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Editorial



Peter PAUWELS Executive director Cancéropôle CLARA

2011, a renowned dimension and enlarged field of action for CLARA

2011 was a most fulfilling year for the Cancéropôle CLARA. Aside from daily missions which involve uniting teams, supporting projects and coordinating the scientific aspects of oncology in Rhône-Alpes Auvergne, we will retain the support of regional authorities and also of the French National Cancer Institute (INCa) which certified the Cancéropôle for 2011-2014.

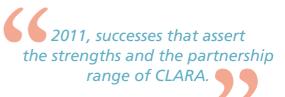
For the first time in their history, the certification of the seven French Cancéropôles by INCa and the allocation of their financing for the 2011-2014 period were subject to assessment by the Research and Higher Education Evaluation Agency (AERES). Particularly positive for CLARA, this evaluation first emphasized the significant contributions of the Cancéropôle in terms of boosting inter-regional oncology and the continued development of marketable applications of Research results. Secondly, it gave guidelines for CLARA actions through 2014.

The following are highlights of 2011:

- Structuring of the Research support strategy for the Cancéropôle CLARA by the identification of six uniting scientific axes, of which two are themes of the future "Evaluation, Risks Perception and Cancer Prevention" and "Environment, Nutrition and Cancer", from which the first achievements arise.
- Increasing activity with 270 Research teams in connection with 210 projects, for which it operates on a daily basis.
- The continued transfer of innovative applications with four *Proof of Concept* projects currently under clinical development and the launch of *OncoStarter*, an original project maturation program.
- Rapid development of CLARA beyond its borders in France, Europe and the rest of the world.

The quality of the CLARA network teams was acknowledged in 2011 with the introduction of top-class structures following calls for high-quality projects such as LYRIC (one of two Integrated Cancer Research Sites (SIRIC) in France), the laboratory of excellence DEVweCAN and the Carnot Institute CALYM... These successes provide CLARA with a wider field of international partners and also a new scope to continue its efforts to support translational and transfer research. The Cancéropôle CLARA will not, however, be any less attentive to the balance of forces over the whole of its territory.

The success of these actions shows yet again the pivotal role of the Cancéropôle CLARA in interfacing skills and opening Research dialogue towards economic development. It is in this dynamic that the Cancéropôle CLARA has stepped up its actions to work and coordinate its activities with those of its partners such as development structures, incubators and the Lyonbiopôle competitiveness cluster, standing tall as an influential figure of expertise and innovation in oncology.



2011 Landmarks



Key figures

€178M investment in Cancer Research (total budget) of which

€3.6M allocated to the Cancéropôle CLARA by the French National Cancer Institute (INCa) in connection with its certification (2011-2014)

210 projects in progress mobilizing 270 research teams including:

- 58 INCa projects involving CLARA teams initiated in 2011, of which
 - 34 as leader
- 24 in partnership with other Cancéropôles
- 20 Proof of Concept projects (of which 5 initiated in 2011)
- 20 European projects (of which 5 initiated in 2011)

Outstanding events

A Research support strategy in line with the objectives of the French Cancer Plan II

To make the best use of inter-regional strengths in oncology, CLARA has developed its basic themes with a view to maximizing collaborations and encouraging the influence of inter-regional teams.

In particular, it has reinforced its activity by implementing two new measures which mobilize CLARA teams on themes of the future meeting the objectives established by the Cancer Plan II "to understand through Research the inequalities in relation to Cancer, in order to reduce them" and "to determine environmental and life-style risks". On the basis of these objectives, the Cancéropôle CLARA has undertaken initiatives to mobilize Research teams and to start structuring projects based on the emerging themes "Environment, Nutrition and Cancer" and "Inequalities and Cancer" (cf. Appendix 1).

Development and implementation of *OncoStarter*, CLARA's new maturation program

With the launch of *OncoStarter* in October 2011, the Cancéropôle CLARA wishes to further develop applications arising from the results of Cancer Research. This project maturation program, aiming to dynamize translational Research and emerging themes, incorporated its first two projects in the fields of haematological and breast cancers.



Four CLARA *Proof of Concept* projects in clinical development

Among the 20 *Proof of Concept* projects in progress, four are in clinical development. They concern a high-intensity focused ultrasound device against hepatic metastases, an antibody for treating sarcoma, a therapeutic vaccine against melanoma and an immunity follow-up platform for patients with breast cancer undergoing chemotherapy.

A network enriched with new structures of excellence in oncology

The opening of the Lyon Cancer Research Center, the creation of the Carnot Lymphoma Institute (CALYM), the selection of the Laboratory of excellence DEVweCAN (Development, Cancer and Targeted Therapies), the "European Center of Excellence" certification of the Central Pathological Anatomy and Cytology Laboratory at the Édouard Herriot Hospital and finally the selection of the Integrated Cancer Research Site in Lyon (one of the two current SIRICs in France out of the five planned) bear witness to the high scientific quality of the Cancéropôle CLARA teams. They also validate the CLARA strategy, unconditional promoter of strong translational Research and scientific excellence.

A steady collaborative dynamic

The collaborative dynamic of CLARA is expressed, **on a national scale**, by the close involvement of its teams in 58 new projects resulting from 2011 INCa calls for projects: 34 as leader and 24 in partnership with the other Cancéropôles.

On an international scale, CLARA is successfully continuing its strategy of developing links with Research teams beyond national borders. Three projects accepted by INCa have a European dimension, while five European projects were initiated in 2011. With over 130 partners in Europe and the world, including increased synergies with three clusters located in Spain, the Cancéropôle has developed its network considerably. Finally, CLARA has expanded into China with the recent creation of its alter ego, CLARA International Shanghai, a Sino-French oncology Research network involving 14 Research institutes from Rhône-Alpes and Shanghai.



Environment, Nutrition and Cancer: the emergence of a strong theme

A major goal in 2011 was to build the foundations of this theme of the future. The actions included, among others, **two chairs of Excellence** aiming to encourage the integration of top-ranking scientists in laboratories and provide them with the means to conduct ambitious research projects:

- "Nutrition and Cancer" chair, financed by Auvergne University and the Auvergne Regional Council (Coordination: S. BASU)
- "Cancer, Environment and Nutrition" chair, in partnership with the Léon Bérard Cancer Center, Merck Serono and the City of Lyon (Coordination: B. FERVERS)

In line with Cancer Plan II objectives, the Cancéropôle CLARA has worked towards revitalizing the Research effort in strong themes, thus contributing to the visibility of French Research on an international level.

Cancéropôle CLARA Recognized assets and renewed confidence for the 2011-2014 period



In 2011, on the initiative of the French National Cancer Institute (INCa), the Research and Higher Education Evaluation Agency (AERES) evaluated the activity of the seven Cancéropôles since 2007. The certification of the Cancéropôles and funding allocation for a new three-year period (2011-2014) were based on the results of this evaluation. Particularly advantageous for the Cancéropôle CLARA, it was qualified as "a model potentially applicable to other Cancéropôles". It has displayed major strengths which, on the basis of the recommendations of INCa and the Cancer Plan II, form the spearheads of the Cancéropôle CLARA's 2011-2014 roadmap.

AERES: a positive evaluation for CLARA

AERES REPORT

Excerpts from the Research and Higher Education Evaluation Agency (AERES) of February 7, 2011 drawn up by an international jury of experts

CLARA is a research network unique in its kind which has made considerable progress since 2007; its contributions have been significant in three main fields: 1) Tumor escape, Cellular Plasticity and Therapeutic Targeting, 2) Infections and Cancer and 3) Nanotechnologies, Imaging and Cancer.

The good points of CLARA noted

- The certification of several platforms and biological resources centers, the increasing success in calls for projects, the continued development of marketable applications ensuing from research results and the international reach.
- The very high quality of management, which greatly increases platform sharing, project implementation, communication policy and scientific coordination.
- The transparency of activities carried out and projects financed is equal to the top university institutions in the United States. The fact of having an independent committee (Development Committee) which regularly assesses CLARA's work is without a doubt an additional advantage.
- Very strong support from regional authorities.
- Pharmaceutical and biotechnology companies successfully attracted to the inter-region.
- The presence of the International Agency for Research on Cancer (IARC) in Lyon offers sound opportunities for the development of international research cooperation.

In its February 7, 2011 report, AERES, commissioned by INCa in connection with the certification of the Cancéropôles, emphasized the added value of CLARA and namely "the significant contributions of its priority scientific axes; the continued development of applications based on Research results and the international reach"* of its actions.

The report mentions the "considerable progress"* contributed by the three priority scientific axes developed by CLARA: Tumor Escape, Cellular Plasticity and Therapeutic Targeting – Infections and Cancer – Nanotechnologies, Imaging and Cancer.

They generated concrete results, such as initiating clinical studies in the treatment of hepatic metastases.

The report also mentions the success of the strategy to support the technological and industrial transfer of research results for which CLARA has been the forerunner for six years. Several projects of the Proof of Concept public-private partnership program have reached either a clinical or marketing stage. Attractive to a variety of sources (industrial partners, local authorities, European Regional Development Funds (ERDF)...), this system "successfully attracts pharmaceutical and biotechnology companies to the region"*. The Proof of Concept program currently represents a total budget of €36M and the 22 innovating companies involved (including seven accompanied start-ups) benefit from a direct financial support on their activities.



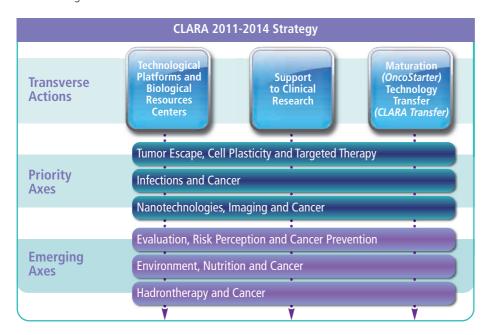
Finally, as emphasized in the AERES report, the "international reach" * of the Cancéropôle is manifested in three ways:

- Involvement in 20 European projects in progress and large-scale achievements (European Lymphoma Institute, World Sarcoma Network, participation in the International Cancer Genome Consortium...)
- High-quality French scientific production in oncology, of which 23%** of high-impact French articles are issued from CLARA teams
- Foreign companies interest in the *Proof of Concept* program

The Cancéropôle CLARA has thus seen its choice of strategic decisions and its proactive attitude crowned with success. It is on the strength of its qualities and with the benefit of the recommendations of the AERES report that it implemented its 2011-2014 roadmap.

2011 shaped by the recommendations of INCa and the French Cancer Plan II

During the first year of this new three-year period for the Cancéropôles, CLARA has implemented its activity in the national Cancer Research strategy. It concentrated mainly on three transverse actions and six uniting themes.



Three flagship points of this strategy ...

To establish synergies with the other Cancéropôles

In 2011 and as recommended by AERES, CLARA took "the necessary measures to play a driving role and establish synergies with other Cancéropôles"*. It launched a thrust for inter-Cancéropôle collaboration: a third of CLARA projects chosen by INCa associate teams from the inter-region with teams from the other six Cancéropôles. The same is true regarding structuring projects selected by CLARA and initiated in 2011: they involve teams from the Great East, Great South-West and North-West Cancéropôles.

To include the emerging axes in a national dynamic

In 2011, the Cancéropôle CLARA supported three structuring projects concerning the "Inequalities and Cancer" theme from various perspectives: access to screening, development of Cancer and aftercare. These projects are conducted in relation to the effort made on a national level by the Cancéropôles and INCa on the oncology/human and social sciences interface.

To continue mentoring the transfer of Research results

In line with Cancer Plan II, the Cancéropôle CLARA relied on the advances of its priority scientific axes to increase its efforts on translational Research and strengthen its links with clinical Research by drawing up and implementing a new program, OncoStarter.

OncoStarter targets the principal actors in clinical and industrial transfer and gives preference to projects in emerging themes that are linked to clinical Research and may involve private companies. (cf. page 9).

- * Research and Higher Education Evaluation Agency AERES report of February 7, 2011 (references)
- ** Study conducted by INSERM, in coordination with INCa for the 2005-2009 period and concerning the IF> 20 journals, i.e. very high quality

Particularly positive for CLARA, the AERES assessment brought forward the uniqueness of the CLARA network while pointing out its significant contribution to Research.

A comprehensive supply of services for the development of innovation in oncology



In connection with the strategy of pursuing the development of innovative applications in oncology promoted by the Cancéropôle CLARA, the Proof of Concept program was incorporated in 2011 in a wider program, CLARA Transfer. In parallel, CLARA launched OncoStarter, a project maturation program intended to maximize the chances of securing financing in future calls for proposals.



Project maturity, a key factor for innovation in oncology

The potential for clinical and industrial transfer of the project is a necessary condition for innovation in oncology, but it is not sufficient: it is equally important to submit mature projects to Research financing programs and to convince financiers of the relevance and soundness of the project. Consolidating scientific data and presenting development prospects and project challenges constitute the bases of *OncoStarter*.

Devised by CLARA and launched in 2011, OncoStarter aims to accelerate the maturation of projects to increase their legibility and attractiveness to funding providers. The chosen projects benefit from financial support plus personalized accompaniment to enhance project quality.

Rigorous selection of the first two projects in 2011

OncoStarter is based on a strict selection of projects, shared between a Committee of independent experts and the CLARA Scientific Steering Committee. The jury comprises renowned scientists from the fields concerned, evaluation experts and key figures in industrial transfer.

Projects are selected on the basis of scientific and technical information (relevance of aims and intended purpose, validity of the concept and scientific interest) and the potential impact of the project. Two initial projects were included in the *OncoStarter* program in 2011: a targeted delivery system (CLUB) and an onco-haematology drug candidate (HLA-G).

OncoStarter, first two projects selected:

- CLUB, chimiothérapie liposomale activée par ultrasons pour le traitement du cancer du sein Partners: Lyon Cancer Research Center, INSERM, the incubator Créalys and CAVI-T
- HLA-G, comme candidat médicament contre la prolifération de cellules tumorales dans les cancers hématologiques

Partners: Cancer Research Center of Lyon and HLA-G Technologies

The relevance of OncoStarter is expressed in particular through the range of expert skills made available by CLARA. It establishes CLARA as a major figure in oncology development and an essential complement to traditional incubation and maturation programs. *OncoStarter* contributes to increasing the legibility and attractiveness of projects to funding providers (CLARA *Proof of Concept* program, ANR, INCa, Oséo, European programs such as FP7...) and to further exploiting the potential for innovation in inter-regional oncology.



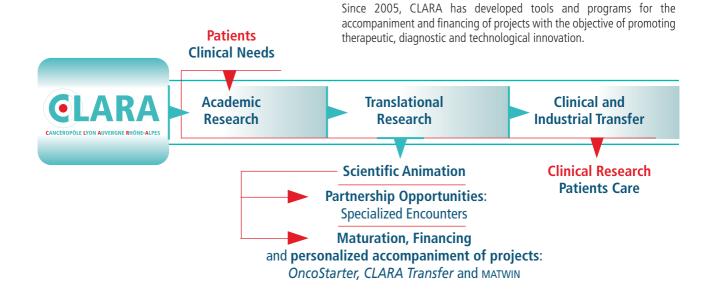
An original program

Specifically positioned to accelerate project maturation to maximize chances of obtaining financing, OncoStarter aspires to surpass conventional project maturation systems.

In this perspective, teams are offered customized support in addition to financial support allocated to consolidate preliminary scientific data.

There are two priority fields:

- * Translational Research
- CLARA emerging themes (cf. diagram p. 10)



CLARA TRANSFER IN 2011

Key figures

Portfolio

- 20 proofs of concept in progress
- 5 new projects selected in 2011
- 6 proofs of concept achieved

Results

- 1 mini-robot on the market in Europe and the United States
- 4 projects in clinical development
- 3 pre-clinical validations carried out

Over 70 partners

- 43 academic teams
- 7 clinical centers
- 22 companies of which 7 accompanied start-ups, 1 Japanese subsidiary established in Lyon and 7 enterprises having raised €90M

Total budget of €36M

- €25M invested by inter-regional industrial partners
- €11M contributed by local authorities and the European ERDF funds

CLARA Transfer, a multi-skill program for clinical and industrial transfer in oncology

CLARA Transfer is a unique public-private program for clinical and industrial Research transfer in partnership with private companies. It is based on the experience and results of its **Proof of Concept Program** Drawn from an essential combination of academic, clinical and industrial partners, it aims to meet the needs of the main figures in oncology transfer (academics, pharmaceutical industrialists, foundations, risk capital).

CLARA Transfer offers expert advice in oncology with a view to providing the best possible support for project development. It is structured around four complementary actions:

- Raising awareness of transfer through training courses
- Detecting and evaluating project opportunities and R&D partnerships
- Coaching projects with expert support
- **Co-financing** and **co-leading** of collaborative transfer projects involving academic and clinical partners and companies within the *Proof of Concept* program.





CLARA Transfer, clinically relevant results

After six years' existence, a few remarkable successes such as the ViKY mini-robot for laparoscopic surgery and non-compressible Research times, *CLARA Transfer* is now able to show clinical progress from its *Proof of Concept* program. **Four projects are currently in clinical development**: HIFU, Synfrizz, GeniusVac-Mel4 and Lymphos'1. Thus, they offer new prospects for patients.

HIFU: Treatment of hepatic metastases by focalized ultrasounds

The HIFU project is aimed at developing a high-intensity focalized ultrasound technique for treating liver metastases. After the development of a pre-clinical proof of concept, a first phase I clinical study showed the feasibility and intensity of tissue destruction by HIFU, safety of use of the device and also tolerance of treatment — conducted without puncturing the organ. In 2011, the project started a phase II clinical study, during which 32 patients will be included. The aim of this study is to evaluate the precision with which an HIFU lesion can be made, and to show the capacity of generating lesions incorporating a metastasis while ensuring a sufficient safety margin. This phase II, which will end in late 2012, has received additional financing granted by CLARA.

Partners: Léon Bérard Cancer Center, INSERM U1032 and EDAP-TMS Financing: €535K (CLARA) + €590K (EDAP-TMS) over 5 years







The support and loyalty provided by CLARA since 2005 has enabled us to progress in the HIFU adventure, by having all the necessary ingredients for success. This success is demonstrated by a solid partnership with EDAP, the finalization of the pre-clinical proof of concept, and AFSSAPS' approval of a phase I/II prospective monocentric study. To date, 15 patients have been included.

Synfrizz: Innovative radio-immunotherapy for synovial sarcomas

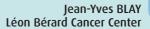
Synovial sarcoma, a rare tumor in adolescents and young adults, has no curative treatment for advanced stages of the disease. Following the pre-clinical proof of concept of a monoclonal antibody specifically targeting this type of tumor, the Synfrizz project is now aiming to develop an innovative treatment targeting synovial sarcomas that can be used in the clinical environment, in radio-

immunotherapy. In this respect, the Persons Protection Committee and AFSSAPS (French Agency for Healthcare Product Safety) gave their agreement, on September 15, 2011 and October 13, 2011 respectively, for the launch of a phase I first-in-man/first-in-class clinical study. This study will be conducted at the Léon Bérard Cancer Center then in two other Cancer Centers (Bergonié Institute and Gustave Roussy Institute). The first patient will be included in January 2012. The Synfrizz project not only embodies an international dynamic with the partnership of the Japanese company OncoTherapy Science, but also boosts regional development with the setting-up of an OncoTherapy Science subsidiary in Lyon.

Partners: Léon Bérard Cancer Center and OncoTherapy Science (Japanese company)

Financing: €751K (CLARA) + €5 600K (OncoTherapy Science) over 4 years







If the Cancéropôle CLARA is able to benefit from so many proofs of concept, it is because the relationship between the academic, clinical and industrial partners was understood very early on.



Joël PLUMAS French National Blood Service and INSERM U823

It was CLARA who put us in touch with Solid Drug Development (SDD), in order to reinforce our development strategy and prepare better for regulatory requirements. Indeed, the product we propose to test in the clinical environment is an innovative drug therapy which is subject to recent complex French and European regulations. The work carried out with CLARA and SDD allows us to prepare the various aspects of our application: pre-clinical proof of concept, production and clinical study on cellular therapy.



GeniusVac-Mel4: A new immunotherapy strategy for the treatment of melanoma

The GeniusVac-Mel4 project aims to develop an immunotherapy which targets advanced malignant melanoma. This "therapeutic vaccine" project consists of stimulating patients' own immune defences against their tumor by an innovative process. The objectives of the project are to optimize the "drug" product, to ensure its production in therapeutic conditions and to test it under clinical conditions by setting up a clinical study. To consolidate the key stages of the project, the team benefits from personalized support from CLARA and from a Swiss firm specializing in drug development.

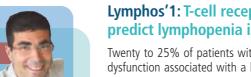
Partners: French National Blood Service, CHU-Grenoble and "Immunology and Cancer Immunotherapy" UJF-INSERM unit

Financing: \leq 800K (CLARA) + \leq 1 000K (French National Blood Service) over 4 years

∵∵ LYMPHOS'1

Nicolas PASQUAL ImmunID

The CLARA Proof of Concept projects are efficient and, among other actions, permit clinical validation of biomarkers. The reactivity and flexibility of the Cancéropôle meant that financing could be rapidly obtained to implement the project, producing a lever effect raising funds of €2.4M in June 2009. The size of the project, with the solid combination of industrial coordinator plus public coordinator, made it possible to have strong entrepreneurial skills, and also close links with a network of clinicans, researchers and statisticians specializing in clinical studies.



Lymphos'1: T-cell receptor (TCR) repertoire study to predict lymphopenia in patients with breast cancer

Twenty to 25% of patients with metastatic breast cancer present immune dysfunction associated with a high mortality rate following chemotherapy. The Lymphos'1 project aims to validate the clinical use of a prognostic tool for immune-system related disorders, combining analysis of the immune repertoire and lymphocyte count in patients with metastatic breast cancer; it will allow the evaluation of immunodeficiency risks associated with treatment and the prediction and improvement of the efficacy of proposed treatments. The first retrospective clinical results obtained then confirmed by a prospective cohort showed score-1 divpenic patients (with a low TCR diversity) and lymphopenic patients (few lymphocytes) with increased risk of not responding to treatments. Following promising results, a prospective cohort of patients with metastatic breast cancer is at the end of recruitment and the project has been extended to metastatic lung cancer. This work has enabled studies to be considered, aiming at restoring immune defences in breast cancer patients. Partners: Léon Bérard Cancer Center and ImmunID

Financing: €425K (CLARA) + €428K (ImmunID) over 3 years



A surge of innovation confirmed in 2011

In connection with the *Proof of Concept* call for projects issued in March 2011, the Cancéropôle CLARA selected five new innovative projects. With a total budget of €4M, they concern the clinical evaluations of an anti-melanoma therapeutic vaccine, a system for assisting liver cancer surgery by fluorescence, and also pre-clinical evaluations of a device for resection of superficial colorectal cancers by pulsed water jet, an automatic urethrovesical suturing device and a therapeutic antibody in colorectal cancer (Cf. Appendix 3). These projects cover a variety of themes, with three medical devices (UroClip, HepatoFluo, Enki-HEH), one drug candidate (Thera8) and one therapeutic vaccine (GeniusVac-Mel4).

Several events in 2011 illustrate the added value offered to industrials and partners by the transfer support provided by CLARA: the **implementation of new development projects** with the companies Fluoptics and iDD Biotech, the **arrival of three new industrial partners** (NESTIS start-up, HLA-G and EFS Rhône-Alpes) and the **incubation of a new project** at CREALYS (Anastom-Tech).

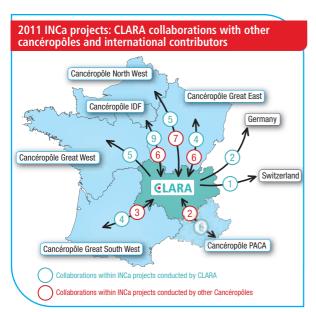
The relevance of the CLARA Transfer service offer is shown by a **strong increase in requests for support in terms of expertise and specialized consultancy** on projects. These requests mainly concern the critical phases of the projects: combining incubating or emerging start-ups (Enki HEK and UroClip) with clinical development stages (GeniusVac-Mel4).

The innovation dynamic of the Cancéropôle CLARA has also been shown through the national MATWIN program (Maturation and Accelerated Translation with Industry) created by the Cancéropôle Great South West. The CLARA teams submitted three letters of intent which were accepted in the 2011 call for projects.

The expert support offered by CLARA establishes it as a major figure in oncology development and an essential complement to existing systems.

A knowledge-sharing dynamic

To contribute to the development of a national critical mass on its Research axes, the Cancéropôle CLARA stepped up initiatives to develop a knowledge-sharing dynamic in 2011 with the other Cancéropôles in France and the interregional actors in oncology.



With the Cancéropôles in France

Developing synergies with the other Cancéropôles has been a priority for the Cancéropôle CLARA in 2011. This collaborative measure meets the dual aim of implementing INCa's recommendations and participating in setting up a national critical mass, for both emerging themes and the priority themes of the Cancéropôle CLARA.

Thus, 24 projects financed by INCa in 2011 and led by other Cancéropôles are bringing together the CLARA teams. Also, ten CLARA projects selected by INCa are mobilizing teams from the other six Cancéropôles, while three projects are international collaborations (cf. Appendix 2).

Reinforced partnerships with local actors

2011 was an important year for strengthening local partnerships for the

Cancéropôle CLARA. It contributed specific and complementary actions to assignments of inter-regional structures, providing undisputed expertise in oncology, including:

Lyonbiopôle competitiveness cluster



Cooperation with Lyonbiopôle increased during 2011, aiming to develop interactions between the two structures with a view to encouraging the development of "Infections & Cancer" interface projects. This closer relationship is the precursor of inter-regional coordination in oncology.

The working axes initiated in 2011 will be actively continued in 2012, such as increasing cooperation in the accompaniment of innovative projects in oncology, developing joint scientific activities including a partnership in the CLARA Scientific Forum in 2012, joint training programs and promoting high-visibility initiatives in oncology.



The development structures Auvergne Valorisation, GRAVIT, Lyon Science Transfert and the incubators Busi, Créalys, Floralis, GRAIN and Lyon Ingénierie Projets















An essential role is played by development structures in accompanying the work of regional actors in oncology for technology transfer and the maturation of innovative projects. Brought in very early on in the projects, the development structures are consulted in particular for the evaluation of either *Proof of Concept* or *OncoStarter* projects and mobilized annually for the 4th CLARA Industrial-Academic Encounters. The innovation in oncology draws great benefit from capitalizing on the synergies established between the development structures and CLARA. This is demonstrated by the Uroclip and CLUB projects supported by CLARA which, thanks to the accompaniment of development structures and partner incubators, led to the creation of the companies Anastom-Surgical and CAVI-T.

Major events aimed at oncology professionals

During 2011, the events organized or jointly organized by the Cancéropôle CLARA brought together over 1,000 Cancer professionals (researchers, clinicians, industrials). Mobilizing high-profile speakers and ensuring to offer a quality program, the CLARA Scientific Forum and the Industrial-Academic Encounters constitute the major yearly events of the Cancéropôle CLARA.

The 6th CLARA Scientific Forum in partnership with the BioVision Life Sciences World Forum

CLARA attaches great importance to carrying out its activities in partnership with regional actors in order to streamline the offering of events on related subjects and indirectly increase their visibility. Those are the reasons for the partnership between the Scientific Foundation of Lyon and the South-East, and the CLARA Scientific Forum, of which its renewal is planned for the 2013 edition of BioVision.

Organized on March 28 and 29, the 6th Scientific Forum mobilized 420 participants on important subjects concerning Cancer and brought together internationally-renowned speakers. A session called "Cancer Research for Personalized Patient Treatment" was jointly organized with BioVision. The interactivity between the two events was encouraged by free access to the sessions of both events and the sharing of a networking platform specially set up for the occasion.

The 6th Scientific Forum is an opportunity to highlight the work of young researchers by awarding:

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|-------|------|------|--------|
| Ihree | anst | ract | prizes |
| | 4000 | | PILES |

| Cyril LAFON INSERM – Lyon University | Application of ultrasound to sonosensitive liposomal doxorubicin for treating tumors: <i>in vivo</i> proof of concept |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| Magali ROCHE Cancer Research Center of Lyon, UMR INSERM U1052, CNRS 5286, Lyon | Integrated genomic profiling identifies loss of chromosome 11p impacting transcriptomic activity in aggressive pituitary PRL tumors |
| Karen SAGORNY Cancer Research Center of Lyon, Lyon University | Deregulation of Twist-1 in the CD34+ compartment represents a novel prognostic factor in chronic myeloid leukemia (CML) |

and two poster prizes

| Élodie JOBARD Ultra-High Field NMR Center - Léon Bérard Cancer Center, Lyon | 1H NMR-based metabolomics reveals a serum metabolic signature of advanced metastatic breast cancer |
|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Alain KFOURY Cancer Research Center of Lyon | MyD88 is required for RAS/ERK mediated cell survival in cancer cells |

4th Industrial-Academic Encounters

A now major gathering between inter-regional researchers, clinicians, and industrials, the 4th CLARA Industrial-Academic Encounters were held on December 7, 2011 at the Rockefeller Faculty in Lyon. The figures confirmed the interest of the actors in the sector in strengthening ties between the academic and industrial sectors: 220 participants, divided equally between industrials and academics, around 50 (30 in 2010) innovative projects in oncology presented by researchers to industrials, and 500 face-to-face meetings between researchers who were present to promote their projects and industrials who participated as technology monitors. On this occasion, Philippe AMIEL (Gustave Roussy Institute), Jean DERÉGNAUCOURT (Pasteur Institute) and Damien SALAUZE (Curie Institute), among others, summed up the academic, clinical and industrial challenges of transfer research. The CLARA 2011 Trophies rewarded the development potential of the projects of Laurence LAFANECHERE (CNRS, Grenoble) and Pascale COHEN (Cancer Research Center of Lyon/Lyon 1 University) concerning, respectively, a LIM Kinase inhibitor and a new prognostic and predictive biomarker for breast cancer.

Nine events co-organized by CLARA in 2011: a few examples ...

- Physical Activity and Cancer Workshop (Lyon, April 11, 2011)
 In partnership with the Léon Bérard Cancer Center and the International Agency for Research on Cancer (IARC)
- Tumor Escape, Cellular Plasticity and Targeted Therapies Workshop (Saint-Etienne, May 11-12, 2011)

The second edition of this workshop saw the number of teams involved increase to 85 (50 in 2010).

- CLARA- NACRe (National Cancer-Nutrition Research Network) Nutrition and Cancer Seminar: primary, secondary and tertiary prevention (Lyon, May 19, 2011)
 First edition of this seminar, including a Cancéropôle and the NACRe network
 Result: mobilization of participants from the seven Cancéropôles
- First Shanghai/Rhône-Alpes Translational Oncology Research Symposium (Shanghai, China, July 4-6, 2011)

This symposium created the foundation of greater collaboration between the inter-regional teams and Chinese Research actors within the framework of CLARA International Shanghai (see p. 26)

- Third CLARA-PACA Bioinformatics Workshop (Lyon, September 28, 2011)

 Quality Controls in the Applications of Next Generation Sequencing (NGS) to Cancer Research and Patient Management
- Two CLARA training sessions on the regulatory aspects of oncology development (Lyon, April 13 and October 11, 2011)

Concerning the initial development of an anti-cancer drug candidate and tracers and contrast media in imaging

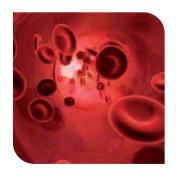
KEY COMPONENTS

CLARA's scientific events in 2011

- → 9 events either organized or co-organized by CLARA
 - Over **1,000** participants mobilized
 - 165 speakers
- → 7 events sponsored by CLARA in Rhône-Alpes Auvergne
- → A few examples of repercussions:
 - National multicentric study project launched during the Physical Activity and Cancer workshop on April 11, 2011 (organized in partnership with Léon Bérard Cancer Center and IARC), with joint publication planned in the French Bulletin du Cancer
 - 70% of participants at the 4th Industrial-Academic Encounters concretely followed up on this event in the short or medium term (i.e. next year)

Invested in a national and inter-regional collaborative approach, the Cancéropôle CLARA contributes actively to the emergence of collaborations and promising projects.

A research ecosystem enriched with leading structures



A great year for inter-region, 2011 saw the creation of several excellent Cancer structures. The opening of the Lyon Cancer Research Center, the creation of the Carnot Lymphoma Institute CALYM (Lymphoma), the certification of the Laboratory of excellence Development, Cancer and Targeted Therapies, the European Center of Excellence certification of the Central Pathological Anatomy and Cytology Laboratory at the Édouard Herriot Hospital and the certification of the Integrated Cancer Research Site (SIRIC) of the Health Cooperation Group (GCS) Léon Bérard Cancer Center – Lyon Civil Hospitals bear witness to the acknowledged excellence of Research within CLARA. They reward the close involvement of clinicians and scientific teams and confirm CLARA's strategy supporting strong translational Research while enabling patients to benefit in the long run from progress in basic Research.

At the same time, inter-regional resources continued their advancement with cutting-edge structures.

New structures of excellence with international reach

The Cancer Research Center of Lyon (CRCL)



Consisting of 19 teams (360 persons, 103 of whom are researchers and teacher-researchers), the Cancer Research Center of Lyon (CRCL) opened its doors in January 2011. Its aims are to increase international recognition and the attractiveness of the site, to facilitate knowledge transfer to the clinical environment and industry, and

to develop teaching and training. Three scientific departments handle the priority Research themes:

- Tumor Escape (Directors: P. MEHLEN and J-Y. SCOAZEC)
- Information Flow in the Cancer Cell (Directors: G. THOMAS and D. AUBOEUF)
- Immunity, Microenvironment, Virus (Directors: C. CAUX and F. ZOULIM)

Director: A. PUISIEUX

Supervisors: INSERM, CNRS, Lyon 1 University

Hospital Partners: Léon Bérard Cancer Center (CLB), Lyon Civil Hospitals (HCL)

For more information: www.crcl.fr

Carnot Institute: Consortium for Accelerating Innovation and its Transfer to the Lymphoma Field (CALYM)



Based on partnership Research, CALYM relies on the leading position of the Adult Lymphoma Study Group — Clinical Research (GELARC) in order to meet the Research and innovation needs of companies. It responds to



significant health, scientific and socio-economic challenges. With over 70,000 new cases per year in Europe (of which 12,000 are in France) and about two million patients diagnosed in the world, lymphoma, the 6th most common form of Cancer, is the most common blood cancer.

With 13 partners in France, the **creation of CALYM shares national skills in lymphoma Research and confirms the CLARA strategy which supported the foundation of the European Lymphoma Institute** (ELI) in 2010. CALYM is structured around four Research and Development "pillars":

- The search for and validation of biological targets and in vitro / in vivo models of lymphoma
- Blood or tissue biomarkers
- Identification of early pharmacodynamic signs of activity
- Optimization and use of tools, processes and platforms linked with clinical Research

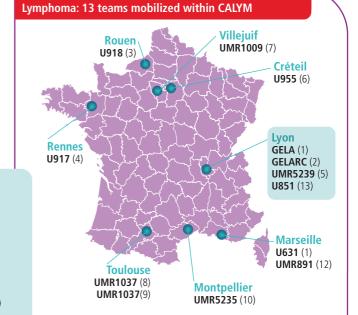
The Carnot Institute certification will enable partners to benefit from financial and operational support from the National Research Agency (ANR) and from encouragement to public-private partnerships to progress in lymphoma Research.

Coordinator: P. DESCHASEAUX (GELARC - South Lyon Hospital Center)

Supervisors: INSERM, CNRS, Universities (East Paris Créteil, Claude Bernard Lyon 1, Méditerranée, Montpellier 1 and 2, Rennes 1, Rouen, Toulouse 3, South Paris 11), Lyon Civil Hospitals, Higher Teacher-Training College of Lyon, Gustave Roussy Institute

Grant: about €0.6M per vear

For more information: www.instituts-carnot.eu/fr/calym



Skills
Clinical Research (1), (2)
Tumor Genome (3), (5), (6), (8), (11), (12)
Host Genome (3), (5), (7), (10)
Pathology (6), (8), (12)
Transcriptome (3), (4), (5), (6), (7), (8), (11), (12)
Proteome (4), (8), (11)
Immunomonitoring (4), (6), (9), (10), (12), (13)
Lymphomagenesis B (4), (11), (13)
Animal Models (5), (7), (8), (9), (10), (11), (13)
Biological Resources Center (3), (4), (5), (6), (8), (12)

The Laboratory of excellence DEVweCAN



Among the first Laboratories of Excellence selected by the General Investment Committee, the DEVweCAN project (Development, Cancer and Targeted Therapies) aims for better knowledge of embryonic mechanisms reactivated during tumor progression. On the border between Cancer

Research and embryonic development, it intends to validate new tumor progression markers in order to identify new diagnostic and/or therapeutic targets.

For the training aspect, DEVweCAN will introduce a Master in oncology in 2013 and will endeavour to strengthen its links with international institutions such as Imperial College London, Massachusetts Institute of Technology and Johns Hopkins University, thus contributing to the spread of inter-regional oncology Research.

Coordinator: P. MEHLEN (Cancer Research Center of Lyon)

Partners: Cancer Research Center of Lyon, Stem Cell and Brain Institute (Bron), Molecular and Cellular Genetics Center (Lyon)

Grant: €1.2M per year over 10 years

European Certification of the Pathological Anatomy and Cytology Central Laboratory of the Édouard-Herriot Hospital



Hôpitaux de Lyon

Among nine hospitals in Europe, the Pathological Anatomy and Cytology Central Laboratory of the Édouard-Herriot Hospital received the certification of the European Neuroendocrine Tumor Society (ENETS) as a European Center of excellence on neuroendocrine and gastroenteropancreatic tumors. The Lyon laboratory has developed expertise in the fields of

recruitment, diagnosis and therapeutic care; it is involved in clinical Research and doctor information on digestive endocrine tumors, a rare pathology. This certification is the result of close and structured collaboration within a network (clinical pathology, oncology, digestive surgery, gastroenterology, endocrinology, radiology, genetics and nuclear medicine) and benefits from the interface with teams of the Cancer Research Center of Lyon.

Contact: J-Y. SCOAZEC (Lyon Civil Hospitals)

For more information: www.enets.org - www.chu-lyon.fr

Lyon Integrated Cancer Research (LYRIC)



The Lyon Integrated Cancer Research (SIRIC) project, known as LYRIC, brings together the Léon Bérard Cancer Center and the Lyon Civil Hospitals. With the Curie Institute, it is one of the first two projects certified by the French National Cancer Institute (INCa). The project involves three large Research programs applied in priority to breast, lung sarcomas, lymphomas and digestive, gynaecological and

and child cancers, sarcomas, lymphomas and digestive, gynaecological and neuroendocrine tumors:

• Characterizing changes in the embryonic development signaling pathways in tumor cells, aiming to identify new markers for diagnosis and new targeted treatments

- Immunosurveillance of cancers and tumor escape
- Targeting of macroscopic tumors *in vivo* via new physical destruction techniques Several emerging Research programs have been identified in human and social sciences and in molecular epidemiology, in particular with the International Agency for Research on Cancer (IARC). **600 researchers and doctors are involved in LYRIC and steadfastly dedicated to transfer Research and the development of personalized clinical applications and therapeutics.** Coordinator: J-Y. BLAY (CLB), assisted by two directors: A. PUISIEUX (CRCL) and J-Y. SCOAZEC (HCL) Partners: Synergy Lyon Cancer Foundation, International Agency for Research on Cancer, Léon Bérard Cancer Center, Lyon Civil Hospitals, Claude Bernard - Lyon I University, INSERM, CNRS and INRIA

For more information: www.e-cancer.fr/recherche/structuration-de-la-recherche/siric

Financing provided by INCa and DGOS: €1.8M per year over 5 years

The Nano-Biotechnology BITum project

Selected during the 2011 calls for Investments for the Future projects, the Nano-Biotechnology BITum project completes the successes achieved with the DEVweCAN and CALYM projects. In particular, it aims to **develop new methods of diagnosis of prostate cancers using a fluorescent marking in tumors in addition to ultrasound imaging**. This new approach will allow the improvement of the contrast and resolution of biopsies and therefore, the efficiency of diagnosis. The project focuses on prostate cancer detection. The technology developed will avoid the recourse to MRI imaging, which is more expensive, more cumbersome and more difficult to implement.

Coordinator: P. BOISSEAU (CEA - Grenoble)
Partners: Sorb, Supersonic Imagine
Grant: €1.35 M over 4 years



Inter-regional achievements at the heart of innovation

With several innovating achievements, the inter-regional resources continue their development as proved by the examples of Optimal, Opti-Clinic, Jean Perrin and Hygée Centers and LINA.

Optimal and Optic-Clinic: pre-clinical multi-modal imaging for patient care in Grenoble

The Optimal and Optic Clinic Clinatec platforms combine ultrasound, optical and molecular imaging technologies. They enable complex biological functions to be understood, especially macromolecules associated with cell function.

Developed by J-L. COLL, the **Optimal** platform, IBiSA certified (Biology, Health and Agronomy Infrastructures) and candidate in the call for "Infrastructures" projects in relation to Investments of the Future, is dedicated to *in vivo* optical imaging in small animals.

Launched in 2011 with a grant of €30K from the Cancéropôle CLARA, the Optic-Clinic platform constitutes the continuation of work carried out on small animals. Combining technology and clinical

context, Optic-Clinic has, at the Grenoble University Hospital, the latest generation of multi-modal imaging equipment for better diagnosis of Cancer patients. Optic-Clinic is associated with the Grenoble University Hospital, CEA, Joseph Fourier University, INSERM and CNRS.

Clinatec®: a biomedical Research center dedicated to micro nanotechnology applications for health in Grenoble



Dedicated to micro-nanotechnology applications, Clinatec® aims to carry out proofs of concept in humans for the development of implantable and minimally invasive medical devices. Clinatec® includes the cancer field with applications for biopsies and drug dispensing.

Coordinator: F. BERGER, CEA

Partners: CEA, Grenoble University Hospital, INSERM and Joseph Fourier University

The HYGEE platform, an inter-regional resources center for cancer information, prevention and education in Saint-Etienne



Setting up partnerships and completing architectural projects have been particularly active stages in 2011. The Center moved to new premises in Saint-Etienne. Several Research projects have been initiated, both on patient education and secondary prevention by organized screening (FORMADOC, DECIDEO), and on human sciences REMPAR (study on HPV vaccination) and

VIAS (social re-integration of women \leq 50 years after breast cancer treatment).

The noteworthy challenges are currently on developing the Center's "primary prevention" aspect: renewal of the educational approach in the exhibition area intended for the public, introduction of interventional Research projects and creation of a territorial dynamic for encouraging Research on prevention, based on the development of new networks with both public actors (such as IUFM (Teachers Training Colleges) and the French Institute of Education) and with companies.

Certification of the Interdisciplinary Laboratory of studies on Aerosolized Nanoparticles in Saint-Etienne

The Interdisciplinary Laboratory of Studies on Aerosolized Nanoparticles (LINA) has been EA 4624 certified since January 1, 2011 at the end of a four-year maturation within IFR INSERM 143. This mixed team, combining Jean Monnet University and the Saint-Étienne Graduate School of Engineering took form gradually, starting from the *in vitro* study of the toxicity of manufactured nanoparticles. Apart from the university/engineering school mix, one of LINA's strong points is the close collaboration

between physico-chemists, biologists, clinicians and surgeons. Since 2008, the early work has led to participation in coordinating the CLARA theme of "Nanotechnologies, Imaging and Cancer". The structuring of LINA has benefited greatly from contacts established with other regional teams, mainly from Lyon and Grenoble, in relation to structuring programs of the Cancéropôle.

Jean Perrin Center in Clermont-Ferrand



Following the *Sino-French Workshop in oncology* (November 25 and 26, 2011, Sun Yat Sen University Cancer Center, China), the Jean Perrin Center (Y-J. BIGNON team) conducted the first two consultations in oncogenetics in China and set up a working group of 10 persons on clinical oncogenetics. At the same time, a Sino-French oncogenetics school at the Sun Yat Sen

University Cancer Center should see its first sessions start next May.



Projects accompanied by associations mobilizing financing for researchers in Rhône-Alpes Auvergne:

Cancer Research Association: €3,128K

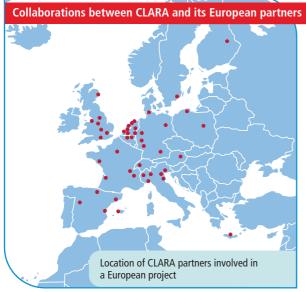


National Cancer League: €2,543K (apart from department committees' financing)





International influence



The intensity of the international development of the Cancéropôle CLARA was a prominent feature of its activity in 2011. It has led to the implementation of new European programs and a broader field of international partnerships.

European projects: figures for new and current projects

Twenty European oncology projects are now in progress in the interregion. They represent a total budget of around €100M and contribute effectively to the diversification of the Cancéropôle CLARA's financing sources. Five new projects were initiated in 2011, two of which are

coordinated by CLARA members and three by partners. These new projects give CLARA researchers access to a network of over 70 new entities spread over Europe.

European projects coordinated within the perimeter of the Cancéropôle CLARA and initiated in 2011



BONE-NET (bone metastases)

The aims of this project are the development of basic knowledge and the acquisition of qualifications by researchers, to enable significant progress in the field of bone metastases. It is based on the Marie Curie initial training network (ITN) set up under the 7th Framework Program for Research and Technological Development (FP7).

Coordinator: P. CLEZARDIN (Claude Bernard Lyon 1 University)

Grant: €3.3 M; 2011-2015 (European Commission)

For more information: Appendix 4

EUROSARC (Sarcoma, rare cancer of soft tissue)

This project accompanies the development of the World Sarcoma Network, set up in 2009 with the financial support of CLARA (€450K) (see box). Its aim is to share expert skills across the world (13 national sarcoma groups) and provide a significant critical mass of patients for clinical Research on sarcoma.

Coordinator: P. CLEZARDIN (Claude Bernard Lyon 1 University)

Grant: €3.3 M; 2011-2015 (European Commission)

For more information: Appendix 4



European projects in partnership initiated in 2011

Three projects were initiated by CLARA partners with a total budget of €18M. They concern:

- Epigenetic therapeutic signatures for improvement of prognosis in lung cancer (**CURELUNG** project CLARA Partner: Elisabeth BRAMBILLA (Joseph Fourier Grenoble 1 University)
- Establishment of a virtual European institute for clinical and translational Research on paediatric and adolescent cancers (ENCCA project – CLARA Partner: Liliana VIEIRA (Léon Bérard Cancer Center, Lyon) and Olaf KELM (International Agency for Research on Cancer, Lyon)
- Hepatic fibrosis and liver cancer in Africa (PROLIFICA project CLARA Partner: Fabien ZOULIM (Cancer Research Center of Lyon), Pierre HAINAUT (International Agency for Research on Cancer, Lyon).

For more information: Appendix 4





An extensive field of international collaborations

Every year, the field of CLARA's international partners expands. In 2011, CLARA strengthened its links with Spain and established collaborations with China.







A continued collaboration with Spain

Collaboration with the Spanish oncology clusters is part of CLARA's strategy to form strong links with other oncology clusters in Europe. The partnership with the Biotecyl cluster (Salamanca — Castilla y León region — Spain) aims to elaborate a joint work plan with Research axes focused on new therapeutic approaches, personalized medicine and sarcoma and leukaemia biomarkers.

Furthermore, CLARA is continuing the dynamic of collaboration initiated in January 2010 at the Clinical Applications of Nanotechnologies in Oncology seminar, co-organized with the Cancéropôle Great South West in Montpellier, the Institute for Bioengineering of Catalonia and the InNaBioSanté Foundation. It will lead to the organization of a dedicated event within the 7th Scientific Forum in 2012, with the Catalans Oncocat and BioNanoMed clusters. It aims to promote exchanges between researchers and companies working in the fields of nanomedicine/oncology and to initiate European-scale projects.

For more information: www.biotecyl.com - www.bionanomedcat.org - www.oncocat.org

Three INCa projects coordinated by CLARA teams and open to international environment

In 2011, three INCa projects led by CLARA featured international dynamics:

- Unité de Coordination en Oncogériatrie Rhodanienne Coordinated by: Catherine TERRET/Gilles ALBRAND (Léon Bérard Cancer Center/Lyon Civil Hospitals) Partnership with Germany
- Prospective and comparative evaluation of radiotherapy by carbon ions (carbon therapy):
 establishment of a cohort of patients with a localized Cancer, inoperable (or in R2 resection) and
 radioresistant (chordoma, sarcoma or cystic adenoid carcinoma extended at the skull base),
 and comparison of the results of carbon therapy (conducted outside France) and alternative
 radiotherapy methods (conducted in France) Coordinated by: Pascal POMMIER (Léon Bérard
 Cancer Center, Lyon) Germany
- Regulation of MyD88 functions at the interface between inflammation, and Ras-induced transformation and signaling — Coordinated by: Toufic RENNO (Léon Bérard Cancer Center, Lyon) — Switzerland

The Cancéropôle CLARA expands to China

The Cancéropôle CLARA now has a Chinese counterpart: CLARA International Shanghai. A Research network dedicated to Cancer Research, it brings together academic teams from the Rhône-Alpes Region and the City of Shanghai. Fourteen Research institutes from Rhône-Alpes and Shanghai are already involved. The first established collaborations deal with Cancer stem cells. This collaboration is supported by the Rhône-Alpes Region and the City of Shanghai.

The future: CLARA's ambitions



In line with Cancer Plan II, the Cancéropôle CLARA will follow its 2011-2014 roadmap with the objective of continuing to bring Research teams together. In this respect, it will keep encouraging an interdisciplinary approach. It will attach particular importance to acting as a partner within its network and implementing the actions which best meet the latter's expectations.

To implement its strategy successfully, the Cancéropôle CLARA benefits from several advantages such as its expertise in industrial and clinical transfer of academic Research results, the presence of leading structures in its territory and its reach beyond its borders. Supported by this exceptional environment, the Cancéropôle CLARA intends to operate whilst giving priority to the following:

- Speed up the development of applications arising from Research results, with emphasis on three axes
 - Each Research project is directed towards an ad hoc expert: oncology Research involves a diversity of specialized skills, without which the project may fail to result in improved patient care. CLARA's well-endowed network is able to offer, through its members, a wide range of expertise to accompany each project closely within its field of Research. CLARA intends to take particular care in matching the needs of each project with the supply of skills.
 - A comprehensive supply of services for clinical and industrial transfer with emphasis on:
 - Translational and Transfer Research with the *OncoStarter, Proof of Concept* and MATWIN programs
 - Increase in value of its project portfolio by the accompaniment of pre-clinical study projects towards clinical development
 - Coordination with local oncology structures and/or other fields for complementary skills, improved organization and profitable use of resources
- Prioritize the development of emerging axes "Environment, Nutrition and Cancer" and "Inequalities and Cancer", in accordance with the priorities of Cancer Plan II and in close collaboration with other Cancéropôles, in order to advance with a national critical mass
- Pursue the development of CLARA beyond its borders by developing its involvement in European programs and ambitious international initiatives. Implementing this strategic axis will help develop CLARA's reach and attractiveness to industrial partners involved in the oncology sector.

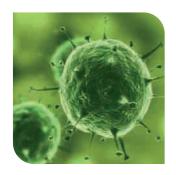
CLARA's 2011-2014 strategy was validated by the French National Cancer Institute (INCa). Following its certification, a budget of €3.6M was allocated to the Cancéropôle. With excellent results in terms of economic value and international Research development, CLARA will be able to continue to benefit from the trust and support of territorial collectivities (€4.6M for 2012-2013), and also from European and industrial financing.

CANCER PLAN II

Excerpt

- Measure 1.5: Increase interaction between public research development structures and economic actors to follow up and accompany projects with economic potential
- Measure 2: Understand by research the inequalities involving Cancer so as to reduce them
- Measure 3: Identify the environmental and life style risks
- **Measure 4**: Dynamize clinical research
- **Measure 5**: Make France an international reference in Cancerology

Financial position overview 2011



Despite a difficult environment for public budgets, INCa and local authorities renewed their support for CLARA in 2011.

Under its 2011-2014 program, INCa allocated a sum of €3.6M over three years to CLARA, the majority of which is assigned to Oncostarter, a new support program for the maturation of Translational Research projects and emerging themes.

Thirteen local partner authorities signed a new framework agreement for a total sum of \in 4.6M over two years (2012 and 2013), the majority of which is assigned to the Proof of Concept transfer and development program.

A total of **€28.6M in new financing** was committed in 2011 by public authorities for the Cancéropôle CLARA's activities, distributed as follows:

- €18M from INCa for 2011 calls for projects
- €2.7M from local authorities and ERDF for the Proof of Concept development program
- €1.8M over three years from INCa for 2011-2014 activities, including OncoStarter
- €3.1M for the Saint-Etienne Hygée Center
- €3M for CLARA Network Management, €1.7M of which over three years from INCa for 2011-2014

€16.5M were mandated during 2011 on all the commitments made by public authorities since CLARA's foundation:

- €10.6M from INCa, €9.5M of which in connection with calls for Research projects, and over €1M for 2011-2014
- €3.3M from the European Regional Development Fund (ERDF) and local authorities, €1.8M of which is for the Proof of Concept program, and €1.5M for CLARA's scientific events and large projects such as the European Lymphoma Institute (ELI), World Sarcoma Network (WSN) and the Hygée Center
- €2.6M from local authorities of which €0.9M is for the Saint-Étienne Hygée Center and €1.7M for the Léon Bérard Cancer Center.

In sum, funding by CLARA, since 2003, amounts to €178M in public and private financing (aside from European projects):

- €86.9M from the government, mainly to support Research projects by INCa (€67.4M), platforms (€9.7M) and scientific events and ProCan programs (€8.6M)
- €62.1M from the 14 Rhône-Alpes Auvergne authorities as partners, for the CLARA platforms (€41.9M), Proof of Concept projects (€9.3M) and Network Management and large projects such as ELI, WSN and the Hygée Center (€10.9M)
- €4.6M from ERDF, €1.7M of which was allocated to platforms, and over €2.2M for the *Proof of Concept* development program
- €25M from the 22 industrial partners involved in the *Proof of Concept* projects.

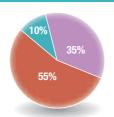
Overview of CLARA's 2003-2011 multiyear plan

Breakdown of key funding by program and by source

| | | Approved 2 | 011 (in €K) | Overall total approved 2003-2011 (in €K) | | | |
|-----------------|-------------------------------------|---------------|-------------|------------------------------------------|----------------|------------|--|
| | Program | Approved 2011 | Paid 2011 | Paid 2011 | Total Approved | Total Paid | |
| | Auvergne (1) platform | - | - | - | 3 823 | 3 823 | |
| | IARC platform | - | - | - | 1 100 | 1 100 | |
| | Grenoble (1) platform | - | - | - | 4 176 | 3 874 | |
| Platforms | East Lyon CLB Platform | 1 959 | 1 719 | 1 719 | 9 459 | 9 219 | |
| | South & East Lyon Platform | - | - | - | 8 500 | 8 500 | |
| | High Field NMR-CNRS | - | - | - | 19 850 | 19 850 | |
| | Saint-Etienne (1) platform | 1 100 | 500 | 896 | 6 246 | 2 323 | |
| Total platforms | ; | 3 059 | 2 219 | 2 615 | 53 154 | 48 689 | |
| | Calls for Proposal INCa 2003 - 2011 | 18 043 | 4 261 | 9 521 | 67 441 | 48 991 | |
| Funding | ProCan 1 Scientific Axes | - | - | 50 | 2 650 | 2 650 | |
| of projects | Axes 2011 - 2014 | 1 809 | 543 | 543 | 1 809 | 543 | |
| | Proof of Concept | 2 691 | 498 | 1 784 | 11 532 | 8 219 | |
| | Other Projects | - | - | - | 1 135 | 1 135 | |
| | Total Funding of Projects | | 5 302 | 11 898 | 84 567 | 61 538 | |
| Total Network | Management/Major Projects | 3 020 | 1 030 | 2 014 | 15 819 | 12 886 | |
| Total | | 28 622 | 8 551 | 16 527 | 153 540 | 123 113 | |

(1) Amount paid inferior to maximum planned (2) New CLARA-INCa 2011-2014 program

Overall orientation of approved funding during the period 2003-2011



Financing of Projects: €84.6M

■ Platforms: €53.2M

Network Management/Major Projects: €15.8M

Overview of the multi-year scheduling of the CLARA program, 2003-2011

Status of the main sources of funding on a national level

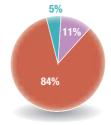




| | Ap | proved 2 | 011 (in €K | 0 | Overall total approved 2003-2011 (in €K) | | | |
|------------------------------------|----------|----------|------------|-------|------------------------------------------|-------------------------------------|---------------------------------|--|
| Recipient | Invest | ment | Operations | | Total paid | Including Overall Total Approved | Including Overall Total Paid | |
| (funding) | Approved | Paid | Approved | Paid | in 2011 | 2003-2011 | 2003-2011 | |
| Platforms | - | - | - | - | 13 | 9 150 | 9 013 | |
| Calls for Proposal (1) | - | - | 18 043 | 4 261 | 9 521 | 67 441 | 48 991 | |
| Biological Resources Centers | - | - | - | - | - | 1 027 | 1 027 | |
| ProCan 1 Axes | - | - | - | - | - | 2 550 | 2 550 | |
| ProCan 2 Axes | - | - | 1 809 | 543 | 543 | 1 809 | 543 | |
| Network Managements/Major Projects | - | - | 1 740 | 522 | 522 | 4 053 | 2 834 | |
| Total | - | - | 21 592 | 5 326 | 10 599 | 86 030 | 64 958 | |

(1) Figures for the Cancer Plan and INCa are estimates, incluting STIC and PHRC

Amounts approved by the State on a national level 2003-2011



Funding of Projects: €72.8M

Platforms: €9.2M

Network Management/Major Projects: €4M



Status of the main sources of funding by the Rhône-Alpes Area



| | Ар | proved 2 | 011 (in €K | 0 | Overall total approved 2003-2011 (in €K) | | |
|------------------------------------|----------|----------|------------|-------|------------------------------------------|----------------------------------|---------------------------------|
| Recipient | Invest | ment | Opera | tions | Total paid | Including Overall Total Approved | Including Overall Total Paid |
| (funding) | Approved | Paid | Approved | Paid | in 2011 | 2003-2011 | 2003-2011 |
| Proof of Concept | - | - | 990 | 198 | 529 | 2 066 | 852 |
| Network Managements/Major Projects | - | - | - | - | 466 | 700 | 498 |
| TOTAL | - | - | 990 | 198 | 995 | 2 766 | 1 350 |

Amounts approved by ERDF Rhône-Alpes 2003-2011





| | Ар | proved 2 | 011 (in €K | 0 | Overall total approved 2003-2011 (in €K) | | | |
|------------------------------------|----------|----------|------------|-----------------------|------------------------------------------|----------------------------------|---------------------------------|--|
| Recipient | Invest | ment | Opera | Operations Total paid | | Including Overall Total Approved | Including Overall Total Paid | |
| (funding) | Approved | Paid | Approved | Paid | in 2011 | 2003-2011 | 2003-2011 | |
| Biological Resources Centers | - | - | - | - | - | 108 | 108 | |
| Proof of Concept | - | - | - | - | - | 37 | 37 | |
| Network Managements/Major Projects | - | - | - | - | - | 216 | 216 | |
| TOTAL | - | - | - | - | - | 361 | 361 | |

Amounts approved by the State 2003-2011



Rhôn€\lpes

| | Ar | proved 2 | 011 (in €ŀ | () | Overall total approved 2003-2011 (in €K) | | |
|------------------------------------|----------|----------|------------|------|------------------------------------------|----------------------------------|---------------------------------|
| Recipient | Invest | ment | Operations | | Total paid | Including Overall Total Approved | Including Overall Total Paid |
| (funding) | Approved | Paid | Approved | Paid | in 2011 | 2003-2011 | 2003-2011 |
| Platforms (1) | 1 959 | 1 719 | - | - | 2 103 | 17 915 | 15 373 |
| Proof of Concept | - | - | 185 | 185 | 204 | 1 135 | 1 135 |
| Network Managements/Major Projects | - | - | 415 | 384 | 415 | 3 969 | 3 518 |
| TOTAL | 1 959 | 1 719 | 600 | 569 | 2 722 | 23 019 | 20 026 |

(1) Amount paid inferior to maximum planned

Amounts approved by the Rhône-Alpes Region 2003-2011



Platforms: €17,915KProof of Concept: €1,135K

Network Management/Major Projects: €3,969K



LE DÉPARTEMENT

| | Ap | proved 2 | 011 (in €K | () | Overall total approved 2003-2011 (in €K) | | |
|------------------------------------|----------|------------------|------------|--------------------|------------------------------------------|----------------------------------|---------------------------------|
| Recipient | Invest | Investment Opera | | rations Total paid | | Including Overall Total Approved | Including Overall Total Paid |
| (funding) | Approved | Paid | Approved | Paid | in 2011 | 2003-2011 | 2003-2011 |
| Platforms | - | - | - | - | - | 8 100 | 8 100 |
| Proof of Concept | - | - | 630 | - | 189 | 2 875 | 1 930 |
| Network Managements/Major Projects | - | - | 370 | - | 111 | 3 076 | 2 521 |
| TOTAL | - | - | 1 000 | - | 300 | 14 051 | 12 551 |

Amounts approved by the Rhône Department 2003-2011





Status of the main sources of funding by the Rhône-Alpes Area

GRANDLYON communauté urbaine

| | Ap | proved 2 | 011 (in €k | () | Overall tota | l approved 2003-2 | 011 (in €K) |
|------------------------------------|----------|------------|------------|-------|--------------|----------------------------------|---------------------------------|
| Recipient | Invest | Investment | | tions | Total paid | Including Overall Total Approved | Including Overall Total Paid |
| (funding) | Approved | Paid | Approved | Paid | in 2011 | 2003-2011 | 2003-2011 |
| Platforms | - | - | - | - | - | 11 350 | 11 350 |
| Proof of Concept | - | - | 315 | - | 315 | 3 900 | 3 428 |
| Network Managements/Major Projects | - | - | 185 | - | 185 | 2 350 | 2 029 |
| TOTAL | - | - | 500 | - | 500 | 17 600 | 16 807 |

Amounts approved by the Greater Lyon 2003-2011



■ Platforms: €11,350K ■ Proof of Concept: €3,900K

Network Management/Major Projects: €2,350K



| | Ар | proved 2 | 011 (in €k | () | Overall total approved 2003-2011 (in €K) | | |
|----------------------------------------|----------|----------|-----------------|------|------------------------------------------|-------------------------------------|---------------------------------|
| Recipient | Invest | ment | nent Operations | | Total paid | Including Overall Total Approved | Including Overall Total Paid |
| (funding) | Approved | Paid | Approved | Paid | in 2011 | 2003-2011 | 2003-2011 |
| Platforms | - | - | - | - | - | 1 716 | 530 |
| Network Managements/Major Projects (2) | - | - | 125 | 125 | 125 | 500 | 500 |
| TOTAL | - | - | 125 | 125 | 125 | 2 216 | 1 030 |

[2] Saint-Étienne Hygée Center 2009, 2010 and 2011 paiements via Network Management, Hygée Center repayment agreement being processed

Amounts approved by the Saint-Etienne Metropole 2003-2011





| | Ар | proved 20 | 011 (in €K | 0 | Overall total approved 2003-2011 (in €K) | | | |
|------------------------------------|------------|-----------|------------|------|------------------------------------------|-------------------------------------|---------------------------------|--|
| Recipient (funding) | Investment | | Operations | | Total paid | Including Overall Total Approved | Including Overall Total Paid | |
| | Approved | Paid | Approved | Paid | in 2011 | 2003-2011 | 2003-2011 | |
| Platforms (3) | 1 100 | 500 | - | - | 500 | 1 100 | 500 | |
| Network Managements/Major Projects | - | - | - | - | 25 | 75 | 75 | |
| TOTAL | 1 100 | 500 | - | - | 525 | 1 175 | 575 | |

(3) €1M paid in 2011 instead of 2010

Amounts approved by the Loire Department 2003-2011



| 6% | |
|-----|--|
| | |
| | |
| ٧ | |
| 94% | |
| | |
| | |

■ Platforms: €1,100K

■ Network Management/Major Projects: €75K

| NO | Ар | proved 2 | 011 (in €K | 1 | Overall total approved 2003-2011 (in €K) | | | |
|------------------------------------|------------|----------|------------|------|------------------------------------------|-------------------------------------|---------------------------------|--|
| Recipient | Investment | | Operations | | Total paid | Including Overall Total Approved | Including Overall Total Paid | |
| (funding) | Approved | Paid | Approved | Paid | in 2011 | 2003-2011 | 2003-2011 | |
| Proof of Concept | - | - | 192 | 58 | 134 | 386 | 213 | |
| Network Managements/Major Projects | - | - | 10 | - | 10 | 40 | 30 | |
| TOTAL | - | _ | 202 | 58 | 144 | 426 | 243 | |

Amounts approved by the City of Grenoble 2003-2011



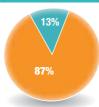
Proof of Concept: €386K

■ Network Management/Major Projects: **€40K**



| | Ap | proved 2 | 011 (in €K |) | Overall total approved 2003-2011 (in €K) | | | |
|------------------------------------|------------|----------|------------|------|------------------------------------------|----------------------------------|---------------------------------|--|
| Recipient | Investment | | Operations | | Total paid | Including Overall Total Approved | Including Overall Total Paid | |
| (funding) | Approved | Paid | Approved | Paid | in 2011 | 2003-2011 | 2003-2011 | |
| Proof of Concept | - | - | 192 | 58 | 162 | 386 | 213 | |
| Network Managements/Major Projects | - | - | 15 | - | 15 | 60 | 45 | |
| TOTAL | - | - | 207 | 58 | 177 | 446 | 258 | |

Amounts approved by Grenoble Alpes Metropole 2003-2011



Proof of Concept: €386K

■ Network Management/Major Projects: €60K



Status of the main sources of funding by the Rhône-Alpes Area



| | Ap | proved 2 | 011 (in €k | () | Overall total approved 2003-2011 (in €K) | | | |
|------------------------------------|------------|----------|------------|-------|------------------------------------------|----------------------------------|---------------------------------|--|
| Recipient (funding) | Investment | | Opera | tions | Total paid | Including Overall Total Approved | Including Overall Total Paid | |
| | Approved | Paid | Approved | Paid | in 2011 | 2003-2011 | 2003-2011 | |
| Proof of Concept | - | - | - | - | 232 | 350 | 262 | |
| Network Managements/Major Projects | - | - | - | - | 15 | 45 | 45 | |
| TOTAL | - | - | - | - | 247 | 395 | 307 | |

Amounts approved by the Isère Department 2003-2011





| DYON BY SHONICALITY | Ap | proved 2 | 011 (in €ŀ | 0 | Overall total approved 2003-2011 (in €K) | | | |
|------------------------|------------|----------|------------|------|------------------------------------------|----------------------------------|---------------------------------|--|
| Recipient (funding) | Investment | | Operations | | Total paid | Including Overall Total Approved | Including Overall Total Paid | |
| | Approved | Paid | Approved | Paid | in 2011 | 2003-2011 | 2003-2011 | |
| ProCan I | - | - | - | - | 50 | 50 | 50 | |
| TOTAL | - | - | - | - | 50 | 50 | 50 | |



Hôpitaux de Lyon Approved 2011 (in €K) Overall total approved 2003-2011 (in €K) Including Overall Including Overall Recipient Operations Investment Total paid Total Approved Total Paid (funding) in 2011 Approved Paid Approved Paid 2003-2011 2003-2011 ProCan 1 Axes 50 50 50 50 **TOTAL**

| TOTAL FUNDING IN RHÔNE-ALPES | 3 059 | 2 219 | 3 624 | 1 008 | 5 785 | 62 555 | 53 608 |
|---------------------------------|-------|-------|-------|-------|-------|----------|--------|
| | | | | | | <u> </u> | 00 000 |

Summary of the multi-year scheduling of the CLARA program, 2003-2011

Status of the main sources of funding by the Auvergne Area



| | Ap | proved 2 | 011 (in €K | 0 | Overall total approved 2003-2011 (in €K) | | | |
|------------------------|------------|----------|------------|------|------------------------------------------|----------------------------------|---------------------------------|--|
| Recipient (funding) | Investment | | Operations | | Total paid | Including Overall Total Approved | Including Overall Total Paid | |
| | Approved | Paid | Approved | Paid | in 2011 | 2003-2011 | 2003-2011 | |
| Platforms (1) | - | - | - | - | - | 1 665 | 1 665 | |
| Proof of Concept | - | - | 82 | - | - | 182 | 41 | |
| TOTAL | - | - | 82 | - | - | 1 847 | 1 706 | |

⁽¹⁾ Auvergne ERDF + Massif Central ERDF covering Auvergne Region + the Loire Department



| | Ap | proved 2 | 011 (in €k | () | Overall total approved 2003-2011 (in €K) | | | |
|------------------------|------------|----------|------------|------|------------------------------------------|----------------------------------|---------------------------------|--|
| Recipient (funding) | Investment | | Operations | | Total paid | Including Overall Total Approved | Including Overall Total Paid | |
| | Approved | Paid | Approved | Paid | in 2011 | 2003-2011 | 2003-2011 | |
| Platforms | - | - | - | - | - | 505 | 505 | |
| TOTAL | - | - | - | - | - | 505 | 505 | |



| | Ap | proved 2 | 011 (in €K | 0 | Overall total approved 2003-2011 (in €K) | | | |
|------------------------------------|------------|----------|------------|-------|------------------------------------------|-------------------------------------|---------------------------------|--|
| Recipient | Investment | | Opera | tions | Total paid | Including Overall Total Approved | Including Overall Total Paid | |
| (funding) | Approved | Paid | Approved | Paid | in 2011 | 2003-2011 | 2003-2011 | |
| Platforms (1) | - | - | - | - | - | 1 183 | 1 183 | |
| Proof of Concept | - | - | - | - | - | 50 | 50 | |
| Network Managements/Major Projects | - | - | 160 | 0 | 80 | 525 | 365 | |
| TOTAL | - | - | 160 | 0 | 80 | 1 758 | 1 598 | |

⁽¹⁾ Amounts paid inferior to maximum planned



Status of the main sources of funding by the Auvergne Area



| | Ар | proved 2 | 011 (in €K | () | Overall total approved 2003-2011 (in €K) | | | |
|------------------------------------|------------|----------|------------|------|------------------------------------------|----------------------------------|---------------------------------|--|
| Recipient (funding) | Investment | | Operations | | Total paid | Including Overall Total Approved | Including Overall Total Paid | |
| | Approved | Paid | Approved | Paid | in 2011 | 2003-2011 | 2003-2011 | |
| Platforms (1) | - | - | - | - | - | 240 | 240 | |
| Proof of Concept | - | - | 70 | - | 20 | 114 | 44 | |
| Network Managements/Major Projects | - | - | - | - | 30 | 140 | 140 | |
| TOTAL | - | - | 70 | - | 50 | 494 | 424 | |

⁽¹⁾ Amount paid inferior to maximum planned



| | Ар | proved 2 | 011 (in €K | 0 | Overall total approved 2003-2011 (in €K) | | | |
|------------------------------------|------------|----------|------------|------|------------------------------------------|----------------------------------|---------------------------------|--|
| Recipient | Investment | | Operations | | Total paid | Including Overall Total Approved | Including Overall Total Paid | |
| (funding) | Approved | Paid | Approved | Paid | in 2011 | 2003-2011 | 2003-2011 | |
| Platforms | - | - | - | - | - | 100 | 100 | |
| Proof of Concept | - | - | 35 | - | - | 50 | 15 | |
| Network Managements/Major Projects | - | - | - | - | 15 | 70 | 70 | |
| TOTAL | - | - | 35 | - | 15 | 220 | 185 | |



| Approved 2011 (in €K) | | | | 0 | Overall total approved 2003-2011 (in €K) | | |
|-----------------------|------------|------|------------|------|------------------------------------------|-------------------------------------|---------------------------------|
| Recipient | Investment | | Operations | | Total paid | Including Overall Total Approved | Including Overall Total Paid |
| (funding) | Approved | Paid | Approved | Paid | in 2011 | 2003-2011 | 2003-2011 |
| Platforms | - | - | - | - | - | 50 | 50 |
| TOTAL | - | - | - | - | - | 50 | 50 |



| | Approved 2011 (in €K) | | | | Overall tota | l approved 2003-20 | 011 (in €K) |
|------------------------|----------------------------------|------|----------|---------------------------------|--------------|--------------------|-------------|
| Recipient (funding) | Investment Operations Total paid | | 3 3 | Including Overall Total Paid | | | |
| | Approved | Paid | Approved | Paid | in 2011 | 2003-2011 | 2003-2011 |
| Platforms | - | - | - | - | - | 40 | 40 |
| TOTAL | | | | | | 40 | 40 |



| | Approved 2011 (in €K) | | | | Overall total approved 2003-2011 (in €K) | | |
|------------------------|-----------------------|------|-------|---------------------|------------------------------------------|--------------------------------------------------------------|-----------|
| Recipient (funding) | Invest | ment | Opera | erations Total paid | | Including Overall Including Overal Total Approved Total Paid | |
| | Approved | Paid | Paid | Versé | in 2011 | 2003-2011 | 2003-2011 |
| Platforms | - | - | - | - | - | 40 | 40 |
| TOTAL | - | - | - | - | - | 40 | 40 |

| TOTAL FUNDING | | | | | |
|----------------------|--|-----|-----|-------|-------|
| BY THE AUVERGNE AREA | | 347 | 145 | 4 954 | 4 548 |

Amounts approved in the Auvergne Area 2003-2011



Appendix 1Several key actions on emerging axes



Two emerging axes were identified in 2011, within the repositioning of CLARA Research support. Among the activities carried out in 2011, we notice:

• Environment, Nutrition and Cancer

Two strong Research approaches

- L'impact des facteurs environnementaux et nutritionnels sur le déclenchement et la progression du cancer du sein avec 2 études en cours, l'une sur la prise en charge nutritionnelle et physique de patientes atteintes d'un cancer du sein, prélude à la mise en place d'une étude clinique multicentrique, l'autre sur l'impact des molécules environnementales perturbatrices, soutenue par l'Agence Nationale de la Recherche (CLARENCE project - Pascale COHEN)
- Le diagnostic des cancers professionnels avec une étude pilote avec des patients, visant à compléter la base de données RNV3P (Réseau National de vigilance et de prévention des pathologies professionnelles) sur les liens entre cancer du poumon et exposition professionnelle (Béatrice FERVERS, CLB/Barbara CHARBOTEL, HCL)

A comprehensive portfolio on the links between Cancer and environmental exposure

- Exposition aux pesticides et cancers chez les agriculteurs
- Interactions entre les nutriments, le développement des cancers et leurs traitements
- Établissement d'un indicateur d'exposition aux nanoparticules en relation avec la future plate-forme de recherche en écotoxicologie environnementale et en écotoxicologie de Rovaltain

A website for the general public for wide circulation of scientific information www.cancer-environnement.fr

A website on the links between Cancer and the environment put on line thanks to CLARA's synergy between the Léon Bérard Cancer Center and the International Agency for Research on Cancer

Inequalities and Cancer

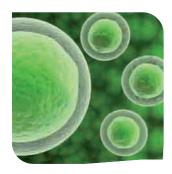
As part of its objective to provide material for a national critical mass via structuringprojects and/or collaborations between Cancéropôles, the Cancéropôle CLARA supports three key projects

 Analyse compréhensive des motifs de participation et de non participation au dépistage du cancer colorectal des individus vivant dans des territoires précaires et faiblemenlow participation. Study in the Isère department

Coordinated by: Pierre MAZET (PACTE Grenoble)
Managing institution: IEP Grenoble

- Modes et hygiène de vie : explorer la surreprésentation des hémopathies lymphoïdes au sein de milieux favorisés
- Coordinated by: Patricia MEDINA (ORS Rhône-Alpes) Managing Institution: Regional Health Observatory CLARA and Cancéropôle Great East teams
- Réinscription sociale des femmes de 50 ans et moins après un traitement de cancer du sein Coordinated by: Véronique REGNIER-DENOIS (ICL) Managing Institution: Loire Cancer Institute CLARA and Cancéropôle Great South West teams

Appendix 234 CLARA projects attributed by INCa



Support for Training in Translational Research on Cancerology

- Caractérisation des tyrosines kinases impliquées dans la croissance et le traitement de tumeurs conjonctives agressives rares : les tumeurs desmoïdes Coordination: Jean-Yves BLAY (Léon Bérard Cancer Center, Lyon) €105,000
- Développement de l'approche métabolomique par résonance magnétique nucléaire et applications en recherche translationnelle pour les cancers du pancréas et du foie Coordination: Bénédicte ELENA-HERMANN (European Center for Very High Fields Magnetic Resonance (NMR), Lyon FRE3008 (CNRS), Villeurbanne) €35,000
- Étude de la relation entre le risque de cancer du sein préménopausique et les biomarqueurs sériques de diabète de type 2 et de syndrome métabolique dans la cohorte Européenne EPIC (CIRC) Coordination: Isabelle ROMIEU (Nutrition Department, International Agency for Research on Cancer, Lyon) €50,000

Free Translational Research Projects

 Analyse des paramètres immunitaires au cours d'une immunothérapie par IL-7 chez des patients atteints de cancers du sein en phase métastatique (étude randomisée de phase 1b/2, multicentrique) et corrélation avec l'évolution clinique - Coordination: Christophe CAUX (Léon Bérard Cancer Center, Lyon) - €496,000

Partner Cancéropôle: IDF

• Protéines de guidage axonal et tumeurs neuroendocrines gastroenteropancréatiques : rôle dans la progression tumorale - Coordination : Colette ROCHE / Jean-Yves SCOAZEC (INSERM U865 Laënnec Faculty, Lyon) - €360,000

Free Cancer Biomedical Research Projects

- Importance du contrôle apoptotique exercé par la Nétrine-1 au cours de l'angiogenèse tumorale Coordination: Patrick MEHLEN (Léon Bérard Cancer Center, Lyon) €400,000
- Régulation des fonctions de MyD88 à l'interface entre l'inflammation, et la signalisation et la transformation par Ras Coordination : Toufic RENNO (Léon Bérard Cancer Center, Lyon) €400.000

International Partner: Switzerland

• ACT' IN CANCER. L'architecture, la dynamique et la contractilité du réseau d'actine, des caractéristiques importantes pour prédire les capacités métastasiques

des cellules cancéreuses du poumon - Coordination: Manuel THERY (CEA, Grenoble) - €450,000

• Induction d'une immunité anti-tumorale par mobilisation des cellules dendritiques BDCA3+ Coordination: Jenny VALLADEAU / Christophe CAUX (INSERM U590, Léon Bérard Cancer Center, Lyon) -€500,000

Partner Cancéropôle: PACA

Certification of Integrated Cancer Research Site (SIRIC)

• Lyon University Cancerology (LCU) — GCS - Coordination: Jean-Yves BLAY (Claude Bernard Lyon 1 University, Villeurbanne) - €9 500,000

Free Research projects on Health and Safety, Epidemiology and Public Health

• Le métabolome polyphénolique et le risque du cancer colorectal dans l'étude EPIC (cohortes européennes et françaises) — Coordination: Augustin SCALBERT (International Agency for Research on Cancer, Lyon) - €256,000

Public Health: Support of Cancer Prevention and Screening Policies

- Promouvoir et améliorer la prévention primaire du dépistage des cancers auprès des retraités migrants vivant dans la précarité - Coordination: Mounira B'CHIR (Le Patio des Aînés, Lyon) - €9,000
- Mise en place d'un réseau sentinelle ville/hôpital de détection précoce des lésions précancéreuses et des cancers de la cavité buccale en région lyonnaise : valeur prédictive d'un examen clinique bucco-dentaire standardisé en population générale de sujets à risque de plus de 45 ans Coordination: Denis BOURGEOIS (Claude Bernard Lyon 1 University, Villeurbanne) €100.770
- Étude d'évaluation qualitative relative à l'interdiction de vente d'alcool aux mineurs (loi HPST Art. 93) Coordination : Renaud BOUTHIER (Future Health France Association, Lyon) €40,000
- Traduire pour mieux prévenir Coordination: Arnaud DE BROCA (FNATH, Life Injuries Associations, Saint-Étienne) €40,000
- Évolution des pratiques de dépistage individuel vers le dépistage organisé en Isère - Coordination: Catherine EXBRAYAT (Fight Against Cancer Office, Meylan) -€32,520
- Formation et suivi de pharmaciens, préparateurs et de travailleurs sociaux relais pour accompagner les

publics en situation de précarité vers le dépistage organisé des cancers - Coordination: Alice NOURRISSAT (Loire Cancer Institute, Saint-Étienne) - €85,218

- Dépistage organisé du cancer colorectal : évaluation d'une action complémentaire de recrutement des patients avec test positif et ayant refusé la coloscopie -Coordination: Thierry PONCHON (Lyon Civil Hospital) -€136.400
- Femmes, ruralité, prévention-santé et activités physiques Coordination: Dominique TOUATI (Regional Committee for Physical Education and Optional Gymnastics of Auvergne) €15,000

Clinical Research Hospital Program (PHRC)

• Évaluation de la valeur pronostique et prédictive des polymorphismes constitutionnels chez des patientes atteintes d'une tumeur du sein métastatique — Coordination: Thomas BACHELOT (Léon Bérard Cancer Center, Lyon) - €290,000

Partner Cancéropôles: GE, IDF, GO, PACA, GSO

• IRM hépatique avec quantification de la perfusion tumorale pour l'évaluation précoce des traitements anti-angiogéniques dans le carcinome hépatocellulaire – Coordination: Agnès RODE (Croix-Rousse Hospital, Lyon) - €211,000

Partner Cancéropôles: IDF, GO

• Étude de phase II randomisée visant à évaluer l'efficacité d'un traitement par pazopanib plus paclitaxel/carboplatine versus paclitaxel/carboplatine pour le traitement des cancers de la thyroïde anaplasiques métastatiques et/ou en rechute après traitement initial de référence — Coordination: Christelle DE LA FOUCHARDIERE (Léon Bérard Cancer Center, Lyon) - €367,000

Partner Cancéropôles: IDF, NO, GE, PACA

• Évaluation de l'efficacité et de la tolérance à l'évérolimus en néo-adjuvant chez des patients atteints de chondrosarcome — Coordination: François GOUIN/Jean-Yves BLAY (Léon Bérard Cancer Center, Lyon) €248,000

Partner Cancéropôles: GO, IDF, PACA, GSO, GE,

• Évaluation prospective et comparative de la radiothérapie par ions carbone (carbonethérapie) : mise en place d'une cohorte de patients porteurs d'un cancer localisé, inopérables (ou en résection R2) et radiorésistant (chordome, sarcome ou carcinome adénoïde kystique étendu à la base du crâne), et comparaison des résultats de la carbonethérapie (réalisée hors de France) et des modalités alternatives de radiothérapie (réalisées en France).-Coordination: Pascal POMMIER (Léon Bérard Cancer Center, Lyon) - €522,000

International Partner: Germany

Support for Innovative and Costly Techniques (STIC)

• Évaluation médico-économique de la chirurgie guidée par fluorescence pour l'optimisation de la résection des glioblastomes — Coordination: Jacques GUYOTAT(Wertheimer Hospital, Bron) - €444,000

Partner Cancéropôles: IDF, PACA, GSO, GO, NO

• Évaluation médico-économique d'une radiothérapie externe première associée à un boost en curiethérapie comparée à une irradiation externe exclusive dans les cancers de la prostate de risque intermédiaire (GETUG P05) — Coordination: Olivier CHAPET (CHU South Lyon) - €1 000,000

Partner Cancéropôles: GE, IDF, GO, PACA, GSO, NO

Support for the Installation of Per-Operative Radiotherapy Equipment for Breast Cancer

- Développement de la radiothérapie per-opératoire par électrons (Système NOVAC 11) dans le cancer du sein aux Hospices Civils de Lyon Coordination: Anne D'HOMBRES (CHU South Lyon) €300,000
- SEINPEROPRAYONX Coordination: Séverine RACADOT (Léon Bérard Cancer Center, Lyon) -€300,000

Associations and Quality of Life

 Programme personnalisé d'accompagnement social pour les familles touchées par le cancer, en Ardèche -Coordination: Mathilde GROBERT (The League Against Cancer Center - Ardèche Committee, Privas) - €27,000

Establishment of National Cancer Multicenter Clinical-Biological Bases

 Base clinicobiologique française dans le syndrome de Lynch : le projet FR3 Lys – Coordination: Christine LASSET (Léon Bérard Cancer Center, Lyon) -€500.000

Partner Cancéropôles: NO IDF

National Deployment of Oncogeriatrics Coordination Units UCOG 2011

• UCOG Rhodanienne — Coordination: Catherine TERRET/Gilles ALBRAND (Léon Bérard Cancer Center, Lyon Civil Hospitals, Lyon) - €280,920

International Partner Germany

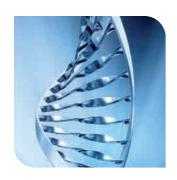
 Unité de Coordination Régionale en Oncogériatrie du sillon Alpin (UCOGAlp) - Coordination: Laetitia STEFANI/Gaetan GAVAZZI (Annecy Regional Hospital/Grenoble University Hospitals) - €268,341
 Partner Cancéropôle: IDF

Support for New Integrated and Innovative Projects in Favor of Adolescents and Young Adults with Cancer

- Mise en place d'un dispositif lié à la population AJA (15 - 25 ans) au sein des établissements CLB et IHOP à Lyon - Coordination: Perrine MAREC-BERARD (Léon Bérard Cancer Center, Lyon) - €140,000
- AJA et Cancer: Projet Arc Alpin Coordination: Dominique PLANTAZ (CHU Grenoble) - €184,040

In green, projects carried out in partnership with other Cancéropôles or with international partners.

Appendix 3CLARA Proof of Concept projects



2011: five new projects for a total budget of €4M

Two projects in clinical development

Genius Vac-Mel4, a new immunotherapy strategy on melanoma

The GeniusVac-Me14 project aims to develop immunotherapy which targets advanced malignant melanoma. This "therapeutic vaccine" project consists of stimulating patients' own immune defences against their tumor by an innovative process. The objectives of the project are to optimize the "drug" product, to manufacture it under therapeutic conditions and to test it under clinical conditions by setting up a clinical study. To consolidate the key stages of the project, the team benefits from personalized support from CLARA and a Swiss firm specializing in drug development.

Partners: French National Blood Service, Grenoble University Hospital and "Immunology and Cancer Immunotherapy" UJF-INSERM Unit

Financing: €800K (CLARA) + €1.000K (French National Blood Service) over 4 years

HepatoFluo, evaluation of indocyanine green as a fluorescent agent in image-guided liver

The treatment of hepatic metastases and primitive liver cancers requires liver resection to be carried out. In spite of current imaging techniques, the structure of liver makes it difficult to identify liver segments; vascular components are also often discovered during parenchymal section. Fluorescence imaging now appears to be a potential aid in liver surgery. Moreover, most medical devices available on the market need to work with the operating theater lighting switched off. The aim of the HepatoFluo project coordinated by P. PEYRAT is to evaluate the feasibility and efficacy of fluorescence imaging using Fluobeam™ technology compatible with operating theater lighting, developed by Fluoptics. For this reason, the indocyanine green-Fluobeam™ combination will first be validated in a pre-clinical study conducted at the Experimental Surgery Clinic of the Léon Bérard Cancer Center, then taken to phase I/II clinical trial, conducted on liver cancer surgery patients. Using indocyanine green and the Fluobeam™ equipment will make it possible to evaluate the capacity of the combination to mark hepatic lesions and guide the surgery.

Partners: Léon Bérard Cancer Center and Fluoptics Financing: €498K (CLARA) and €498K (Fluoptics) over 30 months

Three projects at the pre-clinical stage

UroClip, an automatic urethrovesical anastomosis system (prostate cancer)

Prostate cancer in France affects one man out of six after the age of 50, and removal of the prostate is one of the treatments of reference. Among the side effects of the operation, stenosis of the urethra and incontinence are severely detrimental to patients' quality of life. The Uroclip project is aiming to develop UroLink, an innovative surgical suturing device specifically designed for this operation and based on patented technology. By facilitating a delicate, long and arduous task for the surgeon, this technology is intended to reduce side effects of the surgery for the patient. After a proof of concept on the porcine model in partnership with VetAgroSup, the project will lead to the creation of the company Anastom Surgical, which will handle clinical trials of the device prior to the marketing of UroLink. The company will then deploy its suturing technology to develop a portfolio of medical devices which meet the specific requirements of other

Partners: Anastom-Tech, VetAgro-Sup and the incubator Créalys

Financing: €278K (CLARA) and €118K (Anastom-Tech) over 2 years

Thera8, targeting a surface protein for the development of therapeutic antibodies

Colorectal cancers represent over 10% of all cancers and survival at five years is 50%. Frequent metastatic dissemination is responsible for most deaths. The development of antimetastatic agents has become a priority. The Lyon Cancer Research Center recently showed that colon cancer cells are characterized by the unusual presence on their surface of a cytoskeletal protein. This protein is usually intracellular and its extracellular location is largely associated with the process of cell cancerogenesis and invasion. Its neutralization by a monoclonal antibody (mAb) halts the invasive capacity of Cancer cells in vitro and limits tumor growth in vivo. The Thera8 project coordinated by J-J. DIAZ aims to develop humanized monoclonal antibodies targeting surface protein for therapeutic purposes, and to establish the proof of concept in vitro and in vivo with regard to their potential for inhibiting tumor growth and/or the invasive process of colorectal

cancer cells.

Partners: Cancer Research Center of Lyon and IDD Biotech

Financing: €354K (CLARA) and €359K (IDD Biotech) over 3 years

Enki-HEH, evaluation of a new endoscopic technique for resection of superficial colorectal cancer

Colorectal cancer, the second most common type of cancer, is currently treated by endoscopic submucosal dissection (ESD), which consists of removing the tumor in one piece, with a lateral and depth margin of healthy tissue. However, the surgery is lengthy and leads to risks of perforation by lesion of the deep muscle layer that can reach 10%, often requiring urgent surgery. NESTIS has developed an innovative technology using high-

pressure water which, when used during ESD, would enable the mucosa to be cleanly separated from the muscle layer and to facilitate dissection by electric scalpel by isolating the fibrous attachments to be sectioned and avoid lesions of the muscle layer. The Enki-HEH project aims to validate this technology in animals, in order to confirm the benefits of dissection assisted by pulsed water jet, and also test the parameters relating to the water jet and the catheter conveying the water. This project will then lead to a regulated clinical trial, to validate the efficacy of the technique with patients.

Partners: Hepatogastroenterology and Digestive Endoscopy Departments at Édouard Herriot Hospital (Lyon Civil Hospitals) and NESTIS

CLARA financing: €140K (CLARA) and €210K (NESTIS) over 15 months

CLARA Proof of Concept projects in progress in 2011

| Name of | Field of | | | Industrial |
|--------------------|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| Project | Application | Title of Project | Academic Coordinator | Partners |
| CANCERDRUG | Chemotherapy | Preclinical validation of a novel Vascular-Disrupting Agent | Andrei POPOV, GIN, Grenoble Neurosciences Institute, CRI INSERM 836, CEA, CHU Grenoble, UJF | Ecrins Therapeutics |
| CLARAFT | Surgical device | Association of $\alpha v \beta 3$ integrins targeting raft-crgd and nir probe for intraoperative detection of tumour margins and metastases in sarcoma | Aurélie DUTOUR, INSERM Unit 590, Claude Bernard Lyon 1 University, Léon Bérard Cancer Center, Lyon Civil Hospitals | Fluoptics |
| DOC-CALIPSO | Surgical device | Robot navigation for tumour focal therapy | Marc COLOMBEL, HCL, Claude-Bernard, Lyon I University | ADEPT |
| EBV BIOTECH | Diagnostic tool | Diagnosis and Immunotherapy of Epstein- Barr Virus-associated cancers | Bruno LINA , FRE3011, CNRS, Claude Bernard Lyon 1 University | EBV-Biotech |
| ENKI-HEH | Surgical device | Evaluation of a new endoscopic technique to resect superficial colorectal carcinomas | Thierry PONCHON , Hepatogastroenterology Department, Édouard Herriot Hospital, Lyon Civil Hospitals | Nestis |
| GENIUSVAC- MEL4 | Immunotherapy | Immunotherapy by GeniusVac-Mel4: a new immunotherapeutic strategy for the treatment of melanoma | Joël PLUMAS, French National Blood Service/ INSERM U823, Team 9 "Cancer Immunology and Immunotherapy" of Albert Bonniot Institute | French National Blood Service |
| HEPATOFLUO | Surgical device | Clinical assessment of a Fluorescence dye in hepatic surgery | Patrice PEYRAT , Liver surgeon at Léon Bérard Cancer Center | Fluoptics |
| HIFU | Surgical device | High Intensity Focused Ultrasound device for the treatment of liver metastases from colorectal cancer | David MELODELIMA, Jean-Yves CHAPELON, Laboratory of Therapeutic Applications of Ultrasound, INSERM & UCBL1, Lyon Michel RIVOIRE, Léon Bérard Cancer Center, Experimental Surgery Institute, INSERM, Lyon | EDAPTMS |

| Nom du Projet | Domaine d'application | Titre du Projet | Coordinateur Académique | Partenaire Industriel |
|------------------|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|
| IPROMAH | Immunotherapy | Industrial proof of concept for new monoclonal antibodies for haematological malignancies | Aurélie DUTOUR, INSERM Unit 590, Claude Bernard Lyon 1 University, Léon Bérard Cancer Center, Lyon Civil Hospitals | iDD Biotech Technologies |
| LANTHARAD | Molecular radiotherapy | Hybrid radiosensitizer nanoparticles allowing treatment of radio-resistant tumours | Marc JANIER, CREATIS UMR CNRS 5220, INSERM U630, Claude Bernard Lyon 1 University | Nano-H |
| LIPOBAK | Recombinant protein | Therapeutic proteoliposomes for glioblastoma treatment | Jean-Luc LENORMAND, UMR CNRS 5525 "TIMC- IMAG", Joseph Fourier University, Grenoble | Synthelis |
| LYMPHOS1 | Diagnostic tool | Tracking TCR repertoire distortions to predict lymphopenia and prevent deaths due to infections associated with chemotherapy in patients with breast cancer | Christophe CAUX , INSERM Unit 590 Claude Bernard Lyon 1 University, Léon Bérard Cancer Center, Lyon Civil Hospitals | ImmunID |
| NANOBIOP | Mini-invasive sampling tool | An innovative strategy for molecular nanobiopsy using magnetic nanoparticles | François BERGER, GIN, CRI INSERM 836, CEA, CHU Grenoble, Joseph Fourier University | |
| NANO-ENO | Molecular radiotherapy | Nano Encapsulated Nuclear / Optical imaging probe | Isabelle TEXIER-NOGUES , CEA | AAA |
| NETRIN-LUNG | Chemotherapy | Proof of concept of the efficiency of a candidate drug in the treatment of lung cancer | Jean-Guy DELCROS , UMR CNRS 5238, Claude Bernard University, Léon Bérard Cancer Center | Netris Pharma |
| NT3-TARGET | Chemotherapy | Inhibition of the NT-3/TrkC interaction and its application to the treatment of metastatic breast cancer | Sandrine TAUSZIG- DELAMASURE, UMR CNRS 5238, Claude Bernard University, Léon Bérard Cancer Center | Netris Pharma |
| SYNFRIZZ | Molecular radiotherapy | Novel antibody therapy against Synovial sarcoma targeting | Jean-Yves BLAY , Léon Bérard Cancer Center, UCBL | OncoTherapy |
| THERA8 | Immunotherapy | Targeting cell surface protein for the development of the therapeutic and diagnostic antibodies for colorectal cancer treatment | Jean-Jacques DIAZ, Nuclear Fields and Pathologies Team, Cancer Research Center of Lyon | iDD Biotech Technologies |
| TRT/PETMEL | Molecular radiotherapy | Development of new heteroaromatic halogenated radiotracers for PET imaging and targeted radionuclide therapy of melanoma | | Laboratoires Cyclopharma |
| UROCLIP | Surgical device | Automated urethro-vesical anastomosis system | Claude CAROZZO , Environment Cell Interactions Laboratory, VetAgroSup | Anastom-Surgical |

In red, projects initiated in 2011

Appendix 4European projects in progress



CLARA Coordinator

| Project Name | Field of Application | Title of Project | Coordinator | Institution |
|------------------------|--------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|--------------------|------------------------------------------------|
| BIBA | Nanotechnologies Nanomedicine | Delivering nanopharmaceuticals through Biological Barriers | Patrick BOISSEAU | Atomic Energy Commission (CEA), Grenoble |
| | | | Patrice Marche | INSERM IAB, Grenoble |
| Bone-Net | PhD/Postdocs training network | European Training Network on Cancer-Induced Bone Diseases | Philippe CLEZARDIN | Claude Bernard Lyon 1 University |
| CD44 carcinogenesis | Basic Research | A new role for CD44 in carcinogenesis | Serge MANIÉ | Cancer Research Center of Lyon |
| DECanBio | Biomarkers Diagnosis Prognosis | Novel MS-based strategies to Discover and Evaluate Cancer Biomarkers in urine: Application to Diagnosis of Bladder Cancer | Jérôme GARIN | Atomic Energy Commission (CEA), Grenoble |
| EUROSARC | Clinical Research | European Clinical trials in Rare Sarcomas within an integrated translational trial network | Jean-Yves BLAY | Cancer Research Center of Lyon |
| iNanoDCs | Nanotechnologies Nanomedicine | Design of multifunctional nanoparticles targeting TLR or Nod receptors for dendritic cell immune therapy | Bernard VERRIER | CNRS IBCP, Lyon |
| NOTCH3DR | Basic Research | Investigating a novel role of Notch3 as a dependence receptor and its relevance <i>in vivo</i> | Patrick MELHEN | Cancer Research Center of Lyon |
| TARGET-PDT | Nanotechnologies Nanomedicine | Photo Dynamic Therapy using photosensitizer-doped targeted organic nanoparticles | Patrick BOISSEAU | Atomic Energy Commission (CEA), Grenoble |

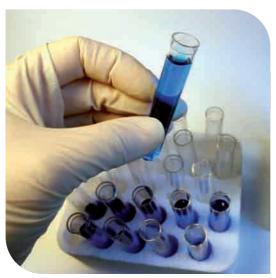
CLARA Partner

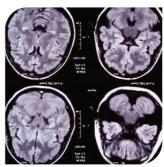
| Acronyme | Thématique | Titre du Projet | Porteur | Organisme |
|----------------|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|--------------------------------------------|
| APO-SYS | Basic Research | Apoptosis systems biology applied to cancer and AIDS. An integrated approach of experimental biology, data mining, mathematical modelling, biostatistics, systems engineering and molecular medicine | Patrick MELHEN | Cancer Research Center of Lyon |
| ChinaAccess4El | J International collaborations | Supporting the EU acess to Chinese Research and Innovation programmes | Jean-Luc COLL | Joseph Fourier Grenoble 1 University |

| Acronyme | Thématique | Titre du Projet | Porteur | Organisme |
|-----------|-------------------------------------------------------|---------------------------------------------------------------------------------------------------------|---------------------|-------------------------------------------------------------|
| COGS | Cancer Environment | Collaborative Oncological Gene-environment Study | Olga SINILNIKOVA | Cancer Research Center of Lyon |
| CURELUNG | Biomarkers Diagnosis Prognosis | Determining (epi)genetic therapeutic signatures for improving lung cancer prognosis | Elisabeth BRAMBILLA | Joseph Fourier Grenoble 1 University |
| ENCCA | Access to therapies Treatments | EUROPEAN NETWORK for CANCER research in CHILDREN and ADOLESCENTS | Olaf KELM | International Agency for Research on Cancer, Lyon |
| | | | Liliana VIEIRA | Léon Bérard Cancer Center, Lyon |
| ENVISION | Hadrontherapy | European NoVel Imaging Systems for ION therapy | Alain BALDIT | National Scientific Research Center, Clermont-Ferrand |
| | | | Daniel BABOT | INSA, Lyon |
| Ethentech | Health and Safety / Care | Ethics of enhancement technology | François BERGER | INSERM CHU GIN, Grenoble |
| HEPACUTE | Basic Research | Host and viral factors in acute hepatitis C | Fabien ZOULIM | Cancer Research Center of Lyon |
| NANOSTEM | Nanotechnologies Nanomedicine | Targeting Combined Therapy to Cancer Stem Cells | Patrick BOISSEAU | Atomic Energy Commission (CEA), Grenoble |
| PROLIFICA | Prevention | Prevention Of Liver Fibrosis and Cancer in Africa | Pierre HAINAUT | International Agency for Research on Cancer, Lyon |
| | | | Fabien ZOULIM | Cancer Research Center of Lyon |
| SPIDIA | Biomarkers Diagnosis Prognosis Hadrontherapy | Standardisation and improvement of generic pre-analytical tools and procedures for in vitro diagnostics | Pierre HAINAUT | International Agency for Research on Cancer, Lyon |
| ULICE | | Union of Light-Ion Centres in Europe | Jacques BALOSSO | CGS ETOILE, Lyon |

In red, projects initiated in 2011











Acknowledgements



Many thanks to the actors involved in CLARA's activities in 2011

Thierry ABRIBAT, Alizé Pharma SAS • Saurabh AGGARWAL, Parexel Consulting, Bethesda, USA • Marie Alexandra ALBARET, Cancer Research Center of Lyon • Gilles ALBERICI, OCTALFA • Corinne ALBIGES-RIZO, Albert Bonniot Institute, Grenoble • Serge ALZIARI, Blaise Pascal University, Aubière • Philippe AMIEL, Gustave Roussy Institute, Villejuif • Stéphane ANSIEAU, Cancer Research Center of Lyon • Sami ANTOUN, Gustave Roussy Institute, Villejuif • Serge ASKIENAZY, Cyclopharma Laboratories • Bernard ASSELAIN, Curie Institute, Paris • Véronique ATGER, French National Cancer Institute • Didier AUBOEUF, Cancer Research Center of Lyon • Philippe AUZELOUX, UMR 990 INSERM/Auvergne University • Patrick BACHMANN, Cancer Research Center of Lyon • Marie-Thérèse BACQUE, Strasbourg University • Sabine BAILLY, CEA-Leti, Grenoble • Jacques BALOSSO, CHU Grenoble/ETOILE Center • Jean-Claude BARBARE, CHU Amiens • Claude BEAUDOIN, CNRS UMR 6247/Clermont University • Jean-Pierre BENOIT, IBS-CHU Angers • François BERGER, Grenoble Institute of Neurosciences • Marc BERGER, Grenoble Institute of Neurosciences • Odile BERTHIER-VERGNES, UMR-CNRS 5534, Lyon • Philippe BERTOLINO, Cancer Research Center of Lyon, Léon Bérard Cancer Center, Lyon • Franco BERRINO, Istituto Nazionale Tumori, Milan, Italy • Yannick BIDET, Jean Perrin Center, Clermont-Ferrand • Yves-Jean BIGNON, Jean Perrin Center, Clermont-Ferrand • Emmanuel BLANC, EDAP-TMS • Jean-Yves BLAY, Léon Bérard Cancer Center, Lyon • Christine BOBIN-DUBIGEON, René Gauducheau ICO Center, Nantes Saint-Herblain • Paolo **BOFFETTA**. International Prevention Research Institute, Lyon / Mount Sinai School of Medicine, New York, USA • Patrick BOISSEAU, CEA Leti, Grenoble • Ayache BOUAKAZ, INSERM U930 • Jean-Luc BOUQUET, Co-Pluriel, Lyon • Maurice BOURLION, Jean Monnet University, Saint-Etienne • Daniel BOUVARD, U823 Albert Bonniot Institute, Grenoble • Étienne BRAIN, Curie Institute, Comprehensive Cancer Center René Huguenin Hospital, Saint-Cloud • Christian BRAMBILLA, Albert Bonniot Institute, Grenoble • Christian BRECHOT, Mérieux Institute, Lyon • Guillaume BRUNEL, INPI Rhône-Alpes, Lyon • Franz BUCHEGGER, Vaudois University Hospital Center, Lausanne, Switzerland • Louis BUSCAIL, Molecular Medicine Institute, Ranqueil • Jean-Luc CAILLOT, CHU Nantes • Mary CALLANAN, Albert Bonniot Institute, INSERM Research Center-Joseph Fourier University, Grenoble • Fabien CALVO, French National Cancer Institute, Paris • Janke CARSTEN, Curie Institute, Paris • Sandrine CARTEAU, Lyon Science Transfert, Lyon University • Patrick CASTEL, Center for the Sociology of Organizations, Political Sciences Institute, Paris • Dominic CELLIER, Merck Serono • **Véronique CHAJES**, International Agency for Research on Cancer, Lyon • **Jean-Yves CHAPELON**, INSERM U1032, Lyon • Thierry CHARDES, Cancer Research Institute of Montpellier • Franck CHAUVIN, Loire Cancer Institute • Nadia CHERRADI, CEA, INSERM U1036, Grenoble • Bernard CIPOLLA, Urology, Private Hospital Center, Saint-Grégoire • Françoise CLAVEL-CHAPELON, INSERM U1018, Epidemiology and Health of Populations Center (CESP), South-Paris University, UMR1018 • Jean-Louis COATRIEUX, Signaling and Imaging Treatment Laboratory, Rennes • Bertrand COIFFIER, Lyon Civil Hospitals, Lyon 1 University • Jean-Luc COLL, Albert Bonniot Institute, Grenoble • Luc **CORMIER**, University Hospital Center of Dijon • **Riccardo DALLA-FAVERA**, Columbia University, New York, USA • Christelle DAVID-BASEI, Association for Research against Cancer • Johann DE BONO, Institute of Cancer Research, Royal Marsden Hospital, UK • Françoise DEGOUL, INSERM U990, Clermont-Ferrand • Dominique DELMAS, INSERM U866, Dijon • Jean DEREGNAUCOURT, Pasteur Institute, Paris • Jacques DESCOTES, Lyon University, Antipoison Center, Pharmacovigilance Center, Lyon Civil Hospitals • Eric DEUTSCH, Gustave Roussy Institute, Villejuif • Bernadette DEVICTOR, CISS Rhône-Alpes • Jean-Jacques DIAZ, Cancer Research Center of Lyon • Pierre-Yves DIETRICH, Geneva Regional Hospital, Switzerland • Attilio DI PIETRO, Institute of Biology and Chemistry of Proteins, Lyon • Lucette DIXON, Rhône-Alpes Region • Ricardo DOLCETTI, IRCCS National Cancer Institute, Italy • Jean-Yves DOUILLARD, Western Cancer Institute • Nathalie DRUESNE-PECOLLO, ...



Acknowledgements...

... UMR U557 INSERM/U1125 INRA/CNAM/Paris 13 University • Virginie DUBOIS, SVFp Laboratory, EA4233 Nutrition, Carcinogenesis and Anti-Tumoral Therapy, CRNH Auvergne, UFR Pharmacy, Auvergne University, Clermont-Ferrand • Sandra DUBOS, OSEO Rhône-Alpes Lyon • Benoît DUBUIS, Éclosion SA, Switzerland • Olivier DUCHAMP, Oncodesign Biotechnology • Frédéric DUCONGE, CEA Île-de-France • Charles DUMONTET, South Lyon Hospital Center • David DURANTEL, INSERM U1052 / Cancer Research Center of Lyon • Martin DUTERTRE, INSERM U1052, Cancer Research Center of Lyon • Alexander EGGERMONT, Gustave Roussy Institute, Paris/Erasmus University, Rotterdam • Bénédicte ELENA-HERRMANN, Center for Very High Field NMR/Analytical Sciences Institute, Villeurbanne • Marie-Odile FAUVARQUE, CEA, Grenoble • Jean-Jacques FEIGE, CEA, INSERM U1036, Grenoble • Anthony FERRARI, Synergy Lyon Cancer Foundation, Lyon • Pietro FERRARI, International Agency for Research on Cancer, Lyon • **Béatrice FERVERS**, Léon Bérard Cancer Center, Lyon • Odile FILHOL-COCHET, CEA-Leti, Grenoble • Martine FFRENCH, Lyon Civil Hospitals, Claude Bernard Lyon 1 University, CNRS U 5239 • Stephen H. FRIEND, Sage Bionetworks, Seattle, Washington, USA • Arnaud GAUTIER, UMR 6504, SEESIB Laboratory, Aubière • Sylvie GAZZERI, Albert Bonniot Institute, Grenoble • Stéphanie GIBERT-CAILLOUX, BUSI • Xavier GIDROL, INSERM U1038, Grenoble • Isabelle GODDARD, Tumoral Models Laboratory • Yann GODFRIN, ERYtech Pharma • Marc GREGOIRE, Nantes University • Françoise GUERITTE, Institute of Natural Substances Chemistry, CNRS, Gif-sur-Yvette • Romain GUIEZE, Adult Clinical Hematology Service, CHU Estaing, Clermont-Ferrand • Joëlle GOUDABLE, ISPB-Faculty of Pharmacy, Lyon • Pierre HAINAUT, International Agency for Research on Cancer, Lyon • Catherine HÄNNI, Higher Teacher-Training College of Lyon • Monika HEGI, Vaudois University Hospital Center, Lausanne, Switzerland • Anca HENNINO, INSERM U1052, Lyon • Frédéric HOLLANDE, Functional Genomics Institute of Montpellier • Jérôme HONNORAT, Neurosciences Research Center of Lyon • Anne HOSMALIN, Cochin Institute, Paris • Laure HUOT, Lyon Civil Hospitals • Amandine HURBIN, Albert Bonniot Institute, Grenoble • Jean IMBERT, Technological Advances for Genomics and Clinics, INSERM U928, Marseille • Marc JANIER, Lyon University, Lyon Civil Hospitals • **Béatrice JANIN JACQUAT**, Camara & Partners SARL • Stéphane JARDIN, Auverque Valorisation • Michel JOLIVET, Jolivet Bioconseil/Mérieux Institute • **Benoît JOSEPH**, Institute of Molecular and Supramolecular Chemistry and Biochemistry (ICBMS) UMR – CNRS 5246, Claude Bernard Lyon 1 University, ICBMS – CNRS 5246 ● Véronique JOSSERAND, Albert Bonniot Institute, Grenoble • Henriette KAUNTZ, Strasbourg University, Unit EA4438, IRCAD, Strasbourg • David KRYZA, ISPB Faculty of Pharmacy, Lyon Civil Hospitals • François LACOMBE, Mauna Kea Technologies SA • Laurence LAFANECHERE, Albert Bonniot Institute, CRI INSERM/UJF U823, Grenoble • Claude LAMBERT, UMR-CNRS 5148, LPMG; IFR 143 INSERM IFRESIS, National Graduate School of Engineering of Saint-Etienne • **Sophie LANCELOT**, ISPB Faculty of Pharmacy, Lyon Civil Hospitals • François LANGEVIN, Compiègne Technological University • Carole LARTIZIEN, CREATIS — INSA Lyon • Paule LATINO-MARTEL, NACRe Network • Guy LAUNOY, Caen University • Yves LAURENT, Lyonbiopôle • Martine LAVILLE, CRNH Rhône-Alpes • Serge LEBECQUE, Claude Bernard Lyon 1 University, Lyon Civil Hospitals, Cancer Research Center of Lyon, UMR INSERM 1052/CNRS 5286, Léon Bérard Cancer Center • Philippe LE BOUTEILLER, Purpan Hospital, Toulouse • Jean-Marc LOBACCARO, UMR CNRS6247-Clermont University-INSERM U931, Aubière Véronique MAGUER-SATTA, Cancer Research Center of Lyon, CNRS UMR 5286 - INSERM 1052 • Bernard MANDRAND, Lyonbiopôle • Serge MANIE, Léon Bérard Cancer Center • Frédéric MARCHAL, Comprehensive Cancer Center Alexis Vautrin, Nancy • Patrice MARCHÉ, Albert Bonniot Institute • Adam MARGOLIN, Sage Bionetworks, Seatle, Washington, USA • Jean-Claude MARTINOU, Geneva University, Switzeland • Chris MATTOCKS, National Genetics Reference Laboratory (Wessex) & Eurogentest, UK • Patrick MEHLEN, Cancer Research Center of Lyon •

David MELODELIMA, INSERM U1032, Lyon • Jean-Philippe METGES, CHU Brest • Emmanuel MITRY, Curie Institute, Paris • Emmanuel MOREAU, INSERM U990, Auvergne University, Clermont-Ferrand • Laurent MOREL, Blaise Pascal Clermont 1 University • Bruno MOUGIN, Biomérieux, Grenoble • Olivier MUNDLER, Public Healthcare — Marseille Hospitals • Carole NEVES, Sanofi-Aventis R&D, Paris • Grégory NINOT, Montpellier 1 University • Testuro NOGUCHI, Paoli Calmettes Institute, Marseille • Teresa NORAT, Imperial College, London, UK • Daniel OLIVE, Cancer Research Center of Marseille • Christophe OLIVIER, Cancer Research Center of Nantes-Angers, INSERM U892, Therapeutic Research Institute of Nantes University • Michel PAVIC. Desgenettes Army Teaching Hospital, Lyon • Isabelle PELLETIER-BRESSAC, Gustave Roussy Institute, Villejuif • Frédérique PENAULT-LLORCA, Jean Perrin Center, Clermont-Ferrand • Christine PEPONNET, CEA, Grenoble • David PEROL, Léon Bérard Cancer Center, Lyon • Aléxia PEROUSE, Crédit Agricole Private Equity • Frank PICARD, Rhône-Alpes Bioinformatics Cluster, Lyon • Claude PICHARD, Geneva Regional Hospital, Switzerland • Fabrice PIERRE, ToxAlim ENVT-INRA, Toulouse • Alain PUISIEUX, Léon Bérard Cancer Center, Cancer Research Center of Lyon • Isabelle RAY COQUARD, Léon Bérard Cancer Center, Lyon • Chantal REMY, Grenoble Institute of Neurosciences, INSERM U836 • Caroline REYNAUD, Biology and Chemistry of Proteins Institute, Lyon • **Michel RIVOIRE**, Léon Bérard Cancer Center, Lyon • Isabelle ROMIEU, Internation Agency for Research on Cancer, Lyon • Marina ROUSSEAU-TSANGARIS, Léon Bérard Cancer Cener, Lyon • Sophie ROUSSEAUX, Albert Bonniot Institute, Grenoble • Patricia ROUSSELLE, Biology and Chemistry of Proteins Institute, Lyon • Florence RUGGIERO, UMR CNRS 5242, ENS Lyon • Damien SALAUZE, Curie Institute, Villejuif• Gilles SALLES, South Lyon Hospital Center • Joseph SAMITIER, Institute for Bioengineering of Catalonia, Spain • David SARRUT, CREATIS—INSA Lyon • Annie SASCO, Bordeaux University • Sylvie SAUVAIGO, CEA-Leti, Grenoble • Agnès SAVIGNER, Créalys • Michel SCHAEFER, Guerbet • Pierre SENESSE, Comprehensive Cancer Center of Aurelle, Montpellier • Michel SEVE, U823 Albert Bonniot Institute, Grenoble • Véronique SEZANNE, ERYtech Pharma • Demetrios SKOUFIAS, Structural Biology Institute, Grenoble • Éric SOLARY, Bourgogne University • Olivier SOUBRANE, Saint-Antoine Hospital, Paris • Agnès SOUBRIER, International Research Laboratories • Frédérique SOUQ, GRAVIT • Donny STROSBERG, Scripps-Florida, Jupiter, USA/Denis Diderot University Paris 7 • Isabelle STÜCKER, Gustave Roussy Institute, Villejuif • Roger STUPP, Vaudois University Hospital Center, Lausanne, Switzerland • Gilles TALBOTIER, GRAIN • Ian TANNOCK, Princess Margaret Hospital, Toronto, Canada • Eric TARTOUR, Georges Pompidou European Hospital, Paris • Jean-Luc TEILLAUD, Cordeliers Research Center, Paris • Vincent THERY, UMR 6504, SEESIB Laboratory, Aubière • Gilles THOMAS, Lyon 1 University, Synergy Lyon Cancer Foundation, Cancer Research Center of Lyon • Massimo TOMMASINO, International Agency for Research on Cancer, Lyon • Marina **TOUILLAUD**, Léon Bérard Cancer Center, Lyon • Mathilde TOUVIER, Nutritional Epidemiology Research Unit, Bobigny • Gilles TRAVE, Strasbourg University • Olivier TRÉDAN, Léon Bérard Cancer Center, Lyon • Véronique TRILLET-LENOIR, South Lyon Hospital Center • Nancy UHRHAMMER, Jean Perrin Center, Clermont-Ferrand • Pierre VAL, CNRS UMR 6247 GReD, Blaise Pascal University, Clermont-Ferrand • Jean-Marc VANACKER, CNRS UMR 5242, Lyon • Marie-Paule VASSON, Faculty of Pharmacy, Auvergne University, Clermont-Ferrand • Pierre VERRELLE, Jean Perrin Center, Clermont-Ferrand • Jean-Philippe VUILLEZ, Nuclear Medicine and Molecular Imaging French Society • Qing WANG, Léon Bérard Cancer Center, Lyon • Christopher WILD, International Agency for Research on Cancer, Lyon • Jean-Jacques ZEILLER, Independant Expert • Fabien ZOULIM, INSERM U1052

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