Second multilateral call for research projects within the ERA-NET PathoGenoMics:

"**Applied pathogenomics: Prevention, diagnosis, treatment and monitoring of infectious diseases in humans**".

This document announces the second international joint call on pathogenomics within the framework of the European ERA-NET **PathoGenoMics** programme. The call focuses on "**Applied pathogenomics: Prevention, diagnosis, treatment and monitoring of infectious diseases in humans**". The main purpose of the call is to generate joint European research and development activities. Joint projects, with a maximum of 7 participants from a minimum of 3 ERA-NET PARTNER countries, must include participants from both academia and clinics or industry. A proportion of the funding will be reserved to support projects headed by young scientists. Funding will be granted for a maximum of three years. Submissions of proposals will be in two steps: The deadline for submitting pre-proposals is 29 **February 2008** and full proposals must be submitted by 15 May 2008. Projects will be expected to start at the beginning of 2009.

1. Motivation

Despite great advances in medicine during recent years, infectious diseases still pose a serious and increasing threat for public health, both due to the development of resistance to antibiotics and other anti-infective drugs and because of the spread of pathogens via global travel. The support of genome-based research on pathogenic micro-organisms ("*pathogenomics*") should make a significant contribution to counter the threat.

To improve the international coordination of research on pathogenic micro-organisms, the EU has established two main initiatives: 1) *The Trans-European Cooperation and Coordination of Genome Sequencing and Functional Genomics of Human-pathogenic Micro-organisms* (ERA-NET **PathoGenoMics**) has been created to coordinate the research efforts of member states; and 2) *The Network of Excellence "Europathogenomics"* is aimed at creating scientific impetus in the field of functional genomics of pathogenic bacteria, thereby encouraging collaborations and to facilitating training in the field.

In 2006, **PathoGenoMics** implemented its first multinational call, which resulted in the funding of 12 transnational consortia for the period 2007-2010 with the total budget of 14.1 M€. This open call was aimed primarily at strengthening basic research in the field. As a further step, **PathoGenoMics** has decided to launch a second joint call targeting *"**Applied pathogenomics: prevention, diagnosis, treatment and monitoring of infectious diseases in humans**"* to strengthen the transfer of results from basic research into clinical and industrial applications.

The following PathoGenoMics partner organisations have agreed to participate in the call (hereinafter refereed to as the PARTNERS):

- the Federal Ministry for Science and Research (BMWF) and the Austrian Science Fund (FWF), Austria
- the Academy of Finland (AKA), Finland
- the National Agency for Research (ANR), France
- the Federal Ministry of Education and Research (BMBF), Germany
- the Hungarian Scientific Research Fund (OTKA) and the Hungarian Academy of Science (HAS), Hungary
- the Science and Technology Foundation (FCT), Portugal
- the Ministry of Higher Education, Science and Technology (MHEST), Slovenia
- the Ministry of Education and Science (MEC), Spain

The PARTNERS are opening the call simultaneously in their respective countries. The general regulations given in the call text are the same in each country,

whereas sections 3, 4 and 9 refer to national regulations in each PARTNER country.

2. Aim of the call

Within the framework of **PathoGenoMics**, funding will be provided for transnational, collaborative projects based on a division of labour with a high degree of innovation and scientific and technical risk. Project proposals should focus on:

- prevention
- diagnosis
- treatment
- monitoring

of diseases caused by bacterial and fungal pathogens of humans.

Potential topics of the proposals could include:

- new tools for the prevention of infectious diseases and secondary pathologies, development of new vaccines, use of pre-/probiotic potential of microorganisms,
- development of new tools or strategies for diagnosing infections, development of new procedures for faster/more cost-efficient diagnostics,
- development of new therapies, validation/lead identification of potential new therapeutics, studies on mode of action/mode of side effects, investigations of the role of micro-organisms in secondary pathologies (e.g. in chronic diseases),
- new tools or strategies for monitoring infectious diseases,
- development and application of new technologies (e.g. new sequencing methods, high-throughput methods, new animal models, bio-assays, *in vivo* imaging technologies, *in vivo* screening methods) to develop new diagnostics or therapeutics.

The projects must be based on genome-wide approaches. Furthermore, they must 1) show a close cooperation between academic and clinical or industrial participants, 2) present convincingly the application (exploitation) of the project results and 3) demonstrate a clear benefit to the public.

3. Financial modalities and funding prerequisites

Funding is granted for a maximum of three years in accordance with national regulations. All project participants will be required to sign a Consortium Agreement (CA) before the start of the project, which must address the points given in the Consortium agreement guidelines. The CA, together with any other information required by national regulations, must be made available on request to the national funding agencies.

4. Funding recipients

Research proposals may be submitted by higher education institutions, non-university public research establishments (including hospitals and clinics) and commercial companies, in particular small and medium-size enterprises (SMEs), or by scientists according to relevant national regulations.

Each collaborative consortium should have the optimal critical mass to achieve ambitious scientific goals and should clearly show an added value from working together. Consortia must have a minimum of three **PathoGenoMics** PARTNER countries; a maximum of seven project participants is accepted.

Part of the available funding is dedicated especially to **consortia of young scientists**. All the project leaders of such consortia must be “young scientists”, which is defined as having spent a minimum of two and a maximum of nine years after finishing their PhD or equivalent (periods of maternity or paternity leave shall be taken into account; the time is calculated at the deadline for submission of pre proposals).

Within a joint proposal, each group leader will be the contact person for the relevant national funding agency. Each consortium must nominate a project coordinator to represent the consortium and to be responsible for its internal management. Each consortium should also name a person to coordinate IPR matters (such as licensing in, licensing out, patent and exploitation strategy) together with the legal representative of his/her organization. All participants should agree to abide by the rules of **PathoGenoMics** as defined in the call text and the CA.

Participants from non-PARTNER countries may be involved in projects if they secure their own funding and if their expertise is indispensable for reaching the objectives. However, the maximum number of seven participants may not be exceeded. Participants from non-PARTNER countries must also accept all **PathoGenoMics** rules and guidelines.

5. Management boards

Two boards, with the support of the PathoGenoMics Secretariat, will manage and direct the evaluation and approval of research projects:

i) **The Call Steering Committee** is composed of one member from each PARTNER participating in the call. It will supervise the call and ultimately make recommendations for the proposals to be funded to the national funding bodies. Each PARTNER will appoint a national programme manager to be responsible for local matters.

ii) **The Experts Committee** is a panel of international scientific experts that will be responsible for the evaluation of the proposals.

To ensure objectivity during the evaluation procedure, the members of these two boards will not submit proposals to this call.

6. Partnering Workshop

A Partnering Workshop will be organized to bring together interested persons from the countries involved and to facilitate the establishment of contacts. This will take place on 21 January 2008 in Barcelona. Registration and further information is available at www.pathogenomics-era.net. The deadline for registration is 7 January 2008. Participation in the Workshop is highly recommended but not a prerequisite for submitting a project pre-proposal.

7. Submission of proposals

The application will be a two-steps process (pre-proposal, full proposal) with the following timetable:

21.01.2008	Partnering Workshop
29.02.2008	**Deadline for pre-proposal submission**
31.03.2008	Communication of the results of the pre-proposal assessment
15.05.2008	**Deadline for full proposal submission**
October 2008	Communication of the funding decision
Early 2009	Projects start

The PathoGenoMics Secretariat will be the central contact point for all project coordinators.

7.1 Pre-proposals

Pre-proposals (max. 2 pages plus 1 page financial plan) will be checked for eligibility and fitting into the scope of the call.

They should include:

- Names, positions and full affiliations of the project leaders. A project coordinator should be designated by the consortium to act as its representative.
- Summary of the project
- Project aims, expected results and their exploitation
- Financial plan (on the form provided)

Joint pre-proposals (in English, Arial 10 pt.) should be submitted electronically to the **PathoGenoMics** Secretariat by 29 February 2008. Application forms for pre-proposals are available at www.pathogenomics-era.net/.

Each PARTNER will check the eligibility of their national applicants. The Experts Committee will asses the scientific quality of the pre-proposals and their fit into the scope of the call. **The information given in the pre-proposal is binding**. Thus, any fundamental change between that and the full proposal (composition of the consortia, objectives of the project) is to be communicated to the PathoGenoMics Secretariat with detailed justification and will be allowed with the agreement of the Call Steering Committee. Applicants will be informed by 31 March 2008 whether they are invited to send the corresponding full proposals.

7.2 Full proposals

Full proposals are to be submitted **electronically** to the **PathoGenoMics** Secretariat by 15 May 2008 by means of the application forms available at www.pathogenomics-era.net/. The indicated page limits should not be exceeded and no additional documents will be considered.

Full proposals (in English, Arial 10 pt.) should include:

- Summary of the project (workplan, aims and expected results; max. 1 page)
- Financial plan (on the form provided)
- Background and state-of-the-art (max. 2 pages)
- Work plan (including involvement of participants in different workpackages; max. 6 pages, plus lists of milestones and deliverables)
- Added value of the proposed international collaboration (max. 1/2 page)
- Exploitation plan: Prospects regarding application in clinic and/or industry, market potential, position with regard to IPR both within and outside the consortium (e.g. barriers to sharing materials or results) (max. 2 pages)
- Description of ongoing projects of each participant related to the present topic, indicating funding sources and amounts, and possible overlaps with this proposal (max. ½ page per participant)
- Brief CVs of the project leaders, including lists of up to five recent publications. For young scientists: the CV should demonstrate the compliance with the requirement given by the definition of "young scientist" (= 2-9 years between finish of PhD and pre-proposal deadline). (max. 1 page each)
- Description of significant facilities and large equipment available to the consortium (max. ½ page).
- Description of any training/exchange activities foreseen within the project, if applicable (max. ½ page).

- For companies: short description of the company, financial status quo, own contribution (max. 1 page per company).

7.3 Evaluation of full proposals

The Experts Committee will evaluate the full proposals based on the following criteria:

Scientific criteria:

- Scientific quality, innovation and international competitiveness of the proposal
- Scientific expertise of the consortium and prospects of success
- Relevance of the proposal to the aim of the call
- Quality of the organisation and coordination, multidisciplinarity, appropriateness of time and work schedule
- In projects for young scientists, scientific independence of applicants

Exploitation criteria:

- Economic innovation potential
- Market potential and competitiveness, patent situation
- Prospects for the transfer of results into clinical and/or industrial application, quality of exploitation plan
- Importance for public health
- Quality and quantity of contribution of industrial partners
- Expertise of industrial partners regarding exploitation of research results

A common evaluation form will be made available on the PathoGenoMics webpage.

Project coordinators may be invited to present the project in front of the Expert Committee during the evaluation phase.

7.4 Decision

The Experts Committee will develop a ranking list of the proposals. Based on this list the Call Steering Committee will propose the projects to be funded. Final decisions will be made at the national level. The participants involved in the selected projects will be funded through the national programs (see specific national regulations and contact the respective national contact person). Projects would start early in 2009.

8. Contact persons

The only official communication line of the proposal is between the **PathoGenoMics** Secretariat and the project coordinator. The project coordinator will the person contacted by **PathoGenoMics** Secretariat during the application procedure, so he/she must forward this information to the other participants. Each country has national contact persons who can be contacted for information about the specific national requirements (see Table 1).

Table 1. *National contact persons*

Country	**Contact person**	**E-Mail**
Austria	Dr Nicole Firnberg Dr Graham Tebb	nicole.firnberg@ffg.at graham.tebb@fwf.ac.at
Finland	Dr Soile Juuti Dr Sirpa Nuotio	soile.juuti@ktl.fi sirpa.nuotio@aka.fi
France	Dr Patrick Chaussepied	patrick.chaussepied@gip-anr.fr
Germany; ***PathoGenoMics Secretariat***	Dr Marion Karrasch Dr. Miriam Brandt	m.karrasch@fz-juelich.de mi.brandt@fz-juelich.de
Hungary	Prof. Bela Nagy	bnagy@vmri.hu
Portugal	Dr Catarina Resende	catarina.resende@fct.mctes.pt
Slovenia	Dr Marta Sabec	marta.sabec@gov.si
Spain	Dr Julio Barbas	julio.barbas@mec.es

9. Reporting requirements

The coordinators of all the funded projects must submit an annual scientific project report (in English) to the **PathoGenoMics** Secretariat together with summary reports from each participant. In accordance with specific national regulations, each participant should also submit periodical financial and scientific reports and a final report to its national funding agency. The coordinators will present the results of their projects at annual status seminars to be organized by the **PathoGenoMics** Secretariat. Any publications resulting from the funded projects must acknowledge the national funding agencies and the ERA-NET **PathoGenoMics**, and one copy must be sent to the **PathoGenoMics** Secretariat. As for the call for young scientists, it is expected that young project leaders show their scientific independence acting as senior authors in those publications arising from their results.