ECBA · European Biology Briefing

April–June 2026 · 2026 Q2

How biologists demonstrate competence

A Portuguese specialist title, a Finnish school competition and a German guide to AI in teaching.

618
Pupils in Finland's biology competition

67
Schools represented

€170.7m
CBE JU call announced in April

Portugal's rules for a specialist title, Finland's biology competition and VBIO's teaching guidance concern different stages of a career. Each gives associations a practical example of what can be observed or assessed.

Association news

Member publications and media

Other organisations

Bio-based economy

Policy and reports

Association news

Finland's biology competition reached 67 schools

BMOL reported that 618 pupils from 67 schools took part in the national biology competition on 23 April. The Finnish biology and geography teachers' association published the results on 13 May. Publishing the number of schools gives other associations a practical measure of reach. To compare with another country, also record the eligible age groups, entry arrangements and number of schools invited.

BMOL competition results

RSB: Melanie Welham succeeds Ian Boyd as president

Dame Melanie Welham began a **four-year term as RSB president in May 2026**, succeeding Sir Ian Boyd. The Biologist introduced her in an interview dated 12 May. Its public introduction identifies her background in cell signalling and stem-cell biology and her previous leadership of BBSRC. V02

This completes the presidential transition announced in January. It is distinct from Doug Brown's appointment as chief executive in September 2025. The association therefore enters this period with changes in both executive and presidential leadership. The appointments provide an organisational development to follow; this briefing does not infer their effects from the appointments alone.

VBIO: delegates debate the association's future role

VBIO's **18 May** virtual delegates' assembly brought together representatives of **14 regional associations and 22 specialist societies**. Its report, published the following day, describes discussion of visibility, cooperation and VBIO's role as a shared voice for the biosciences. It also openly identifies a structural financial deficit and a need for additional revenue. V04

The discussion began a longer process; the report does not announce a completed new strategy. This is substantive association news: how a national umbrella body organises a collective role alongside its specialist societies, and how it sustains that work.

France: APBG reports its curriculum representation

APBG's report published on **11 May** describes an audience with the DGESCO on **17 March** concerning science and technology programmes for cycles 2 and 3. It records the association's case for practical work and for clearer connections between curriculum documents. The discussion and the association's proposals are documented; a causal claim about their effect would require comparison with the final texts. E05

This belongs to the Q2 selection because that is when the report was published. The meeting date alone would not establish that its account was available to a Q1 reader.

Also in this quarter

- **United Kingdom · presidency:** Melanie Welham succeeds Ian Boyd in May. V02.
- **Germany · association development:** VBIO's May assembly discusses its future role and financial sustainability. V04.
- **Netherlands · teacher development:** NIBI's 1 June news listing reports on its 29–30 May conference, themed 'Tot op de bodem'. This is a national association's account of its own activity. L02

Member publications and media

An AI policy becomes useful when it starts with the learning outcome

VBIO's guidance for biological faculties and degree programmes is dated 30 June 2026. It presents itself as optional assistance, with institutional rules remaining authoritative. Its organising principle is that decisions about AI should start from the competence being learned or assessed. The document

includes material on teaching, examinations, student transparency and implementation. C04

This approach offers a substantive role for a biological association. University-wide guidance can establish broad boundaries, but it cannot necessarily explain what an acceptable analysis looks like in ecology, molecular biology or physiology. Discipline-specific examples make those boundaries usable.

Take an explicitly illustrative laboratory report. The intended competence might be experimental design, data interpretation or clear scientific writing. AI assistance could affect each of those differently. If the assessment concerns experimental design, a fluent final report may reveal little about whether the student selected suitable controls. If it concerns analysis, the student needs to explain why a procedure answers the question. If it concerns writing, the permitted assistance should match that learning objective.

The same technology can therefore be acceptable in one assignment and undermine another. A blanket list of allowed products is unlikely to resolve that difference. The relevant educational design concerns the task, the evidence of the student's reasoning and the criteria used to evaluate it.

Biology offers especially good opportunities to make that reasoning visible. A student can explain why a sample was excluded, how a classification was checked or which observation would contradict a proposed mechanism. These explanations can be evaluated alongside the final product. They do not need to become a demand for exhaustive records of every keystroke.

There is also a difference between teaching students to operate a tool and teaching them to evaluate its output. A model that identifies an organism or proposes a molecular explanation can make errors that are plausible to a non-specialist. Subject knowledge remains necessary to recognise the error and decide what evidence is missing. This is one reason that AI education belongs inside disciplinary teaching as well as in general digital-skills provision.

For an association, the transferable product could be a collection of carefully bounded biological cases. Each would identify the learning outcome, the permitted assistance and the evidence expected from the learner. The usefulness would come from the quality of the examples and their explanation, rather than from claiming that one rule fits every institution.

A comparable approach can support continuing professional development. A practitioner may need to review a workflow developed by someone else, explain uncertainty to a client or judge whether an analysis can be transferred to a new context. These are assessable professional tasks. The training should make clear which task is being developed and what completion demonstrates.

The guide should not be treated as binding European policy. Its value here is the method it offers for a conversation that many institutions and associations may need to have. Local educational and legal arrangements still need their own assessment.

For association boards: a useful contribution to AI education is biological specificity. Explain the judgement a biologist must retain, and design learning activities that make that judgement visible.

Conservation technology needs an ecological decision at the other end

Bionieuws' 14 April profile of Hack the Planet describes technology used in conservation, including camera systems that send alerts and drone-based observation. The interview gives examples of software developers working with conservation organisations. The described applications are reported experiences, not an independently evaluated estimate of ecological impact. C12

The distinction between collecting an image and supporting a decision is important. A system can detect an object accurately while still leaving the user to decide what to do, how quickly to respond and which evidence is sufficient. Ecological and operational knowledge determine whether an alert is relevant.

For a biologist working with engineers, a useful contribution is to describe the observation problem precisely. The important event may be rare, the consequences of a missed event may differ from those of a false alert, and the conditions under which the equipment operates may affect the data. Those are parts of the design question rather than issues to be added after a system has been built.

This also changes how success should be reported. The number of detections, the time saved in reviewing images and an ecological outcome are different measures. A project may have evidence for one without having established the others. Explaining that difference helps readers understand what has actually improved.

The case is relevant to associations because it shows a productive meeting between professional communities. A conservation organisation can contribute knowledge of the place and the decision; technical specialists can contribute methods for sensing and analysis. The combined work becomes easier to transfer when both contributions are documented.

For a board thinking about professional development, this suggests training centred on a real observation problem. The objective would be the ability to formulate requirements, evaluate output and connect it with a biological decision. That is more informative than treating technological competence as familiarity with a list of devices.

What a learning activity actually measures

BMOL competition

Pupil participation across schools

Use participation by school and eligible cohort to assess reach.

VBIO AI guidance

Learning design and the student's own reasoning

Ask students to explain why they trust a result or how they checked it.

Portuguese specialist route

Experience, training and assessment in a defined role

Follow the requirements in the national regulation and distinguish supervised work from assessment.

The three examples describe participation, learning design and professional recognition. Each needs its own measure. A national competition is a useful route into biology and offers a measure of reach. A classroom task can show whether a learner understands an explanation. A statutory specialist route concerns a defined professional setting. Boards commissioning education can use the distinction when they ask whether a new programme was accessible, whether participants learned something and whether it assesses a competence.

Also in this quarter

- **Germany · policy contribution:** VBIO's Biotech Act I commentary places basic research in the deployment debate. N07
- **Netherlands · magazine:** the 9 June Bionieuws contents connect migration in organisms and cells. N06
- **Italy · magazine:** FNOB's June issue announcement provides a further professional reading and self-study route. N08

A webinar should show the method behind the result

The FEMS and Biolog webinar advertised for 13 May concerned microbial community function and response to environmental stress. The programme combined a commercial technology contribution with research presentations. The announcement supplies a defined subject and a transparent partnership; this briefing has not reviewed the recording. L06

That combination raises an important editorial question for association media. A demonstration can help a researcher understand an unfamiliar method, but it may also be designed to show the strengths of a particular platform. A professional audience needs enough information to distinguish the method, the application and the product offer.

A useful learning account would identify what is measured, which comparison is being made and how the output relates to the biological question. It would also identify circumstances in which a different method would be needed. This is not a demand that every webinar become a comprehensive course. It is a way to make its purpose and limits visible.

The research example and the product description can then be judged separately. A platform may be capable of generating a measurement without that measurement being sufficient for a particular ecological inference. Equally, a published application may answer a narrow research question without validating every proposed use of the platform.

For associations, making that distinction is a service to members and to responsible businesses. Readers are better placed to assess an offer when the relevant evidence is accessible. An editorial summary that repeats a performance claim without its conditions gives less useful information than a careful account of the method's scope.

This principle can be applied to podcasts, demonstrations and conference reports as well. The format may change, but the biological question remains central. A recommendation becomes useful when it says what the reader can learn and what has actually been reviewed.

The five lists at the end of this issue preserve the route to national publications and other organisations. The features above add the European layer: professional recognition, competence in new tools, the research base of industry and the regional conditions for application. That is the added value a shared newsletter can provide to an association that already has plenty of news to read.

Also in this quarter

- **Microbiology · webinar:** FEMS and Biolog advertised a 13 May webinar on microbial community function and environmental stress. The company partnership is part of the offer; the recording and research results have not been reviewed here. L06

Scale-up policy depends on research that is not yet close to market

The second quarter brought both industrial funding opportunities and concern about the research base beneath them. CBE JU opened its call in April; VBIO's May contribution questioned how proposed biotechnology measures would affect basic research. N07 · N09

These developments concern different stages of innovation. A demonstration programme needs a process with a sufficiently clear application to justify testing at greater scale. Basic research may not yet have an identifiable product. Its contribution can be an explanation, a measurement method or a biological insight that changes what a later process can achieve.

A policy discussion that treats every activity as a step along the same predictable project plan can miss that difference. Some work reduces a known uncertainty in an established process. Other work reveals that the process has been based on an incomplete understanding. Both may be useful, but their outputs and evaluation periods differ.

For a national association, this creates an opportunity to make the relationship concrete. It can follow a problem backwards from industrial practice: a production failure, a measurement that cannot be interpreted or a biological response that changes between settings. The resulting case may show why a research method, reference collection or specialist training programme matters to an application.

That account would be more persuasive than a general assertion that all research eventually creates economic value. Not every result has a foreseeable commercial use, and some public functions need justification on other grounds. The point is to show the actual dependencies where evidence is available.

The professional workforce also spans those stages. A person trained in basic biological research may contribute to an applied project through experimental judgement, measurement or analysis. A person working in industry may identify a fundamental problem that has not been resolved. Associations can make these exchanges visible through occupational examples rather than dividing members into academic and commercial categories.

There is a related infrastructure issue. The cost of a shared resource may be visible in one institution's budget while its benefits occur elsewhere. That makes access conditions, maintenance and specialist staffing important subjects for policy. A project grant alone may not answer how the resource will continue to function between projects.

In the European setting, translation also has an institutional meaning. Research, demonstration, regulation and purchasing may be organised by different bodies. A contribution from a professional association is most useful when it identifies the missing connection and the practical consequence. A general call to accelerate innovation is less informative than an account of a specific obstacle and the evidence needed to resolve it.

The Q2 policy items should therefore be read as a connected set. Funding opportunities show where development is being encouraged. Association commentary identifies concerns from the professional research community. Legislative negotiations indicate possible changes in the conditions for application. None of those documents alone measures the health of the whole innovation system.

For association boards: represent the biological work across the complete route, including the research and infrastructure on which later applications depend. Explain the dependencies rather than assuming that support for one stage automatically supports the others.

A regional strategy can make European ambitions specific

North Rhine-Westphalia's bioeconomy consultation opened on 22 June and ran until 16 August. The regional portal describes a strategy intended to guide action plans. It supplies an example of policy moving from a broad European direction towards a particular territory. L15

Regional policy matters because biological resources, processing facilities, skills and potential customers have locations. A promising route in one region may be difficult elsewhere because the resource is dispersed, processing capacity is absent or the existing use of the resource is more valuable. A strategy needs to encounter those constraints before it becomes an operational plan.

For associations, the relevant contribution can be a description of biological functions needed in the region. Resource assessment, process development, environmental monitoring, food quality and education are different kinds of work. A single claim that the region needs more biotechnology skills leaves their relationship unclear.

A concrete regional case could connect a resource stream with a proposed application and then examine the conditions for success. Which measurements establish the stream's availability and quality? Which processing requirements determine where it can be used? Which environmental questions affect the choice? What work would be needed to monitor the outcome?

This does not mean that a professional association should claim authority over every regional development decision. It means that biological expertise can be made legible within the process. Its contribution is strongest where it clarifies an uncertainty, explains the consequences of an assumption or identifies a feasible way to obtain missing evidence.

The public consultation is itself a procedural fact. Its existence does not show that every relevant group participated or that the eventual plan will deliver its ambitions. A useful European follow-up would examine the resulting documents and distinguish proposals, funded measures and evaluated outcomes.

For readers outside Germany, the transferable lesson is the scale of the problem. Europe-wide goals need decisions about particular landscapes, facilities and workforces. Those decisions are often where associations can show the relevance of their members most clearly.

Four questions for a regional scale-up case

Research

Which observation or material property has already been reproduced?

A published method or a documented demonstration.

Facilities

Which pilot equipment and skilled staff can a team use?

Access conditions, scheduling and support.

Buyers

Who specifies the product and accepts a trial lot?

A documented requirement or evaluation agreement.

Policy

What changes if the measure is regional, national or European?

The responsible body, eligible activity and current decision stage.

The quarter's sources cover an EU funding call, industrial policy discussions and a regional strategy in North Rhine-Westphalia. They sit at different points in this sequence. A regional strategy can name the facilities and partners near a company. A European programme can support work shared across regions. A board comparing regions can start with a concrete team or product and identify which of the four questions is still unanswered.

Also in this quarter

- **Circular industry:** the CBE JU call launched on 23 April addresses development and scale-up. The September deadline is historical and has passed. N09

Policy and reports

Portugal makes clinical bioinformatics visible as a biological specialism

Portugal's Regulamento n.º 649/2026, published on 26 May, covers specialist titles in clinical analysis, human genetics, embryology and human reproduction, and clinical genomic bioinformatics. The last of these makes a particularly interesting case for other European associations. Articles 57–63 describe a route involving relevant professional experience, supervised specialised training and assessment. The practical examination can include programming, bioinformatics pipelines and interpretation of genomic results. C03

The significance is not simply that a new technical label appears in a regulation. An occupational function is being connected to evidence of competence and an assessment route. That raises a question which is relevant beyond health: how does a profession make its capabilities understandable to employers, institutions and the public?

Three layers need to be kept separate. An academic qualification shows completion of a programme. Professional experience provides evidence of work in a particular setting. A specialist recognition process evaluates a defined set of competences under particular arrangements. The Portuguese text supplies a national example of the third layer; it does not establish that every biological occupation in every country needs the same system.

For an association in another country, the most useful first comparison would be with the work itself. Clinical genomic bioinformatics connects software, data quality and biological interpretation. A general description such as working with genomic data may conceal substantial differences in responsibility. One role may implement a validated procedure; another may develop the procedure; a third may evaluate whether an interpretation is sufficiently supported for the intended use.

Those distinctions affect education and employment. A degree course can introduce methods, while supervised practice may be needed to demonstrate that a person can use them under real operating constraints. Employers also need to distinguish between the ability to execute a workflow and the responsibility to judge its output. An association can help describe those functions even in a jurisdiction without a comparable specialist title.

International mobility adds another layer. The existence of a national title does not establish automatic recognition elsewhere. A meaningful comparison needs the relevant authority, scope of practice, assessment and any conditions attached to recognition. This briefing does not provide an individual eligibility determination or a cross-border recognition opinion.

The case is nevertheless valuable for European professional discussion. It shows a concrete document in which biological expertise is defined through functions, training and assessment. Associations can compare those building blocks without first claiming that national systems are equivalent.

Such a comparison would also be useful for updated occupational booklets. Instead of a country chapter consisting mainly of organisation names, it could follow a professional pathway: initial education, entry into work, development of competence and the point at which a person can assume a more demanding function. The pathways should remain country-specific where the evidence requires it.

For students, that description would make career advice more practical. For employers, it would identify the evidence behind a professional claim. For policymakers, it would clarify which biological functions already have a recognition route and which are described mainly through qualifications or job experience.

For association boards: professional visibility becomes stronger when an organisation can explain tasks, responsibilities and the evidence of competence. Portugal provides a concrete comparison case, not a ready-made European template.

> **Also in this quarter**
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> - **Regional · Germany:** NRW's bioeconomy strategy consultation opened on 22 June and ran until 16 August. It concerned the development of action plans; this is not a review of the full strategy's effectiveness. L15
> - **EU:** the Biotech Act II evidence call and the Council's Biotech Act I directive mandate represent different stages and instruments. N10 · N11

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