staff guidance and resources. The Private Area consolidates core HR policies, procedures, templates and internal rules, including the Code of Ethics and Conduct, the Gender Equality Plan, OTM-R guidance, onboarding materials and practical forms. The QoL section presents the committee's composition and remit and provides access to updates and materials that

[14] https://hru.biopolis.pt

support quality of life actions. The Health and Safety area gathers workplace guidance and key documents such as the Emergency and Safety Plan, as well as wellbeing resources and contact points. In parallel, staff also have access to the Legal Affairs Unit (LAU) intranet[15], which centralises procurement guidance, R&D-specific purchasing under Decree-Law 60/2018, compliance policies and codes, and the whistleblowing channel, complementing the HRU with legal and compliance resources for day-to-day operations. Together, these online resources provide an up-to-date, searchable reference that improves consistency, reduces administrative burden and gives all collaborators a clear route to the information they need.

During 2024, BIOPOLIS continued to implement its recruitment strategy, aimed at strengthening the administration and technical support units, while maintaining and reinforcing its research workforce. A key objective was to continue consolidating and expanding a stable core of excellent permanent researchers and preserving opportunities for early-career talent, while keeping the flexibility to adjust to the shortage and unpredictability of research funding in Portugal. For instance, national rules for the FCT CEEC Individual scheme changed from six-year contracts across all career levels to three-year contracts restricted to the two initial levels, increasing turnover risk and reinforcing the need to concentrate CEEC sponsorship in strategic areas. The overarching goal of expanding the group of researchers with permanent contracts was greatly leveraged during 2024 by the FCT Tenure Programme, which awarded seven positions to BIOPOLIS on 14/08/2024, encompassing all career levels. This programme covers two-thirds of salary costs in the first triennium and one-third in the second, after which the positions convert to indefinite contracts funded by BIOPOLIS, thereby creating a predictable route to permanence and anchors institutional excellence. A second edition of the FCT Tenure Programme is expected during RP5. In parallel, three researchers were hired under the FCT CEEC Institutional programme on permanent contracts co-funded by FCT for the first six years and thereafter fully supported by BIOPOLIS.

Recruitment and contracting during 2024 remained fully open, transparent and merit based (OTM-R) and were implemented in alignment with the European Code of Conduct for the Recruitment of Researchers. The selection processes were made by a panel of more senior researchers, following the criteria announced in the call text. The criteria vary according to the position and the rules of the funding source, but in general they focus on key aspects such

[15] https://lau.biopolis.pt/

as the candidate's scientific track record and independence, the quality, feasibility and strategic fit of the proposed work plan, the ability to attract funding and build collaborations, and experience in supervision, mentoring and team contribution. Panels also consider field-specific expertise, international experience and English proficiency, as well as the capacity to translate research into societal or policy impact where relevant. Applications are submitted through the institutional portal and typically include a CV, motivation letter, degree certificate and a structured work plan. When needed, interviews are used to clarify merits and confirm fit. Each procedure produces a ranked list supported by written minutes, candidates are notified of outcomes within the stated timelines, and there is an opportunity to comment before finalisation. Equal opportunity and non-discrimination commitments apply to all calls, and foreign degree recognition is completed prior to contracting in line with national regulations. This end-to-end process ensures consistent, documented and auditable decisions while remaining flexible enough to match the specific requirements of each competition. In the case of contracts obtained through FCT's CEEC individual contracts programme, BIOPOLIS supported the applications and hired the selected candidates and their hosting institution, but the selection process is made by an international panel established by FCT. In all cases, new hires received structured onboarding to BIOPOLIS procedures, working conditions, and laboratory practices, with tailored relocation support for international staff, including guidance on housing, schools, healthcare, and taxes.

In 2024 recruitment of administrative staff was more modest than in previous periods, reflecting the stabilisation of most units and alignment with available resources and workload. Key additions included the Head of the SPIn Lab, a graphic designer to lead the BIOPOLIS rebranding and one communication officer (Table 4). Hiring of technical support staff was also lower than in earlier RPs, but six field technicians, six laboratory technicians, and one junior bioinformatician were contracted to support the growing portfolio of projects and services and to replace staff who moved on to other opportunities (Table 7).

Table 7. Administration and Technical Support staff contracted by BIOPOLIS during the fourth reporting period. For each staff member, we indicate the professional category, the dates of contract (start and end), and the funding source.

Name	Category	Start	End	Funding
Ana Camila Ribeiro de Babo	Junior Bioinformatics	01/06/2024	31/05/2026	DNAquaIMG (BiodivMon/0002/2022) (50%) + eDNAqua-plan (HORIZON-MISS-2022-OCEAN-01) (50%)
Ana Luísa Sinde Araújo Torres Mano	Field Technician	01/12/2024	30/09/2025	ANERIS (101094924 — HORIZON-INFRA-2022-TECH-01) (25%) + BIOINTERACT (32%) + MARBEFES - GA n. 101060937 (LifeWatch EIRC second (43%)
Ana Marlene Neto Marafona	Lab Technician	20/09/2024	19/09/2025	CTM RP
Carlos Miguel Guerreiro da Luz Pacheco	Field Technician	01/09/2024	31/08/2027	SOS Pygargus (LIFE23-NAT-PT-101148303)
Eduardo Filipe Valente Cunha da Silva Aires	Graphic designer	01/08/2024	31/07/2027	BIOPOLIS (TEAMING - Fase II)
Gabriela Marino Rodrigues de Lima Brito	Field Technician	01/10/2024	31/10/2024	LUSOQUERCUS - Protocolo CIBIO - FBA
Jaime Daniel Barbosa Botelho de Sousa	Field Technician	01/06/2024	31/12/2025	RCU - Baseline Survey for RAPTORS (50%) +Spatial Habitats Assessment (RSG) (50%)
João Pedro Leite Faria	Field Technician	15/11/2024	14/11/2025	AVE RP (19,35%) + Invasive Species in Saudi Arabia - NELOVER (80,65%)
Joel António Martins Alves	Head of the Spin Lab	01/05/2024	Permanent	BIOPOLIS (TEAMING - Fase II)
Katharina Vera D Avis	Communication Officer	01/04/2024	31/08/2026	TROPIBIO - ERA Chair; Rainforest Trust (after 01/09/2025)
Lorena do Nascimento Pereira	Lab Technician	01/07/2024	23/06/2025	ReStart - Hepatitis E in Rabbits
Maria João Teixeira Ribeiro de Magalhães	Lab Technician	01/06/2024	31/01/2025	SEAGEN RP (40%) + ANTROPOPHIBIAN - PTDC/BIA-CBI/2278/2020 (60%)

Name	Category	Start	End	Funding
Milene Cunha Gabriel	Lab Technician	01/07/2024	31/01/2025	Elephant Crisis Fund
Pedro Miguel Campos Oliveira	Lab Technician	01/09/2024	30/06/2025	NeuroSocialNet - PTDC/BIA-COM/2644/2020
Rui Filipe Moreira dos Santos	Field Technician	01/06/2024	31/01/2025	LUPI LYNX (LIFE22-NAT-PT-LUPI LYNX) - 101113906
Sara Pimentel Fidalgo Peixoto	Lab Technician	01/10/2024	30/09/2025	GEPE Infraestruturas

Among researchers, 32 new contracts were concluded, comprising 19 junior researchers, 8 assistant researchers, 4principal researchers, and one coordinator researcher (Table 8). Of these, 11 (34.4%) had no previous contractual link with the institution, or they were former researchers who returned after more than five years away. The high percentage (65.6%) of researchers that remained within the institution with new contracts is a consequence of the widespread precarity in the Portuguese scientific system, with researchers having to jump from one contract to the next. It also reflects the strong commitment of BIOPOLIS to ensure a stable professional life for most researchers, despite the shortage and unpredictability of scientific funding in the country.

Table 8. Researchers contracted by BIOPOLIS during the fourth reporting period. For each researcher, we indicate the professional category, the dates of contract (start and end), and the funding source. We also indicate whether the researcher is a new staff member, considering those that have never been contracted by BIOPOLIS (or ICETA) or that have been away for >5 years).

Name	Category	Start	End	Funding source	New
Aboozar Mohammadi	Junior	01/04/2024	31/03/2026	PLACES (2022.08134.PTDC)	Yes
Ana Cláudia Fernandes Oliveira	Junior	01/05/2024	31/10/2024	B-ROMAN - PTDC/HAR-ARQ/4909/2020	No
Ana Isabel Cavaco Pinto Coelho	Junior	01/06/2024	31/12/2025	Spatial Habitats Assessment (RSG)	Yes
André Ricardo de Araújo Lima	Junior	01/11/2024	31/10/2025	INSPIRE (BIODIVERSA+ DivProtect/0008/2021)	Yes
André Vicente Liz	Junior	01/06/2024	31/12/2025	Spatial Habitats Assessment (RSG)	No
Angelica Crottini	Principal	01/08/2024	31/08/2025	CEEC 6ª Edição	No

Name	Category	Start	End	Funding source	New
Artem Kasianov	Assistant	01/05/2024	30/04/2030	UID/50027-InBIO	Yes
Bruno André Santos Marcos	Junior	01/05/2024	31/12/2024	PRR RAIZ (NAVIGATOR)	No
Cátia Marina Machado Monteiro	Junior	01/08/2024	31/07/2026	BIOINTERACT	No
Diogo Filipe Ângelo Ferreira	Assistant	01/06/2024	31/12/2025	Spatial Habitats Assessment (RSG)	No
Fraddry D Souza	Principal	01/05/2024	30/04/2030	UID/50027-InBIO	Yes
Francesco Valerio	Junior	01/11/2024	31/10/2026	Gepe Energia	No
Fulvio Licata	Junior	01/06/2024	31/12/2025	Spatial Habitats Assessment (RSG)	No
Gabriel Munar Delgado	Junior	01/04/2024	30/09/2026	Cooperative Partner (ERC - 866489)	Yes
Helena Maria Gomes Moreira	Junior	01/04/2024	31/03/2027	Lightsource bp (90%) + wildE - 101081251 (10%)	Yes
Heroen Verbruggen	Principal	01/08/2024	31/07/2030	CEEC 6ª Edição	Yes
Joana Figueiredo Santana	Assistant	20/06/2024	31/12/2026	wildE - 101081251	No
Joana Maria Mendonça Marques	Assistant	16/12/2024	permanent employment contract	CEECs institucionais LA	No
João Carlos Campos Rodrigues	Assistant	01/10/2024	31/12/2025	Spatial Habitats Assessment (RSG)	No
João Gonçalo Monteiro Carvalho	Junior	01/05/2024	30/04/2026	ERC Portugal - José Melo Ferreira	Yes
João Miguel Camacho Gameiro da Silva	Junior	01/10/2024	30/09/2026	Gepe Energia	No
Jorge Macedo Rocha	Coordinator	01/09/2024	31/08/2026	BIOPOLIS (TEAMING - Fase II)	No
José Gonçalo Gonçalves Porto Curveira Santos	Junior	01/10/2024	30/09/2030	CEEC 6ª Edição	No
Lucía Alarcón Ríos	Junior	01/04/2024	31/03/2025	ANTROPOPHIBIAN - PTDC/BIA-CBI/2278/2020	No
Luís Filipe Pinho Rocha	Junior	01/10/2024	31/07/2026	WILDEcol RP; UID/50027-InBIO (after 01/08/2025)	No

Name	Category	Start	End	Funding source	New
Manuel Peixoto de Magalhães Lopes Lima	Assistant	16/12/2024	Permanent	CEECs institucionais LA	No
Martina Panisi	Junior	01/06/2024	31/12/2025	Spatial Habitats Assessment (RSG)	No
Maximillian Paul Townsend Green Tercel	Assistant	01/04/2024	31/03/2025	TROPIBIO - ERA Chair	Yes
Mónia Nakamura Mercier Real	Junior	01/10/2024	31/07/2027	RCU - Predator & Prey	No
Orlando Gallo	Junior	01/11/2024	31/10/2030	CEEC 6ª Edição	Yes
Pedro Miguel Valente Mendes Raposeiro	Assistant	01/10/2024	15/08/2025	CEECs institucionais LA	No
Sérgio Paulo Ávila Campos Marques	Principal	01/09/2024	31/08/2030	CEEC 6ª Edição	No

During 2024, BIOPOLIS also awarded 10 fellowships through open, independent calls, including Research Initiation (2), MSc (4), PhD (2) and Post-doc (2) grants (Table 9).

Table 9. Fellowships awarded by BIOPOLIS during the fourth reporting period. For each person, we indicate the type of fellowship, start and end dates, and funding source.

Name	Fellowships	Start	End	Funding source
Adriana Sofia de Sousa Padilha	Master	01/11/2024	31/01/2025	BGE
Ana Catarina da Cruz Oliveira	Initiation	01/07/2024	30/09/2024	GEPE Infraestruturas
Ivo Matias Lopes da Costa	Post doc	01/08/2024	31/12/2024	Future4MAKOS - PTDC/ASP-PES/2503/2020
João Afonso Sousa Silva Soares	Master	01/09/2024	28/02/2026	GEPE Infraestruturas
Lorena Pinilla Rodríguez	Master	01/11/2024	31/10/2025	WOLFNESS (BIODIVERSA+ DivProtect/0012/2021)
Luisa Vilela Lisboa	Initiation	15/10/2024	28/02/2025	TelSUMORE (2022.04722.PTDC)
Maryam Mostajeran	PhD	01/10/2024	30/09/2025	Biodesert RP

Name	Fellowships	Start	End	Funding source
Pedro Lucas Assunção de Sousa	Master	01/10/2024	15/03/2025	HybridChange - PTDC/BIA-EVL/1307/2020
Soraia de Fátima Martins dos Santos Ferreira	PhD	01/08/2024	31/07/2025	CTM RP (21,27%) + LABORATORIO ASSOCIADO 21/26 (78,73%)
Tshisimogo Leepang	Post doc	01/05/2024	28/02/2026	Khointact

These contracts and fellowships were supported by a diversified mix of funding sources, including the BIOPOLIS Teaming project, FCT (CEEC schemes, research projects), the European Commission (Horizon Europe projects), Invited Chairs, collaborative research with private partners (e.g., Lightsource bp), and service provision revenues (e.g., projects in Saudi Arabia).

CHALLENGES AND FUTURE PROSPECTS

With the completion of the Quinta do Crasto project, and following a period of significant investment in equipment and the strengthening of its teams—initiated with the establishment of the Association—BIOPOLIS can now focus on its Medium- and Long-Term strategy, aiming to achieve the ambitious goals of the project "BIOPOLIS – Teaming to Upgrade to Excellence in Environmental Biology, Ecosystem Research and Agrobiodiversity" and to prepare for the period following the completion of this project (September 2027). To this end, it will be essential that the various structural funding programs of the Association are finally fully defined and formalized, and that BIOPOLIS is able to maintain and enhance its capacity to generate revenue through technology transfer activities, as was the case in the last two fiscal years.

In this regard, 2025 is expected to be an especially challenging year, as the traditionally severe funding constraints affecting national research units will be compounded by political instability in Portugal and the challenges posed by the new international geopolitical context, particularly budget cuts and new U.S. environmental and energy policies, which will almost certainly impact international funding for projects and scientific cooperation partnerships. This new reality, which is also expected to affect the budget availability and programmatic priorities of U.S. foundations and similar institutions, is further exacerbated by the realignment of the European Union's strategic priorities, which may result in a reduction of structural funds available for scientific research. Against this backdrop, BIOPOLIS's ability to diversify its funding sources and establish partnerships in new geographies will be crucial for achieving its objectives.

Internally, BIOPOLIS will also face significant challenges. First and foremost, due to the precarious nature of funding for scientific employment, the contracts of nearly one hundred staff members will expire in 2025. These contracts are the result of the termination of agreements under the Transitional Rule of D.L. 57/2016, several structural programs such as those associated with the Era-Chair TROPIBIO, and also some ongoing projects currently being conducted in the Kingdom of Saudi Arabia. This situation imposes a considerable demand on the careful management of available funds for human resources, in order to retain as many researchers and technicians as possible whose current contracts will expire.

In parallel, efforts will continue to review the entire regulatory and management framework of BIOPOLIS, with a view to improving and refining the Association's set of rules and procedures. Priority will be given to enhancing the management information system and revising and updating the Association's business plan, processes that were initiated in 2024 but whose implementation was delayed due to the demands posed by the transition of various structural funding programs on BIOPOLIS's internal structure.

Finally, despite the anticipated difficulties in securing new public funding projects, BIOPOLIS will continue its efforts to rehabilitate and renew the Association's infrastructure. This effort extends beyond the completion of the Mértola Biological Station rehabilitation and the start of the construction of the S. Bento do Cando Scientific Branda. In this context, the renovation of CIBIO's main building—equipping it with new facilities while simultaneously promoting greater sustainability and energy efficiency—should receive special attention from the management team.

FINAL CONSIDERATIONS

Nearly four years after its establishment, BIOPOLIS has demonstrated consolidated growth in its research excellence, supported by the strengthening of its teams, processes, and scientific infrastructure. The Association closed 2024 with a total of 190 researchers and research technicians, compared to 125 at the end of 2021, and now benefits from a set of new infrastructures and equipment, including the most advanced Ancient DNA laboratory in the Iberian Peninsula, to which the first of the planned biological stations will soon be added. Having surpassed the initial phase of its establishment, it is now the responsibility of BIOPOLIS to consolidate this growth and face future challenges with the confidence and ambition necessary for the successful completion of the project "BIOPOLIS – Teaming to Upgrade to Excellence in Environmental Biology, Ecosystem Research and Agrobiodiversity."