



## Call for proposals 2019

### Creation of a Research Chair in Social and Human sciences

"Social challenges of personalised medicine and innovation in  
oncology"

**Deadline for project submission: October 1<sup>st</sup>, 2019, 7pm**

**Online Submission:**

<http://www.e-cancer.fr/Institut-national-du-cancer/Appels-a-projets/Appels-a-projets-en-cours/CHAIRESHS-2019>

# Summary

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## 1. Background

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The issue of personalising oncology care has been taken into consideration since the very first Cancer Plan, for 2003-2007. However, it was from the third Cancer Plan (2014-2019) that the term "personalised medicine" started to see extensive use, underlining, from the very introduction of the Plan, that "*the development of personalised medicine requires a reassessment of cancer diagnosis and treatment methods*". Growth in fundamental knowledge on cancerous disease, associated with a succession of technological innovations, is bringing about a sea change in oncology concepts and practices. These advances are paving the way for new research topics in the field of social and human sciences.

This new type of "precision" medicine is aimed at proposing a treatment targeting the molecular abnormalities at the root cause of the tumour process. Its development is related to three series of interdependent transformations:

- an understanding of pathophysiological mechanisms in terms of genetic causality and molecular dysfunction;
- advances in global and high-throughput analysis methods, known as "omics", for all components making up cells, including genomics. Constant improvements in genome sequencing technologies, combined with a simultaneous reduction in testing costs, along with the creation of international consortia, have made it possible to draw up an atlas of recurrent mutations, characterising more than one hundred types of tumours;
- Changes in hospital organisation and institutional mechanisms, in particular via the creation of Biological Resource Centres, genetic and immunological testing platforms, molecular multidisciplinary team (MDT) consultation processes and new professional qualifications (bioinformatics specialists, Artificial Intelligence specialists, etc.).

The very rapid sequence of changes in the oncology field over the past twenty or so years has also led to the emergence of new health-related challenges, structural reorganisations, medical and scientific controversy and economic tensions, which fall within the scope of Social and Human sciences (SHS) research. The transitions currently under way simultaneously relate to:

- changes in medical practices and the sharing of decisions with patients and their families;
- perceptions of cancer and its care in this evolving context;
- renewal of the epistemic context of fundamental oncology;
- changes in the care pathway, taking into account the increasingly chronic nature of numerous types of cancers and the shift to outpatient care, shortening hospital stays;
- processes for the transfer of knowledge to the clinical setting and its industrial use;
- the economic impact of therapeutic innovations on social security funding systems.

This series of changes and restructuring processes currently affecting the entire health system in the field of oncology requires the contribution of qualitative and quantitative SHS studies in order to gain a better understanding of the issues and support the evolutions under way. Social and Human Sciences also need to design concerted mechanisms of action in order to identify and prevent the detrimental effects that personalised medicine could have on healthcare players, patients and their families.

## 2. Issues

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The general objective of this Chair is to develop research in Social and Human Sciences on current changes and innovations in the field of oncology as a result of the rise in practices related to personalised medicine. These changes are far-reaching, and raise many questions that SHS researchers can help to address.

In the field of care, first of all, what are the social, organisational and economic implications of the roll-out of precision medicine? Does it lead to changes to the training of doctors and of health professionals more generally? Does personalised medicine challenge the very definition of oncology itself?

From the perspective of patients and their families, the impacts of rolling out precision medicine remain poorly elucidated. Is the use of therapies adapted to the genetic characteristics of individuals and tumours liable to change perceptions and experiences of the disease? Will the uncertainty that characterises the patient's experience during and after treatments change with the rise of precision medicine? What will be the effects on the quality of life of patients, their families and caregivers?

The transformation of oncology into "data-driven" medicine, based on the collection and analysis of massive amounts of health data, raises epistemological issues that need to be addressed by social and human sciences. This change also has repercussions for how doctors and patients view and make sense of the disease throughout the care pathway. What about the clinician's experience, when he or she moves on from the patient affected by the cancer, to the genome of this tumour, to take into consideration the level of intratumour heterogeneity, its micro-environment and the immune infiltrate? What becomes of the patient and the patient relationship in this approach?

Moreover, socio-technical and economic conditions shape how precision oncology is to be adopted. They suggest a redefinition of some medical and scientific specialties. These professional and organisational changes are taking place in a medico-economic context where inflation in the cost of targeted therapies and immunotherapies is putting pressure on health insurance reimbursement systems. Finally, the inherent momentum in precision oncology, in the context of clinical trials, also raises the crucial question of local disparities in access to innovative treatments. The role of social and human sciences in examining the changes in progress is a central one, not only from a strictly epistemological point of view, but also for the generation of knowledge helping streamline care pathways and work towards reducing social and local health inequalities.

The successful applicant for this Chair will coordinate a research programme in line with these themes, developed jointly with the SHS Department at Centre Léon Bérard and the host laboratory (research structure that will be chosen at Lyon 1 by Claude Bernard Lyon 1 University in liaison with LYriCAN to be specified). The research topics to be addressed might include, but are by no means confined to, the following:

- changes in the perception of cancer by caregiving staff and patients, and in the experience of cancer patienthood, including the impact on patients of exclusion from a clinical trial or lack of access to a targeted therapy if their tumour genome does not carry "actionable" mutations.
- epistemic and ethical challenges of the roll-out of personalised medicine, including dimensions related to predictive medicine and "omic" approaches including exposomics;
- changes in patients' care pathways resulting from personalised medicine, including the shift to outpatient care in oncology;

- therapeutic, organisational and/or medico-economic impact of new remote patient medical monitoring devices (Internet of Medical Things, telemedicine, etc.) in relation to cancer care;
- identification of factors leading to inequality of access to expert networks, molecular testing platforms and/or stratified clinical trials on a national and European scale;
- characterisation of factors promoting or obstructing the adoption of new technologies in hospital, including data-driven treatment and artificial intelligence;
- evaluation of the production, circulation and role of genomic and/or layperson knowledge about precision medicine; how this information is communicated to and understood by patients ("health literacy", numeracy).

### 3. Objectives of the Chair

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The research and teaching objectives shall be as follows:

#### Research:

- to work in concert with the social and human science research programmes at LYriCAN developed in association with the SHS Department at Centre Léon Bérard and with the coordination and facilitation activities conducted by the Lyon Auvergne Rhône-Alpes Canceropole and the French National Cancer Institute (INCa);
- to make an active contribution to promoting the Chair's research and activities: publications in prominent international journals, papers at national and international conferences, scientific events, collaborations with research networks, responses to national, European and international calls for proposals;
- to disseminate knowledge by organising study days and national and international conferences.
- to supervise research conducted by Master's students, doctoral students and/or post-doctoral researchers, in order to enhance the value of the research areas covered by the Chair.

#### Teaching:

- to develop a teaching programme in conjunction with Claude Bernard Lyon 1 University;
- to provide initial and/or continuous education in the field of social sciences, applied to health in general and to cancer in particular;
- to organise and lead a teaching programme on the topics covered by the Chair in the form of research seminars and workshops. Some seminars could be facilitated by visiting international scientific experts, invited to the Lyon site on behalf of the Chair.

## 4. Candidate profile

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The Chairholder shall be well-versed in recent theoretical and methodological developments in social and human sciences, particularly in one or more of the following disciplines: health sociology, the philosophy of medicine and epistemology, social psychology and health geography, and have sound experience in medical innovation research. The Chairholder shall also aim to promote the transfer and dissemination of knowledge, notably through higher education combining various disciplines. Ability to cooperate with clinicians, patients and their caregivers would also be a significant asset.

The candidate must be strongly involved in research. S/he must have high-level experience in research, demonstrated by the production of internationally recognised scientific publications in the relevant research area. S/he must have experience in teaching and the necessary skills to conduct research autonomously (obtaining funding, coordinating teams around a project, enhancing the value of findings, etc.).

If the candidate is not accredited to supervise research (for researchers working in France or equivalent qualification for those working outside France), s/he shall undertake to obtain this qualification during the first three years of activity as the Chairholder.

This Research Chair is open to all French and foreign scientists, whether tenured or contract.

## 5. Partners in the call for applications

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The Chair is supported by a scientific and financial partnership, associating the French National Cancer Institute, the Cancer Research and Innovation SIRIC in Lyon, the Lyon Auvergne Rhône Alpes Canceropole, University of Lyon and, at its heart, the Rabelais Institute (PLAsCAN) and the University of Lyon.

- ❖ The **French National Cancer Institute** (INCa) is the national health and scientific expertise agency in oncology responsible for coordinating actions against cancer. Created by the Public Health Policy Act of 9 August 2004, it is placed under the joint administrative supervision of the Ministry of Social Affairs and Health and the Ministry of Higher Education and Research.
- ❖ **LYriCAN** (LYon Recherche Innovation contre le CANcer - Lyon Cancer Research and Innovation) was designated by the French National Cancer Institute in December 2017 as one of the eight Integrated Cancer Research Sites (SIRIC). The project, proposed by Prof. Jean-Yves Blay, under the aegis of the LCU Healthcare Cooperation Group including Centre Léon Bérard and Hospices Civils de Lyon, is focused on cellular plasticity and therapeutic innovation. LYriCAN's integrated research programmes involve stakeholders from fundamental research and clinical research with a view to developing sound translational research. LYriCAN's SHS programme is developed closely with that of the SHS Department at Centre Léon Bérard.
- ❖ The **Lyon Auvergne Rhône-Alpes Canceropole** (CLARA) has been bringing together academic, clinical and industrial stakeholders from the Auvergne-Rhône-Alpes region since 2003 for the benefit of a regional, national and international strategy to combat cancer. Its actions in support of social and human sciences are given expression through the funding of

cutting-edge and structuring research projects, the organisation of theme-based workshops and research seminars in conjunction with local universities.

- ❖ The **University of Lyon** (UDL) is a higher education institution (COMUE: Group of universities and institutions) bringing together thirty-two higher education and research institutions (twelve members and associates), based in Lyon and Saint-Étienne. UDL was designated as an Initiative of excellence (IDEX) in 2017.
- ❖ **Claude Bernard Lyon 1 University** has 45,000 students and offers excellent training and cutting-edge research. It is one of the major centres of French university research covering all fields of science and technology, health, as well as human and social sciences.

## **6. Scientific and administrative structure of Chair**

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As part of its duties, the French National Cancer Institute shall set up a partnership in the form of an agreement with University of Lyon, who shall receive the grant for the creation of the Research Chair in social and human sciences entitled "Social challenges of precision/personalised medicine and innovation in cancer". The Chairholder will report to a laboratory carrying out social and human sciences-health research within Claude Bernard Lyon 1 University.

Once the Chair is in place, governance bodies shall be established, including, in particular, an independent scientific advisory board made up of eminent scientists from France and abroad and a governance committee made up of the Chair's partners, as defined in section 5 of this call for applications.

## **7. Publication and communication**

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The Institute is pursuing the scientific monitoring and evaluation of cancer research projects. In the context of the National Open Science Plan, which requires open access for publications and data from project-funded research, the grant beneficiary organisation and the project coordinator are informed that summaries (scientific and general public) of funded projects will be published on the Institute's and its partners' websites. When funding the project, the project coordinator must provide the Institute with a scientific summary and a general public summary.

## **8. Funding**

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The Chair shall receive €150,000 of funding per annum from the French National Cancer Institute for a duration of 4 years, with the possibility of extending funding to a 5th year, following review of the progress of the research programme. The SHS Department at Centre Léon Bérard shall provide the necessary work premises and equipment (offices, computer hardware, etc.). LYriCAN shall fund the salaries of two post-doctoral researchers (€130,000 per annum) and Claude Bernard Lyon 1 University shall support this programme by funding a PhD contract.

This budget shall fund the entire Chair.

In the event of a favourable review after five years, Claude Bernard Lyon 1 University agrees to make every effort to maintain the Chairholder's position in order to ensure the continuity of research and teaching on this theme.

## **9. Application evaluation procedure**

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To conduct the evaluation, the partners of this Chair rely on an international scientific review committee, in which the reviewer members are recognised for their expertise in the field covered by the Chair.

The members of the scientific review committee undertake to adhere to the provisions of the French National Cancer Institute's ethics charter (<http://www.e-cancer.fr/Institut-national-du-cancer/Deontologie-et-transparence-DPI/Acteurs-de-l-evaluation-de-projet>). They undertake to declare any connections of interest with respect to the applications submitted to them for review and with the candidate and the teams involved in the proposed application. The composition of the committee is published at the end of the review process of the call for applications.

Applications shall be reviewed in two rounds:

- based on the application files;
- following an interview, for applications selected in the first round.
- Eligibility criteria for applications
- Candidate's academic qualifications (minimum qualification required: PhD in any social and human science discipline<sup>1</sup>).
- Candidate's proven research experience and major scientific contributions. Particular emphasis shall be placed on the main articles published by the candidate proving his/her expertise in the field in question over the last five years.
- Quality of scientific plan in accordance with the objectives of the Chair (originality of the plan and scientific position in the international context; potential for adding medical, economic and/or social value; experience of scientific supervision of doctoral students; national and international scientific collaboration; methodological and financial feasibility; integration of the plan in the local scientific environment, etc.).
- Quality of teaching plan in accordance with the objectives of the Chair (teaching and training; innovative aspect; and organisation of study days, and seminars).
- Quality of plan for dissemination and value enhancement of the research in accordance with the objectives of the Chair (i.e. international publications and presentations; organisation of study days, meetings and conferences, and awareness days for scientists, health professionals and the general public).
- Ability and experience in effective supervision of a multidisciplinary team or group.
- Ability to fund the research activities of his/her team/group by responding to national or European calls for proposals.
- Experience in national and international expert review.
- Proficiency in French and English.

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<sup>1</sup> The list of disciplines corresponds to the scientific fields SHS1 to SHS6 under the Classification of the High Council for Evaluation of Research and Higher Education, November 2016.



## 10. Schedule

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| <b>Publication of call for applications</b> | <b>June 2019</b>   |                                     |
| <b>Deadline for submission</b>              | Online submission of completed application:<br><a href="http://www.e-cancer.fr/Institut-national-du-cancer/Appels-a-projets/Appels-a-projets-en-cours/CHAIRESHS-2019">http://www.e-cancer.fr/Institut-national-du-cancer/Appels-a-projets/Appels-a-projets-en-cours/CHAIRESHS-2019</a> | <b>October, 1<sup>st</sup> 2019</b> |
| <b>Candidate interviews</b>                 | <b>November 2019</b>   |                                     |
| <b>Commencement of duties</b>               | <b>January 2020</b>  |                                     |

## 11. Submission procedures

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The application file (template form) must include all items required and needed for the scientific and technical evaluation of the proposal. The finalised proposal must ONLY be submitted in electronic format (online submission).

➤ **Content of application:**

The application must be written in English (the French version is optional). It must contain:

- Detailed candidate CV (previous scientific and teaching activities, methodological skills, competencies in supervision, value enhancement, expert review, etc.);
- List of main publications;
- Structured description of plans for research, teaching and scientific leadership;
- Description of research dissemination and value enhancement actions;
- Indicative list of funding requirements via the Chair or other funding procedures used by the Chairholder.

➤ **Electronic format submission:**

The complete application in Word97-2003 file format must not exceed 4 MB, and shall be uploaded online via the following website: <http://www.e-cancer.fr/Institut-national-du-cancer/Appels-a-projets/Appels-a-projets-en-cours/CHAIRESHS-2019>

**(PDF format shall not be accepted).**

## 12. Contacts

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If you would like further information on this call for projects, please contact:

**Damien Tamisier**, research project manager in SHS, at INCa ([dtamisier@institutcancer.fr](mailto:dtamisier@institutcancer.fr));

**Deadline for submission of proposals:**

**October 2019 – midnight**

**Online submissions:**

<http://www.e-cancer.fr/Institut-national-du-cancer/Appels-a-projets/Appels-a-projets-en-cours/CHAIRESHS-2019>