Euro Reference
journal of Reference
anses
French agency for food, environmental and occupational health & safety

Journal No. 13
Winter 2015

Lab news

How and where to find European funding for research activities

Arnaud Callegari, European and International Affairs Department, ANSES, France (arnaud.callegari@anses.fr)

What is Horizon 2020?

Horizon 2020, also known as H2020 is the 8th Framework programme for research-development and innovation funded by the European Union for the period 2014 to 2020. Participating in Horizon 2020 is an excellent opportunity to extend one's network, improve visibility among European and international research teams, and find alternative sources of funding to further research activities carried out with State funding.

What is the philosophy behind H2020?

Unlike previous European Framework Programmes For Research, Horizon 2020 is more heavily focused on innovation, a key concept in the area of research and development over the last few years, to help bring the European economy to an internationally competitive level by creating more added value on the basis of innovative results from research. To this end, Horizon 2020 is structured in such a way, that it aims to stimulate and facilitate the transition from completed research to development and marketing of new products. This involves bridging what is known in research-development as the «valley of death»: the interval in the value chain when sufficient resources need to be mobilised to finance the risk incurred by developing and marketing a product, when it is not yet known whether it will be a success and whether there will be sufficient return on investment and future profits.

To improve the chances of success when applying for H2020 funding, it is essential that researchers think about their projects in terms of innovation and in a global context, i.e. where results of research activity must help to create leverage enabling European society to be more present and competitive on the international market. Concerning reference and research activities aimed at detecting pathogens and contaminants, using cutting-edge techniques such as next-generation sequencing (NGS) or high-throughput PCR makes it possible to save time, money, and human resources. For these reasons, research projects based on these technologies are far more likely to receive funding than those that are more conventional.

How does H2020 work?

H2020 is made up of a vast number of calls for proposals that are either generic, known as open calls, or thematic. Concerning thematic calls, the work programmes are established for two years and are revised half-way. They are based on proven comitology, drawing on all players in research, from public or private research laboratories, to the European Commission, and ministries of the Member States and H2020 associated countries (Norway, Turkey, and Israel, among others).

The definition of research subjects within the various H2020 work programmes is based on the legal framework of H2020 (http://ec.europa.eu/research/participants/data/ref/h2020/legal_basis/sp/h2020-sp_en.pdf), and on the definition of a matrix bringing together strategic orientations, cross-functional focus areas and specific calls. These strategic orientations, focus areas and calls are redefined for each new two-year work programme.

H2020 also aims to be highly innovative, even concerning its organisation, since all aspects of the programme are now paper-free and go through the participant portal (http://ec.europa.eu/research/participants/portal/desktop/en/home.html), which provides all the information on the work programmes and closed, open and forthcoming calls for proposals, as well as all tools needed to submit and manage a research project.

Procedure to follow to access the various work programmes of the H2020 calls for proposals:

- 1. Click on the following link: *H2020 Calls for Proposals*;
- 2. In the main panel, listing all the H2020 sub-programmes, select the relevant sub-programme from the six main topics within H2020 (note that the final topic "Euratom" is an independent sub-programme within H2020);
- 3. Based on the filter applied, open calls are then displayed for the selected sub-programme;
- 4. Then click on the call you are interested in, and on the "Call documents" tab, where you will find the work programme document with a title following this form: "WP H2020 – call reference".

In terms of monitoring calls for proposals, there is one call per year for each sub-programme. However, the opening date and deadline for calls in the various sub-programmes are not synchronised. In addition, they are not published on the same date from one year to the next. It is therefore important to visit the participant portal regularly and to note open or forthcoming calls for proposals. Alerts for forthcoming calls are nonetheless published on the participant portal at least three months before opening. **Monitoring every three months** should thus be sufficient to detect future programmes.

It is also possible to sign up to the RSS feed on H2020 calls for proposals by clicking on the RSS logo on the left of the calls for proposals page (e.g. next to «Call Updates»), or by clicking on the calendar icon next to the RSS feed logo to download in MS-Outlook, the H2020 calls for proposals calendar, which enables you to set reminders for opening dates and deadlines for the calls that you have chosen.

On the left of the Calls for Proposals page, there is a search function for closed, open, or forthcoming calls, enabling you to search for relevant calls using key words. To search calls, click on "Search Topics".

With the aim of helping project holders to save time and to avoid unnecessary investment of resources, **the two-step application procedure** has now become standard in H2020, with a first short step requiring minimum investment by the applicant. If the first step is successful, a second more detailed step is opened in which the full project is described (consortium, detailed activities, associated budget, and deliverables).

Journal No. 13 Winter 2015

Lab news

Lastly, H2020 was designed to simplify the process for researchers and research project managers. Unlike previous framework programmes in which recipients had to make their way through an immense regulatory jungle where each sub-programme had specific rules and procedures, all programmes within H2020 work using the same rules. There are a few very rare exceptions but they are mostly justified and acceptable to recipients.

H2020 has three pillars:

• Pillar 1 called “Excellent Science”. For relevant funding of research in reference activities, it covers:
- initial and continuing education by research, through Marie Sklodowska-Curie Actions, for the funding of Master or Doctorate courses, but also mobility of researchers as part of lifelong continuing education;
- research infrastructures (the “Infrastructure” programme);
- and aligning the research capabilities of less advanced Member States with those of the most advanced (the “Spreading excellence and widening participation” programme).

The calls for proposals in the various programmes of the first pillar are open calls that do not cover a specific topic, meaning that a project can be proposed on any topic. However, these funding programmes are extremely competitive, making it necessary to present applications of very high quality. This requires considerable investment from project holders during their preparation.
Note that on the participant portal, calls for proposals of the first pillar are mainly registered under “Excellent Science”, but also under “Spreading excellence and widening participation” and “Science with and for Society”.

• Pillar 2 called “Industrial Leadership”. Its purpose is to fund the development and marketing of products using the results of research. This pillar is mainly directed at private industries and is of little interest for research in reference activities in animal health, plant health, and food safety.
There is however an exception in this second pillar, the LEIT programme (Leadership in Enabling and Industrial Technologies), which covers funding for research in biotechnologies. Calls in this sub-programme are thematic. Part of funding for research in biotechnologies may include aspects of metagenomics and bioinformatics for processing all «omics» data, which is of interest upstream of research and reference activities.

• Pillar 3 called “Societal Challenges”. This pillar focuses on seven major societal challenges, subjects that are dealt with in a global way as part of collaborative research between at least three distinct partners from at least three different Member States or associated countries. As such, like in previous framework programmes, calls for proposals in the third pillar of H2020 are thematic. However, instead of focusing on a pathogen or group of specific pathogens in an animal or plant species or group of animal and plant species for one or more particular health or economic reasons, and based on prioritisation of problems following careful assessment by experts upstream, calls in H2020 are more likely to attempt to respond to questions concerning, for instance, the outlook for food production in the European Union. In this topic, the place, role, and efficiency of animal production are issues that include a significant health aspect and in which scientists working in research and reference activities will have an important role to play.
Calls for proposals in the third pillar therefore have a much broader scope than calls for collaborative research in the previous framework programmes. The consortiums established to respond to the calls are, as a result, much bigger, and consortiums with more than 20 partners are common in H2020. This was rare in previous programmes. The projects funded are supposed to help respond to major societal issues. The project outcomes should help to create leverage to improve European competitiveness in the international arena, thus having a positive effect on European economic growth, and ultimately, a positive impact on the quality of life of Europeans.
In this third pillar, two societal challenges are particularly relevant for research and reference activities:
- challenge 1 on human health which deals specifically with issues of public health related to exposure to chemical contaminants through the environment, and antimicrobial resistance;
- and challenge 2 on food security, sustainable agriculture and forestry, and marine and maritime research, which deals with all the issues related to animal health and welfare, plant health, and public health in relation to food.

In both these challenges, the research actions undertaken could specifically involve methodological research for detection and control of pathogens and other chemical contaminants.