



FP9 statement by the Young Academy of Europe

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Executive summary

- More funding for bottom-up, blue-sky research
- Less administrative burden and single ethics screening
- Recognition of domain diversity
- Ending bibliometrics as a primary quality criterion
- Bringing down publication costs
- Prioritize young researchers and incentivize research-poor countries

Based on the positive results in bottom-up blue-sky research in Horizon 2020 (COST, ERC, Marie Skłodowska-Curie), the Young Academy of Europe (YAE) urges the EC to make the continuation of these highly productive programs a top priority in FP9. At the same time, we urge the EC to make the administrative burden on researchers as small as possible, by following the efficient administrative handling of, e.g., the COST Association and ERCEA, and by moving the management workload to professional project managers, not researchers.

Bottom-up blue-sky research

Predicting future breakthroughs is impossible, and the notion that priority areas can steer science towards the innovations of tomorrow is only part of the story. While the private sector is well placed to fund applied and close-to-market research, funding fundamental research without (apparent) immediate applications is the prerogative of public funding, and absolutely necessary to generate the disruptive innovations of tomorrow. Often, the ground-breaking approaches, riskier and farther from tangible immediate approaches, are deemed far-fetched and set aside by industrial stakeholders. These bottom-up investigations are exactly the ones that need to be funded even more extensively. Meanwhile, fundamental research stimulates the European economy also in the short term, by creating researcher jobs and keeping a lively network of high-tech companies providing science equipment and services. Therefore, we advocate allocating an even higher proportion of funding to such blue-sky research.



Less administrative burden

Scientists have to spend an ever-larger proportion of their time on administration. Streamlining administrative procedures will translate into faster scientific and economic progress. Examples are the obligation to keep time sheets (despite science not being an 8h/day enterprise), and the duplication of paperwork for both local and European administration. The EC should facilitate a standardized online administrative framework. Administrative procedures for scientific research should be harmonized across the EU; with a mandatory priority of EU standards above national schemes to ease the administrative burden on research grant spending.

Single ethics screening

Ethical approvals are ultimately the legal responsibility of national institutions implementing EU directives, and ethics assessment by EU funding agencies should be applied only to proposals lacking appropriate national reviews. This would demonstrate trust in member states, avoid unnecessary time loss and inconsistencies between several ethics boards looking at the same proposal.

Diversity of domains

Many scientific fields now cross disciplinary domains. This fluidity makes the assessment of the quality of work from a researcher more difficult, as it requires knowledge of her/his specific combination of domains. Further, differences in academic cultures and citation practices confound simplistic assessments of the quality of cross-disciplinary work. This should be taken into account explicitly in panel and funding scheme construction.

Bibliometrics as quality criterion

A major issue in assessment is the overuse of bibliometrics, such as journal impact factors and the h-index. The problems with simplistic indicators are well known, such as the failure to distinguish between the contributions of main authors and co-authors, a special case of which are researchers working in large international collaborations. The use of net grant income as an assessment factor should also be discouraged, either internally or externally. Funders are the only players that have the power to change these dynamics, and consider granular, personal (*e.g. citations compared to average citations in the respective field such as is done in the CWTS Researcher Profiles in Leiden or the Severo Ochoa funding scheme in Spain*), and appropriate field-specific criteria, preferably by taking into account more than one source of data (WoS, Google Scholar, etc.), excluding self-citations. For research proposals involving a group of people the Team Index, introduced by Rianne Letschert in her YAE 2017 Prize lecture to determine the diversity of competences within a team, should be considered.



Open Access

Gold open access publishing is problematic, with too high publication fees, leading to a proliferation of new journals and creating incentives for publishers to focus on the quantity, and not the quality, of papers they publish. It increases revenues for hybrid publishers, and creates additional barriers for less funded researchers in lower income countries. Inspired by the success of EU legislation eliminating roaming fees, we advocate legal action enshrining that publicly funded research can be posted on open access repositories within 6 months of publication (Green OA). This would pressure publishers to reduce OA costs, and explore new models.

Inclusiveness of research-poor countries

Rather than including low-income countries through forced international collaborations, it may be more promising to use a “best-in-class” approach; this should be handled without instating state quotas that would jeopardize the excellence criteria of e.g. the ERC mechanism. The ERC has been very successful in increasing the number of female grantees. Similar strategies will help include researchers from all member countries. Grants should introduce competitive salaries equalized across member states, in order to avoid the demand that national standard salaries are paid from grants, which is a clear disadvantage for excellent researchers in low-income countries. The funding schemes should introduce incentives to remain or go to these research-poor countries, e.g. by allowing a larger share of overheads and/or a mobility start-up fund. National funding bodies should adjust at least some of their funding schemes to an ERC-like model, with balanced funding schemes available for both early- and mid-career researchers.

Prioritise young researchers

The age of attaining a permanent academic position is creeping ever upwards, increasing the number of highly uncertain years of short-term contracts and relocations. To ease these pressures and to ensure that the best minds consider science to be a viable career, there should be more focus on supporting academically young researchers, with special emphasis on inclusiveness-target research-poor countries. For this, the budget of bottom-up blue-sky research needs to be increased, in combination with strategies for maintaining the brilliant minds of the whole European research area funded throughout their career.