

# PROGRESS REPORT

2012



CANCÉROPOLE LYON AUVERGNE RHÔNE-ALPES

SPEEDING UP PROGRESS

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# 2012, A NEW MOMENTUM FOR THE CANCÉROPÔLE LYON AUVERGNE RHÔNE-ALPES

As a leading research cluster in supporting the creation and advancement of large-scale projects in oncology, the Cancéropôle Lyon Auvergne Rhône-Alpes (CLARA), has strengthened its commitment, all through 2012, to the members of its network, at the institutional level and by the deployment of its programs.

As CLARA reaches its 10<sup>th</sup> anniversary and a new Cancer Plan is on the horizon, the CLARA executive leadership sought to breathe new energy into the organization and offer fresh perspectives. In an economic climate requiring that every outlay proves as cost effective as possible, CLARA had to solidify its position to ensure that researchers, clinicians, and industry professionals in Oncology have the best chance of success and that patients receive the finest care.

Therefore, an Executive Steering Committee was formed in 2012 to assist CLARA in moving toward a "Network of Networks in Oncology", enhancing CLARA's capacity to bring together all the stakeholders in Clermont-Ferrand, Saint-Étienne, Grenoble and Lyon.

The year 2012 also saw the development of official ties with the competitiveness cluster Lyonbiopôle. The objective is twofold: converge the two clusters' methods of fostering the emergence of innovation and accrediting R&D projects as well as assist in achieving optimal knowledge transfer and exploitation of research results to create clinical applications.

Given the historic missions of CLARA to lead and organize Oncology Research, it is now taking a major step forward in broadening its support of emerging themes (Human, Economic and Social

Sciences, Environment, Nutrition) by helping them build strong scientific foundations and tackle the new challenges in the fight against Cancer.

For 2013, CLARA's path is clear and has four objectives:

- Transform CLARA into a "Network of Networks in Oncology" to foster dialogue between all stakeholders
- Offer an interregional scientific strategy that integrates basic and clinical research
- Address the issue of inequity in our approaches to Cancer by fleshing out the emerging themes in Oncology that are now at the center of patient lives and cause for societal concern
- Develop closer ties with Lyonbiopôle to improve the regional innovation ecosystem.

Working together will get us farther down the road to Cancer Research.

**Véronique TRILLET-LENOIR**  
*President,  
Management Committee*

**Amaury MARTIN**  
*Secretary General*



## CLARA's Missions

# A NETWORK OF NETWORKS FOR ADVANCING CANCER RESEARCH

Since its creation in 2003 as part of the first Cancer Plan, the Cancéropôle Lyon Auvergne Rhône-Alpes (CLARA) has been uniting and leading a network associating academic, clinical and industrial strengths in Cancer Research in Rhône-Alpes Auvergne.

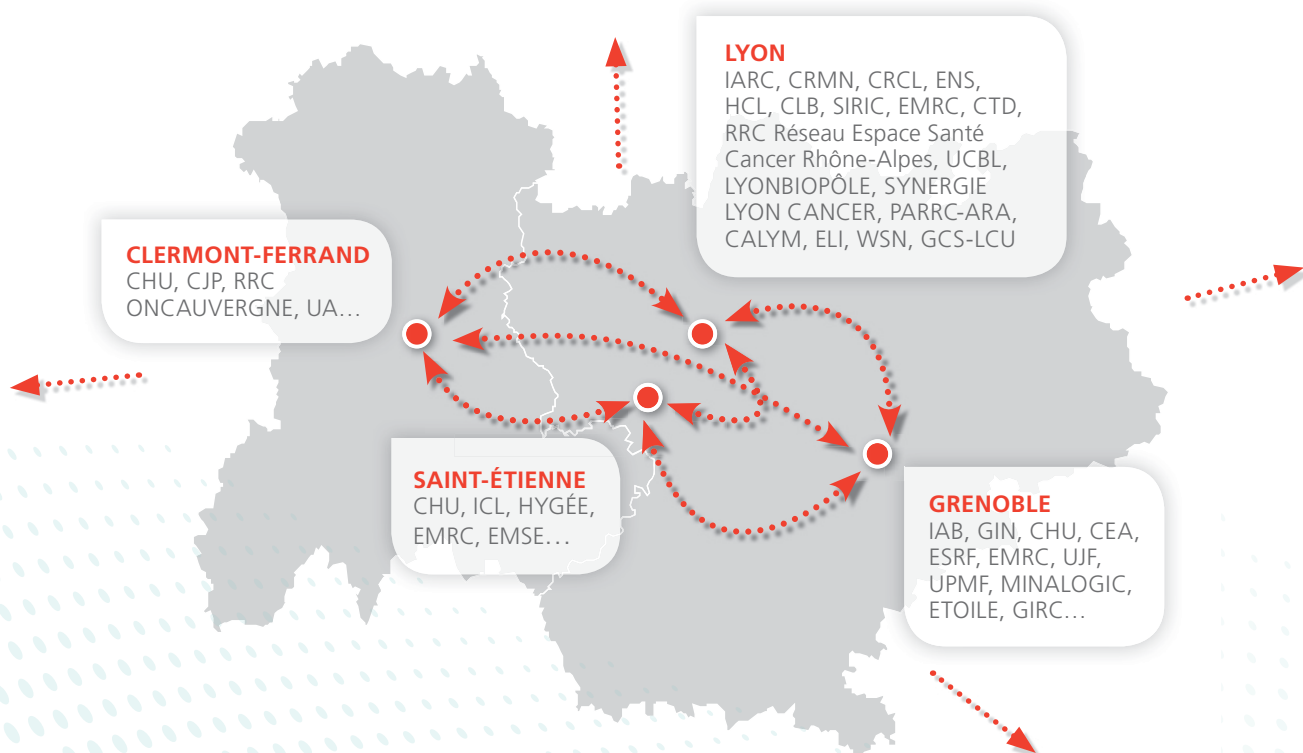
Mandated to organize Oncology Research, CLARA is one of the key stakeholders involved in innovative projects that focus on the quick exploitation of research results for the direct benefit of patients.

Supported by the French National Cancer Institute (INCa) and 14 local authorities, CLARA is working to promote interregional strengths on the national and international stages and contribute to economic growth in the Rhône-Alpes and Auvergne regions.

## CLARA'S GOALS

- > Consolidate a **network of experts** to accelerate Cancer Research
- > Support the **clinical development** of innovative projects
- > Reinforce **national and international collaborative dynamics** to increase the participation of research teams in ambitious programs
- > Fully engage in **global Cancer efforts** by partnering with Lyonbiopôle with the support of local authorities
- > Speed up the **creation of companies**, their growth, and their interregional establishment

## CLARA: Network of Networks in Oncology in Rhône-Alpes and Auvergne



More info on [www.canceropole-clara.com](http://www.canceropole-clara.com)



## Key Figures 2012

### CANCER RESEARCH IN RHÔNE-ALPES AND AUVERGNE

> **M18€** received by research teams for 130 projects\*

> **1500** active researchers\*\*

> **Second region in France in the publication of scientific papers**

- **15%** of French publications in Oncology (Ile-de-France 36%)\* \*
- **20%** of leading publications (Top 1%) (Ile-de-France 45%)\* \*
- **17%** of high-profile publications (Top 10%) (Ile-de-France 37%)\* \*

> **A network of top researchers with outstanding results after the INCa 2012 call for projects, especially in clinical research and emerging themes**

- **23%** of projects in the Clinical Cancer Research Hospital Program (PHRC)
- **20%** of projects in Human and Social Sciences, Epidemiology and Public Health
- **20%** of projects in Intervention Research and Reduction of Social Inequalities

\* See details on projects in the appendix

\*\* Sources: Thomson Reuters WoS (January 2012); Bibliometric Analysis of Cancer Research: A National Inter-Cancéropôle/INCa Study (July 2012) ("active" refers to author or coauthor of at least three publications between 2006 and 2011)

\*\*\* Source: Press Index (print media only)



### CANCÉROPÔLE LYON AUVERGNE RHÔNE-ALPES

> **Reinforced influence**

- **1500** people involved in **31** scientific events
- **79** press releases\*\*\*

> **Increased support for emerging innovation in 2012**

- **€425,000** allocated by CLARA to 18 projects\*
- **10 OncoStarter\* projects** to ensure sustained project development
- **8 mobility grants\*** to help young researchers

> **Proof of Concept program since 2007**

- **32 projects supported**, 15\* in progress and 5 in post-closure follow-up
- **€25,1M** invested by interregional business partners
- **€12,2M** allocated by local authorities and the European Regional Development Fund (ERDF)

> **Concrete results**

- **1 robotic surgical device** on the market
- **5 clinical development projects**
- **6 preclinical assessments** performed

## Structuring of Research

### SCIENTIFIC ANIMATION

## SCIENTIFIC ANIMATION: AT THE HEART OF CLARA'S ACTIONS TO CREATE SYNERGIES AND PROMOTE RESEARCH PARTNERSHIPS

Scientific animation is a top priority for CLARA and part of an overall strategy of supporting activities in key themes and stimulating the development of partnerships between network members and beyond.

The events organized or supported in 2012 have made it possible to reinforce interregional interaction, thus enriching the research landscape with new projects, new innovations, and many thematic collaborations.

As a network leader that knows how to mobilize interregional expertise and assets, CLARA has directly supported several events. Selected according to their alignment with the Cancer Plan priorities, these events offer opportunities for the network to build better targeted relationships and promote scientific culture.



Janice REICHERT, Center for the Study of Drug Development, Tufts University, invited speaker of the 7<sup>th</sup> CLARA Scientific Forum

### KEY FIGURES 2012

- > **16 events**
- > **€400,000** annual budget
- > **€30,000** allocated to 9 events
- > **1500 people** mobilized

### SPOTLIGHT ON... 7<sup>TH</sup> SCIENTIFIC FORUM

The flagship CLARA event, the 2012 edition offered:

- Theme day on innovative approaches to combating Cancer with monoclonal antibodies (partnership with Lyonbiopôle)
- All-day meeting of interregional actors in Cancer Research, allowing them to present their ongoing works and discuss the most recent advances in basic, clinical and translational research in thematic sessions, in partnership with national and international organizations
- Satellite event on Nanomedicine and Oncology in Rhône-Alpes Auvergne and Catalonia (in partnership with the Biocat cluster)

Internationally renowned speakers came together to bring the theme beyond interregional borders (20% of participants from outside the interregional area) and allow the development of partnerships in the study of monoclonal antibodies.



## HIGHLIGHTS 2012

### January

- **Open meeting on Nanotechnologies, Imaging and Cancer** - Presentation of projects and networking ■

### February

- **Inter-Cancéropôles conference** *Glioblastoma: Molecular and Cellular Characterization and Preclinical Models*, Marseille ■

### March

- **7<sup>th</sup> CLARA Scientific Forum**, Lyon ■
- **30<sup>th</sup> meeting of the Club for the Study of Epithelial Cells of the Digestive Tract (CECED)**, Grenoble ●

### April

- **4<sup>th</sup> Inter-Cancéropôles Workshop on Bioinformatics**, Nice ■

### May

- **Workshop on Geographical Approaches to Evaluating Exposure to Pesticides**, Lyon ▲
- **6<sup>th</sup> Francophone Conference on Clinical Epidemiology (EPICLIN) / 19<sup>th</sup> Statistician Forum** of the Centers for the Fight Against Cancer, Lyon ●
- **3<sup>rd</sup> edition of Courir Pour Elles**, (Women's Run Against Breast Cancer), Lyon/Domaine de Lacroix Laval ▲

### June

- **Cancer Cells On-Chips: Now and the Future**, Lyon ●
- **Association des Neuro-Oncologues d'Expression Française (ANOCEF)**, [French association for neuro-oncology and gene expression], Clermont-Ferrand ●
- **8<sup>th</sup> Annual Forum of the French Sarcoma Group** – Bone Tumor Study Group, Lyon ●

### September

- **5<sup>th</sup> Inter-Cancéropôles Bioinformatics Workshop**, Lyon ■

### October

- **2<sup>nd</sup> Translational Research Meeting**, Gerland Lyon-Sud ●

### November

- **12<sup>th</sup> International Conference on Cancer-Induced Bone Disease**, Lyon ●
- **2<sup>nd</sup> Franco-Chinese Symposium on Oncology Research**, Lyon ■

### December

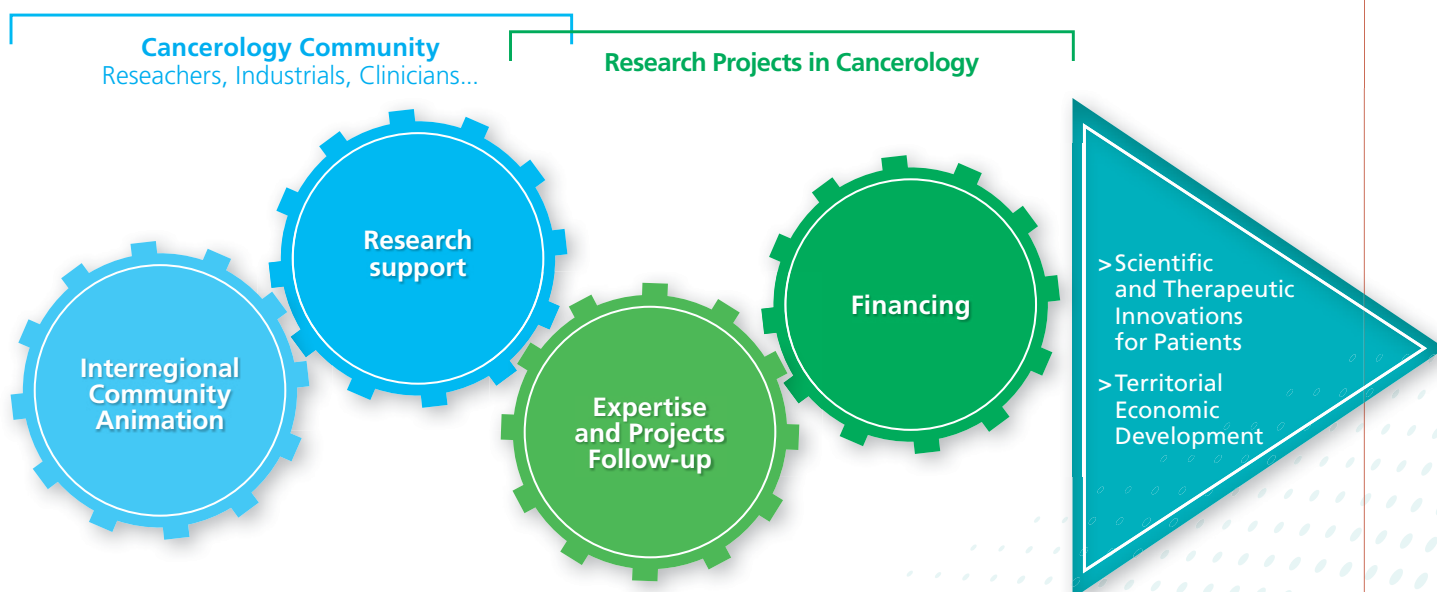
- **11<sup>th</sup> LOWRAD International Conference**, Lyon ●

■ Organizer or co-organizer

● Funding

▲ Institutional partner

## CLARA'S MISSIONS





## Structuring of Research

### SCIENTIFIC ANIMATION

## SCIENTIFIC ANIMATION RELATED TO DEVELOPMENT: PROMOTING THE TRANSFER OF RESEARCH RESULTS TO INDUSTRY AND HEALTHCARE

### HIGHLIGHTS 2012

#### April

- **Webinar** *Knowledge Transfer and Exploitation of Research Results in Oncology: Understanding the CLARA Proof of Concept* ■

#### July

- **Workshop on Industrial Property and Innovation Strategy** (Part 1), Lyon ■ \*

#### September

- **Webinar** *Rare Cancers as Models for Clinical Proof of Concept for Innovative Cancer Treatments* ■
- **Educational Session of the CLARA Regulatory Unit** *Cancer Vaccines*, Lyon ■
- **Workshop on Industrial Property and Innovation Strategy** (Part 2), Lyon ■ \*

#### October

- **Education: CLARA-MATWIN Proof of Concept Training** *Introduction to Drug Discovery: From the Lab to Early Clinical Use*, Lyon ■
- **Workshop on Industrial Property and Standards**, Lyon ■ \*

#### November

- **Workshop on Protecting Combination Products in Healthcare: Biotechnology Inventions – Medical Devices, Lyon ■ \***

#### December

- **Workshop on Technology Forecasting and Competitive Intelligence in R&D Projects, Lyon ■ \***
- **5<sup>th</sup> CLARA Industrial/Academic Encounters, Lyon ■**

■ Organizer or co-organizer

\* Part of the industrial property awareness program set up by the French National Industry Property Institute (INPI), Lyonbiopôle, I-Care Cluster and CLARA (see spotlight on page 9)

Entrusted by local authorities to play a key role in stimulating economic growth, CLARA organized several scientific events in 2012 related to the exploitation of research results in order to promote the transfer of results to industry and patient care.

Whether in the form of webinars, training sessions, workshops or meetings, the objective is to expand the expertise of the network and help build partnerships between industry and academics.



### SPOTLIGHT ON... TRAINING SESSION INTRODUCTION TO DRUG DISCOVERY: FROM THE LAB TO EARLY CLINICAL CARE, LYON

Organized by CLARA and MATWIN SAS, this training day was specifically addressed to CLARA Proof of Concept and MATWIN 2012 project leaders.

Intended to meet the needs of academic researchers who want to pursue their work continuously until proof of concept and beyond until transfer to industry and clinical care, the purpose of this two-session training program was to raise awareness of the specific issues and challenges inherent in development.



## KEY FIGURES 2012

- > **10 events** related to technology transfer
- > **€36,000** annual budget dedicated to events related to technology transfer
- > **400 people** mobilized

## SPOTLIGHT ON... 5<sup>TH</sup> CLARA INDUSTRIAL/ACADEMIC ENCOUNTERS

This key annual event brings together actors in Oncology Research and development in Rhône-Alpes and Auvergne. In 2012, the CLARA Industrial/Academic Encounters offered opportunities for face-to-face meetings between established and potential partners (like a business convention) as well as a plenary session on the complementary strengths of engineering sciences and Oncology, underscoring technological and clinical challenges and opportunities.

Special focus was given to the high potential for innovation through a combined approach encompassing engineering and Cancer Research. Participants learned of the conclusions reached by a joint CLARA and I-Care Cluster scientific committee which organized discussions throughout the year among representatives from medicine, research and business.

During this event, two high-potential projects received the CLARA 2012 Trophies:

- **Development of Functional Fluorescent Nanoparticles for Detecting Colorectal Tumors** (G. BARABINO and J.-M. PHELIP, LINA EA 462 Laboratory / Jean Monnet University, CHU Saint-Étienne)
- **Transthoracic Therapeutic Imaging Using 3-D Magnetic Resonance Imaging-Ultrasound Hybrid Guidance** (M. VIALLO, P. CROISILLE and S. SALOMIR, CREATIS, University Hospitals of Geneva)

## SPOTLIGHT ON... WORKSHOPS ON INDUSTRIAL PROPERTY AWARENESS

First launched in 2008, CLARA partnered in 2012 with the French National Industry Property Institute (INPI), Lyonbiopôle and I-Care Cluster to organize workshops on industrial property awareness.

These workshops are means for any economic and Research actors concerned with protecting industrial innovation as a differentiating factor in competitiveness and growth.

## THEY TALKED ABOUT IT...

Encounter with Gabriele BARABINO, Jean-Marc PHELIP and Michèle COTTIER, CLARA Trophies 2012

*"CLARA is a strong element of motivation and structuring within our team and projects and is important in connecting us to the outside world. Besides our respective activities, CLARA is the motherhouse of our NANOCOLON project."*



Michèle COTTIER, Jean-Marc PHELIP, and Magali VIALLO, CLARA Trophies 2012

Read their complete comments on...  
[www.canceropole-clara.com](http://www.canceropole-clara.com)

## Structuring of Research

### EMERGING THEMES

## HUMAN, ECONOMIC AND SOCIAL SCIENCES IN ONCOLOGY: PUTTING PATIENTS AT THE HEART OF RESEARCH

Recognizing the importance of the human, economic and social sciences in basic and clinical research, CLARA supported the expansion of the working group in 2012 in order to welcome new actors.

To achieve regional and national visibility, several high-priority themes were selected regarding:

- Prevention
- Social inequalities
- Doctor-patient relationship
- Healthcare management
- Technological developments
- Epidemiological indicators

At the crossroads of the issues of personal risk, lifestyle and environmental and community risks for the individual, the Human, Economic and Social Sciences focus area of CLARA can spearhead or advance Research involving basic and applied disciplines.

### HIGHLIGHTS 2012

#### September

**Support provided to three new OncoStarter projects in this area**

- **RI-SCOLAIRE** aims at implementing intervention Research on identifying and preventing Cancer in school environment
- **DEDEPRO** has set out to adapt, implement and assess information and decision-support tools for prostate cancer screening with prostate-specific antigen testing
- **INEGO** is studying factors contributing to inequalities in initial management of ovarian epithelial cancer in France between 2011 and 2014

#### December

**Opening of the Hyg e Center**, a regional Cancer prevention center and public health platform in Saint- tienne

### KEY FIGURES 2012

- > **1<sup>st</sup> French Canc rop le in Social Sciences** related to Oncology\*\*
- > **90 researchers**\*\*
- > **20 research teams**\*
- > **15 laboratories** evaluated by AERES, including 9 rated A+ and A\*
- > **3 OncoStarter projects** launched in 2012
- > **20% of projects** funded by INCa in the Human and Social Sciences, Epidemiology and Public Health are CLARA projects

*\*June 2012: Overview of the interregional driving forces in Rh ne-Alpes Auvergne in human and social sciences, under the supervision of L. DIXON (CLARA internal data)*

*\*\*January 2012: Thomson Reuters WoS; July 2012: Bibliometric Analysis of Cancer Research: A National Inter-Canc rop les/INCa Study*



## SPOTLIGHT ON... HUMAN AND SOCIAL SCIENCES WORKING GROUPS LED BY INCa



### Working group on Quality of Worklife, Quality of Care, Patient Quality of Life

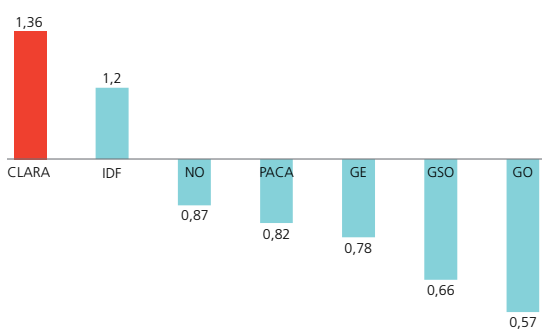
- Promoting and assisting the emergence of national research projects through open calls for projects in Human and Social Sciences, Environment and Public Health
- Helping determine research prospects in calls for projects in Human and Social Sciences, Environment and Public Health

### INCa Inter-Cancéropôles Working group on Inequality and Intervention Research

- Helping determine research prospects in calls for projects in Human and Social Sciences, Environment and Public Health
- Assisting the completion of national research projects resulting from calls for projects

Contact : **Véronique REGNIER**  
(Hygée Center, Saint-Étienne)

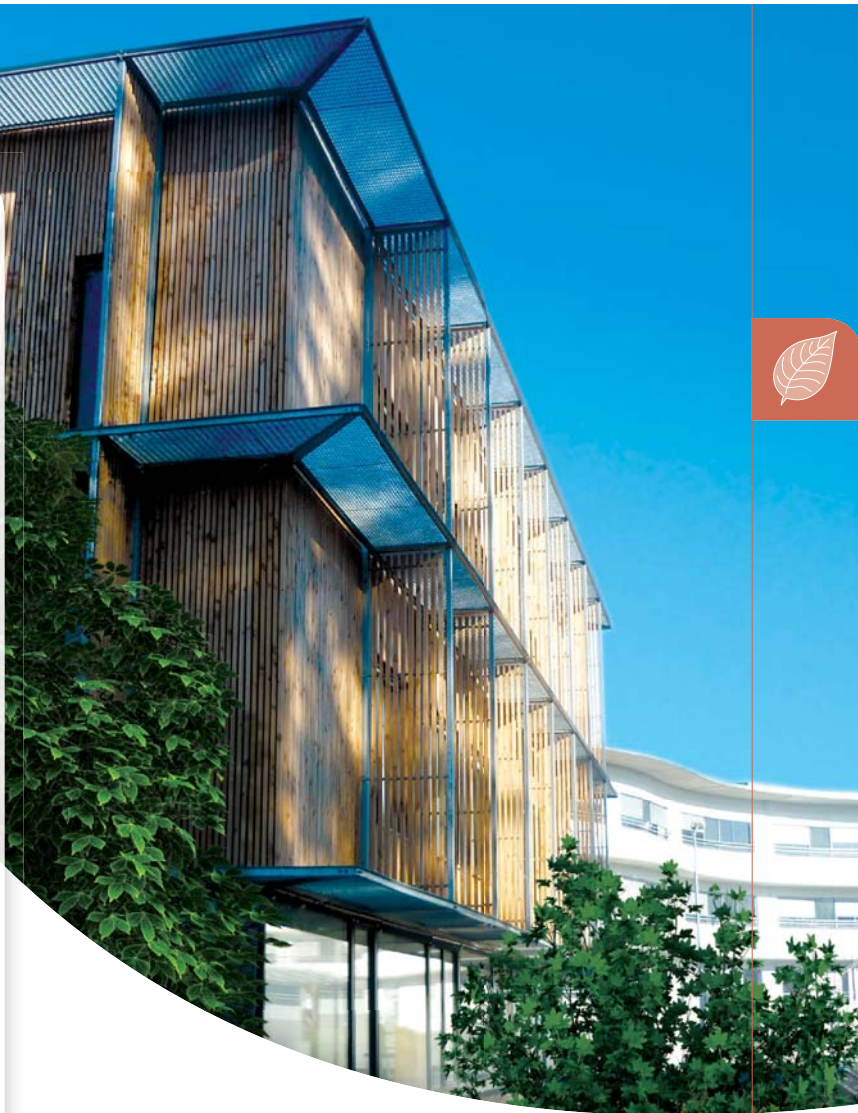
### First French Cancéropôle in scientific publications



> Specialization index for Cancéropôles in publications in social sciences

> Values greater than one indicate the Cancéropôle is more specialized in the field than average in France

The CLARA team thanks Lucette DIXON for her valuable input regarding the human and social sciences focus area and proposals for evolution.



## SPOTLIGHT ON... HYGÉE: REGIONAL CENTER FOR CANCER PREVENTION



The Hygée Center, the CLARA regional public health platform, is housed in a 2500 square-meter building near the Loire Cancerology Institute and is divided into three operational divisions:

- Health education division focused on Cancer prevention activities (primary, secondary and tertiary) for the general public
- Cancer treatment and Research education division
- Public health Research division to raise regional awareness of Cancer and Cancer-related issues

This Center represents an investment of €9M, provided by the French government, the Rhône-Alpes Region, the Loire County, Saint-Étienne Métropole and the Loire Cancerology Institute.



## Structuring of Research

### EMERGING THEMES

## ENVIRONMENTAL AND NUTRITIONAL FACTORS IN ONCOLOGY: PROMOTING INTERDISCIPLINARY RESEARCH THAT ACHIEVES NATIONAL VISIBILITY

In response to the priorities of Cancer Plan II (measure 3), CLARA has incorporated an Environment, Nutrition and Cancer focus area into its 2011-2014 program. Expanded from the thematic focus area Nutrition and Cancer developed between 2007 and 2010, it aims to promote interdisciplinary Research in a field that has regional and national visibility and to contribute to improving knowledge of risk factors:

- Environmental (pesticides and nanomaterials)
- Nutritional (metabolic mechanisms and preventive nutrition interventions)

### SPOTLIGHT ON... INCa WORKING GROUP ON NUTRITION



Developing a National Cancer Nutrition Research Network (NACRe) and CLARA national expertise in Nutrition and Cancer to:

- Promote and assist the emergence of national research projects
- Help determine research prospects

Contact: **Marie-Paule VASSON**, (Faculty of Pharmacy, University of Auvergne)



### KEY FIGURES 2012

- > **4 OncoStarter projects**
- > **3 workshops** (pesticides, nanomaterials and nutrition)
- > **3 meetings** of the INCa Working Group

### HIGHLIGHTS 2012

#### February

#### Launch of the OncoStarter project EXPO-NANO

Coordinated by Jean-Michel VERGNON (CHU Saint-Étienne) and Jérémy POURCHEZ (Saint-Étienne School of Mines), the goal of this project is to develop an indicator of exposure to nanoparticles in order to monitor people who are at occupational risk.

#### May

#### Workshop on Geographical Approaches

to Evaluating Exposure to Pesticides at the International Agency for Research on Cancer (IARC) and Léon Bérard Cancer Center, Lyon

#### July

#### Scientific Forum of the Health-Environment Platform of Rhône-Alpes, EnvitéRA:

Nanomaterials in the Environment and their Impact on the Ecosystem and Human Health

#### September

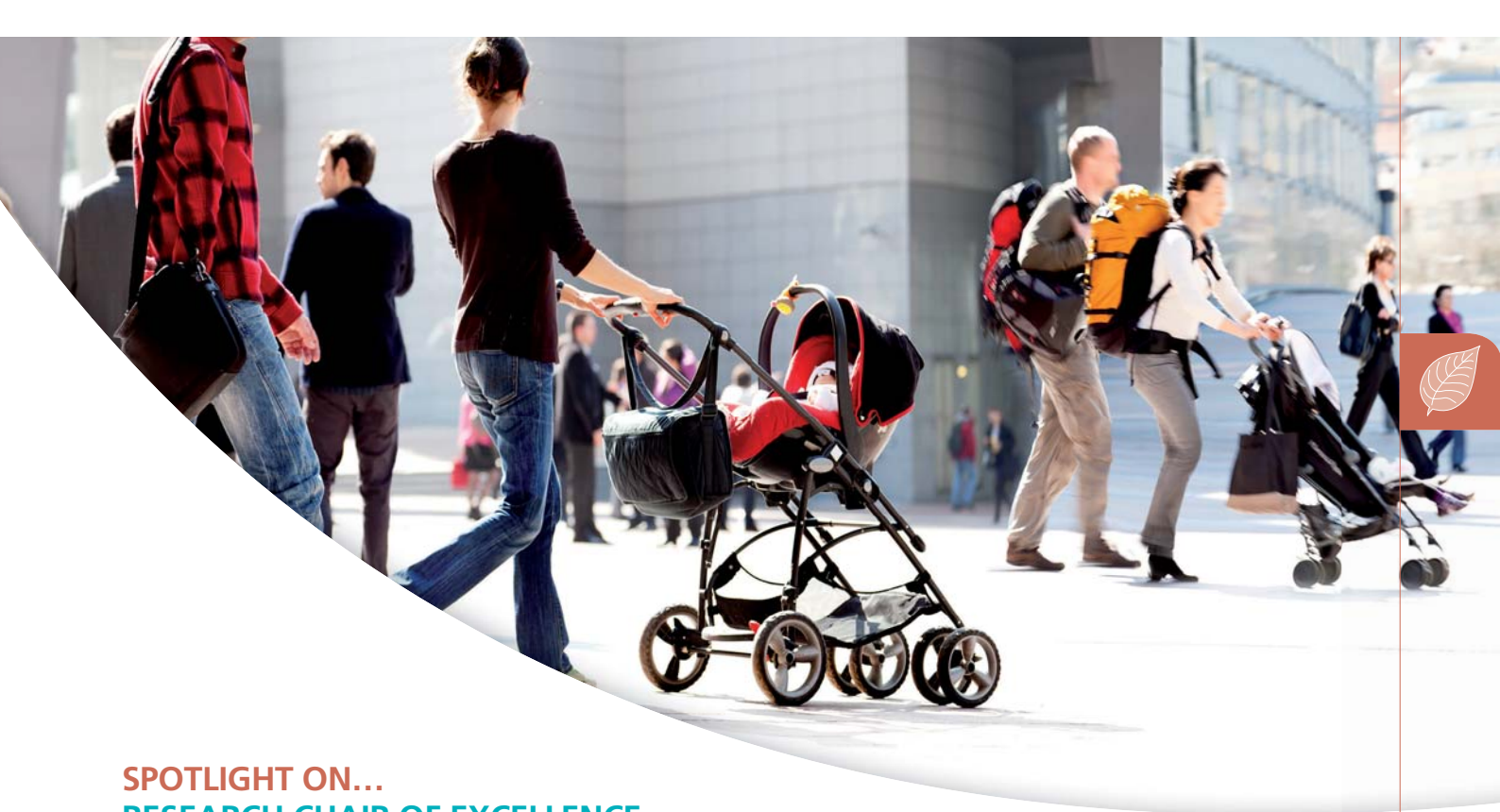
Launch of three new OncoStarter projects, including:

- **GEO3N** on environmental exposure to dioxins and the risk of breast cancer
- **CASTA** on breast cancer and obesity

#### November

INCa/National Cancer Nutrition Research Network (NACRe) Nutrition and Cancer Forum (Before, during, after)





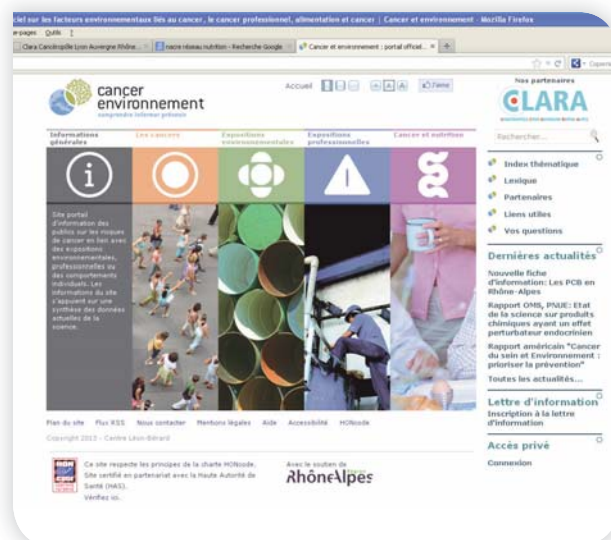
## SPOTLIGHT ON... RESEARCH CHAIR OF EXCELLENCE IN ENVIRONMENT, NUTRITION AND CANCER

In 2010, with the support of the pharmaceutical company Merck Serono, CLARA awarded the Chair of Excellence in "Environment, Nutrition and Cancer" to Dr Béatrice FERVERS of the Cancer and Environment Unit of the Léon Bérard Cancer Center. During those three years, Dr FERVERS has led two major research projects:

- **Detecting occupational cancer**, in collaboration with the Consultation Center for Professional Pathologies, the occupational health center of the Lyon Civil Hospitals. Aiming to improve patient education and overall patient care, this work received the label "Année des patients et de leurs droits" [year for patients and their rights] in 2011.
- Study of **environmental and nutritional factors in breast cancer** taking two complementary approaches:
  - *Study of the cellular, biochemical and genomic impact of chronic low-dose exposure to substances that disrupt endocrine function*
  - *Randomized clinical study of the changing metabolic and cytokine profiles in women diagnosed with breast cancer participating in a six-month nutrition program (diet and exercise) concomitant with cancer treatment*

A public informational web portal on exposure to risks related to the environment, workplace and personal behavior was also created. Its objective is to provide scientifically sound public health information.

[www.cancer-environnement.fr](http://www.cancer-environnement.fr)



## Structuring of Research

# TRANSVERSE ACTIONS: COMBINING THE PROACTIVE INTERREGIONAL ACTIONS OF RHÔNE-ALPES AUVERGNE WITH A NATIONAL APPROACH CONSISTENT WITH OTHER NETWORKS

Eager to incorporate its actions into a national approach that includes interregional teams, CLARA is actively participating in national INCa working groups and creating close ties with partner networks by embracing their initiatives.

## VIRTUAL MICROSCOPY

Inter-Cancéropôles Working group aiming to:

- Share information and know-how for cross-fertilization between Research-Clinical Care-Education approaches
- Issue recommendations that could become INCa recommendations
- Offer an international organization that works with business

Contact: **David MEYRONET** (CHU Lyon)



## KEY FIGURES 2012

- > **23%** of funding for Hospital Clinical Research Program (PHRC) on Cancer projects in 2012 are CLARA projects
- > **160 participants** in two inter-Cancéropôles Bioinformatics workshops
- > **16 meetings** of national INCa Working groups
- > **220 participants** in the EPICLIN conference supported by CLARA

## BIOINFORMATICS



Organizing top-tier inter-Cancéropôles scientific animation around the

Bioinformatics platform of the Synergie Lyon Cancer Foundation and as part of the International Cancer Genome Consortium.

The themes covered in 2012 in the half-yearly workshops were:

- New generations of sequencing applied to Cancer transcriptomics
- High-throughput epigenomics

Contact: **Gilles THOMAS** (UCBL, Synergie Lyon Cancer Foundation, CLB)





Photo : Romain ÉTIENNE / ITEM / Fondation Synergie Lyon Cancer

## CLINICAL RESEARCH



Putting the Clinical Cancer Research Support Platform of the Auvergne Rhône-Alpes (PARCC-ARA) region at the center of the activities of the INCa working group to:

- Increase the potential of clinical Cancer Research by helping investigators design, coordinate and analyze their clinical studies
- Improve INCa clinical trials registry data
- Guide actors involved in local clinical research on clinical trials
- Identify what determines the supply, demand, needs and conduct of Cancer clinical trials, especially when they are associated with inequalities

Contact: **David PEROL** (CLB, CRCL, PARCC-ARA)

## HIGHLIGHTS 2012

**April**

**4<sup>th</sup> Inter-Cancéropôles Bioinformatics Workshop, Nice**

**May**

**19<sup>th</sup> Statistician Forum of the Centers for the Fight Against Cancer and 6<sup>th</sup> Francophone Conference on Clinical Epidemiology (EPICLIN), Lyon**

**September**

**5<sup>th</sup> Inter-Cancéropôles Bioinformatics Workshop, Lyon**



## Structuring of Research

# INTERNATIONAL: POSITIONING THE RHÔNE-ALPES AND AUVERGNE REGIONS AS EUROPEAN REFERENCE SITES IN THE FIGHT AGAINST CANCER

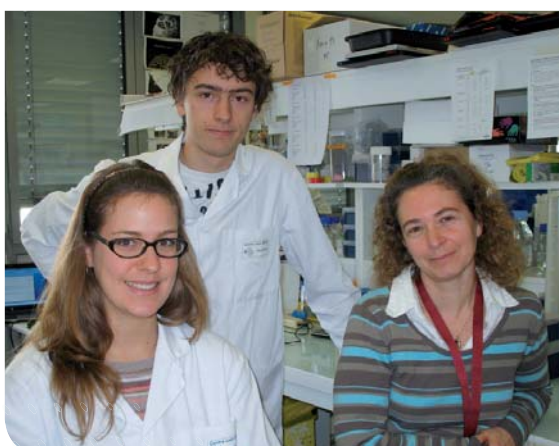
Aware of the importance of expanding interregional Research beyond borders, CLARA is actively promoting international collaborations through two close partnerships:

- With Spanish Cancer Research clusters (Catalonia and Castilla y León)
- Between authorities in Shanghai and the Rhône-Alpes Region.

### IN THEIR WORDS...

Encounter with Dr Véronique MAGUER-SATTA, ROBACETIC project

*"CLARA has supported us at every stage of this international project, which would not exist without it. In a word, CLARA allowed us to have a vision"*



Véronique MAGUER-SATTA and her team

Read Dr Maguer-Satta's complete comments at [www.canceropole-clara.com](http://www.canceropole-clara.com)

### KEY FIGURES 2012

- > **20 European projects** in progress, representing a budget of close to **€100M**
- > **2 strong collaborations:** Shanghai and Spanish clusters
- > **1 student** (Master 2 (Bologna Process), then Ph.D. thesis) pursuing a joint University of Lyon/Shanghai University degree



### HIGHLIGHTS 2012

#### January

**Biotecyl cluster's visit to CLARA:** Launch of a French-Spanish, inter-cluster collaboration

#### March

**Satellite event** of the 7<sup>th</sup> Scientific Forum on Nanomedicine and Oncology in Rhône-Alpes Auvergne and Catalonia, in partnership with the Biocat cluster

#### November

**2<sup>nd</sup> Franco-Chinese Symposium on Cancer Research**, in partnership with the Rhône-Alpes Region





## SPOTLIGHT ON... COLLABORATION WITH SPANISH ONCOLOGY CLUSTERS

In an effort to give a prominent European dimension to the Rhône-Alpes Auvergne interregional Oncology cooperation, two firm partnerships were forged in 2012 with the Biotecyl and Biocat Spanish clusters.



The collaboration with the **Biotecyl** cluster (Salamanca, Castilla y León) is developing a joint work plan whose areas of Research relate to new therapeutic approaches, personalized medicine and biomarkers in sarcomas and leukemia. CLARA invited the Spanish Research leaders to visit Lyon in January to prepare an application for an Interreg program.



As part of the 7<sup>th</sup> CLARA Scientific Forum, a satellite event was organized with the **Biocat** cluster (Catalonia) on Nanomedicine and Oncology in Rhône-Alpes Auvergne and Catalonia. Ten researchers, clinicians and CEOs were invited to share their activities with regional actors in order to develop partnerships.

## SPOTLIGHT ON... 2<sup>ND</sup> FRANCO-CHINESE SYMPOSIUM ON CANCER RESEARCH

**Rhône-Alpes** <sup>Région</sup>

Since 2011 and thanks to the support of the Rhône-Alpes Region, CLARA is leading an ambitious program of collaboration between academic teams in the region and their counterparts in Shanghai.

The visit of a French delegation to Shanghai in July 2011 resulted in the first collaboration, which focuses on stem cells (breast and prostate cancer), between Prof GAO (Med-X Renji Hospital, Stem Cell Research Center) and Dr MAGUER-SATTA (Cancer Research Center of Lyon).

To increase momentum, a delegation of Chinese researchers and institutional representatives was received in Lyon in November 2012. The goal was to improve mutual understanding of the two countries' approaches to the management of Cancer Research and care, present the results of the first joint projects and initiate and strengthen collaborative efforts.

Several partnerships are now being set up.

## Supporting Research Projects

FOSTERING THE EMERGENCE OF PROJECTS

### MOBILITY: BUILDING TOMORROW'S TALENT

**MOBILITÉ** Mobility for young researchers is a source of acquiring new techniques and knowledge and promotes the emergence and strengthening of collaborative projects. For this reason, CLARA set up a program in 2011 focusing on mobility.

Intended for young researchers in Rhône-Alpes Auvergne involved in Oncology projects requiring regional, national or international travel lasting between one and three weeks, the CLARA Mobility program can assist with funding up to €2,500.



#### EXAMPLES OF 2012 PROJECTS

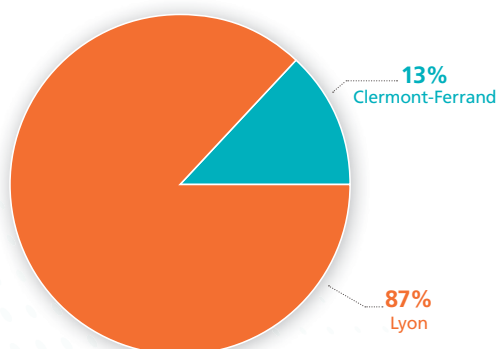
- > Étude des instabilités génétiques des dysplasies pré-cancéreuses tubo-ovariennes chez les patientes à risque génétique (**Jean Perrin Cancer Center, Clermont-Ferrand** → **Montreal University Hospital, Canada**)
- > Étude de la Caséine Kinase 2 et de ses inhibiteurs ; cytotoxicité vis-à-vis de cellules tumorales pancréatiques (**Claude Bernard Lyon 1 University** → **CEA of Grenoble**)
- > Impact des expositions environnementales prénatales sur l'incidence du cancer du testicule (**IARC** → **Danish Cancer Society, Karolinska Institute, Sweden**)

*The complete list of projects appears in the appendices (see p. 28)*

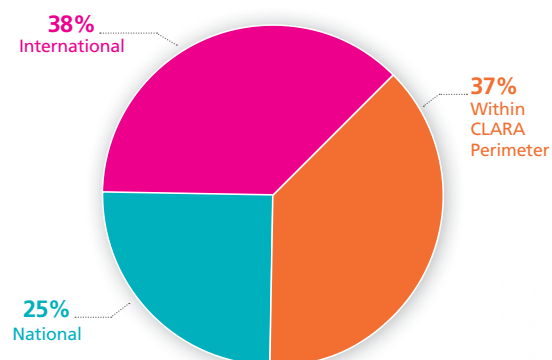
#### KEY FIGURES 2012

- > **€20,000** allocated
- > **8 grants** for Mobility

Geographic Origin of Selected Mobility Projects



Destination of Selected Mobility Projects



FOSTERING THE EMERGENCE OF PROJECTS

## ONCOSTARTER: SUPPORTING THE EMERGENCE OF INNOVATIVE PROJECTS



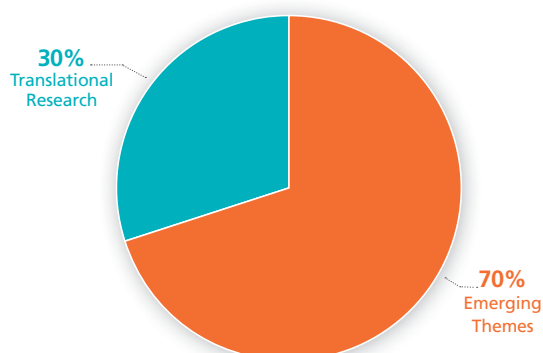
MATURATION PROGRAM  
FOR TRANSLATIONAL RESEARCH AND  
EMERGING FIELDS IN ONCOLOGY

Since 2011, thanks to its unique position allowing it to speed up project development to maximize chances of receiving later funding, OncoStarter complements traditional project development systems as well as, among others, *CLARA Proof of Concept* and *INCa* calls for projects.

In addition to financial assistance allocated to solidify scientific data, teams can receive personalized coaching to raise the level of quality of their projects (extension of partnerships, market research, consideration of regulatory issues, etc.).

Open to all Translational Research projects as well as those that fall within emerging themes identified by CLARA (Assessment, Perception of Risks and Cancer Prevention, Environment, Nutrition and Cancer), it promotes the development of multidisciplinary approaches.

**In 2012, top priority was given to supporting projects on emerging themes:** Environment, Nutrition, Human and Social Sciences



### KEY FIGURES 2012

- > **€405,000** allocated
- > **8 projects** chosen
  - **3 projects** in Translational Research
  - **5 projects** in Environment, Nutrition, and Human and Social Sciences

### EXAMPLES OF 2012 PROJECTS

#### Translational Research

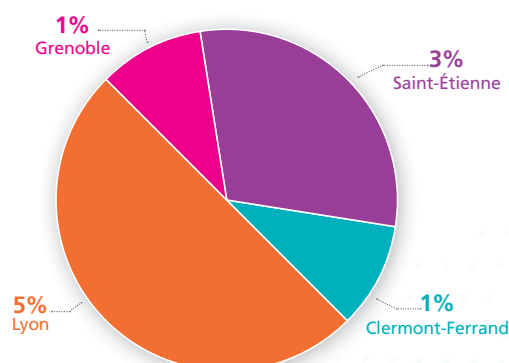
- > Potentialisation des traitements des cancers du pancréas
- > Nouveau marqueur pronostic et prédictif du cancer du sein ER+
- > Développement de nanoparticules fluorescentes pour la détection des lésions tumorales colorectales

#### Emerging Themes

- > Représentations et prévention des cancers en milieu scolaire
- > Évaluation d'outils d'information et d'aide à la décision dans le dépistage du cancer de la prostate
- > Facteurs d'inégalités de la prise en charge initiale des cancers épithéliaux ovariens
- > Vers un indicateur d'exposition aux nanoparticules
- > Expositions environnementales aux dioxines et risque de cancer du sein

*The complete list of projects appears in the appendices (see p. 28)*

#### Balanced location-based projects





## Supporting Research Projects

# CLARA PROOF OF CONCEPT: A KEY STEP IN REACHING CLINICAL CARE FASTER

Since 2005, CLARA has been running a unique and powerful program for exploitation of research results: the *Proof of Concept* program.

Through financial support and assistance to academic and clinical teams in Rhône-Alpes Auvergne, this program makes it easier to develop preclinical projects and clinical studies on high-potential product candidates (drugs and devices) and generate industrial property to support them.



In partnership with a company working within CLARA's scope of activities that is conducting and committed to exploiting the research results in the long run, the program focuses on local economic growth and contributes to promoting innovative therapeutic and diagnostic solutions that directly benefit patients.

### KEY FIGURES 2012

- > **1 robotic surgical device** on the market
- > **5 projects** in clinical development
- > **6 preclinical assessments** performed
- > **32 projects** supported, including 15 in progress and 5 in post-project follow-up\*\*
- > **€37,3 M overall budget** (€25,1M invested by interregional business partners and €12,2M by local authorities and ERDF)
- > **More than 70 partners**, including 7 clinical centers
- > **41 scientific publications\***
- > **43 scientific press releases\***
- > **25 patent applications\***

\* Based on data available on December 31, 2012

\*\* Projects are described in the appendix (see p. 29)





## HIGHLIGHTS 2012

### January

**Synfrizz launches its phase 1 clinical trial first in man/first in class to develop a new treatment for synovial sarcoma.** Based on an innovative treatment combining anti-FZD10 antibody with radiation therapy, it is the first targeted treatment in the world for this type of Cancer. The trial will take place for 24 months and involve 21 sarcoma patients in three French Cancer centers.

### May

**Creation of Anstom Surgical as part of the UroLink project.** Led by Arnold FERLIN, the company Anstom Surgical is the business partner in the UroLink project whose goal is to develop automated urethrovessical anastomosis for prostate cancer. Spawned from the technology incubator CREALYS, Anstom Surgical is the 2012 laureate of the 13<sup>th</sup> Tremplin Entreprise [Business Springboard] co-organized by the French Senate and ESEC.

### June

**The Enki-HEH project starts clinical trials at the Lyon Civil Hospitals to test a new tumor resection technique that uses a pulsed jet of water.**

### July

**A study of high-intensity focused ultrasound (HIFU) begins the phase 2b clinical trial stage for the treatment of hepatic metastases.** Launched in 2011, phase 2a clinical trials were approved in February 2012 by a committee of experts. The approvals for moving to phase 2b by the institutional review board (CPP) and French Agency for Health Product Safety (ANSM) were granted in summer 2012. The first three patients were enrolled in September 2012. The procedures for obtaining CE marking were initiated in December 2012.

### August

**GeniusVac-Mel4 requests approval of a phase 1 clinical trial.** The objective of the project is to develop an innovative drug treatment (cell therapy) for melanoma. After receiving a positive response from CPP in October 2012, feedback from ANSM is expected in 2013.

### September

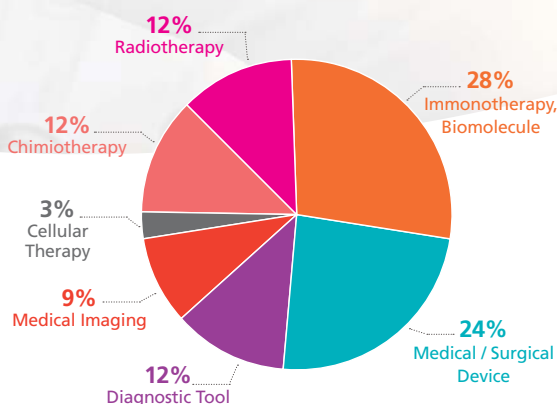
**Reception of nine letters of intent as part of the 8<sup>th</sup> CLARA Proof of Concept call for projects (six applications assessed)**

### November

**HepatoFluo received approval to start its phase 1 clinical trial.** Based on Fluobeam™ technology from the company Fluoptics, the objective of the HepatoFluo project is to assess the feasibility and effectiveness of a fluorescent marker in improving surgical procedures for hepatic metastases and primary liver cancer. Patient enrolment will begin in January 2013. The device received CE marking in December 2012.

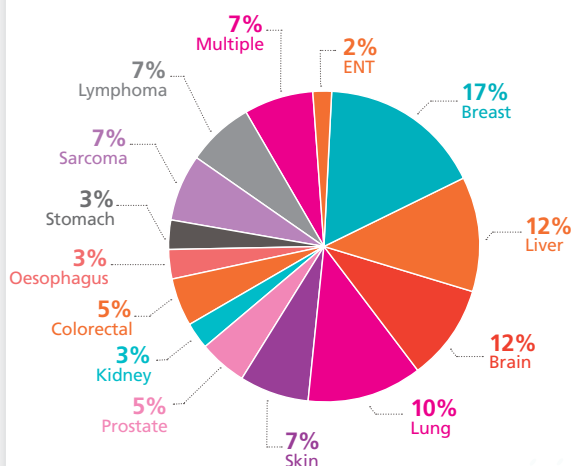
*The complete list of projects appears in the appendices.*

### A vast field of application of proofs of concept targeted since 2005



### Targeted pathologies within the Proof of Concept program since 2005

3 major indications : breast (17%), liver (12%) and brain tumors (12%)



*The CLARA team thanks all the experts mobilized in the selection and in the follow-up of projects, most notably Jean-Jacques ZEILLER and Michel JOLIVET.*

## Supporting Research Projects

# MAJOR INTERREGIONAL PROJECTS: ENHANCING THE REPUTATION OF THE TERRITORY IN ONCOLOGY

Emphasizing the importance of making sure that interregional research teams join forces in innovative and competitive projects that address national Cancer Research priorities and favorably position interregional teams in Europe, CLARA and local authorities have partnered since 2009 to implement a strategy of providing maximum support to development projects.

Sponsor of leading cooperative groups, such as the European Lymphoma Institute (ELI) and World Sarcoma Network (WSN), CLARA decided this year to fund a chair of excellence in Translational Research in Oncology in Grenoble.

## CHAIR OF EXCELLENCE IN TRANSLATIONAL RESEARCH IN ONCOLOGY IN GRENoble

In 2012, CLARA, CHU Grenoble, Joseph Fourier University, Isère County, Grenoble Alpes Métropole and the City of Grenoble co-funded a chair of excellence in Translational Research.

Associated with the creation of a laboratory and dedicated team at the Albert Bonniot Institute, this chair of excellence aims to mobilize the driving forces in Grenoble to collaborate with pharmaceutical companies to develop innovative applications.

Contact: **Christian BRAMBILLA** (Albert Bonniot Institute, Grenoble)

## ELI EUROPEAN LYMPHOMA INSTITUTE

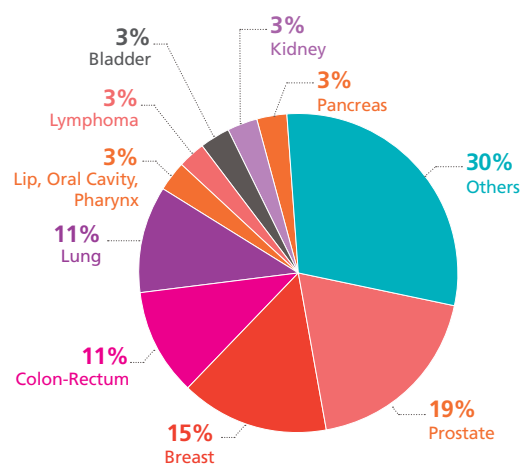


Uniting the most prominent lymphoma specialists in Europe in an institute dedicated to Research, training and education, ELI's goal is to determine a strategy, therapeutic and diagnostic standards and facilitate basic and clinical Research in Europe.

Using this one-of-a-kind collaborative operating model, ELI wants to advance lymphoma Research to offer all patients equal access to the best care.

Contact: **Bertrand COIFFIER** (CHU Lyon)

**Lymphoma: 6<sup>th</sup> Highest Incidence of Cancer in the World**



Source : INCa Situation du Cancer en France en 2012



## KEY FIGURES 2012

- > **€900,000** over 3 years to ELI and WSN
- > **€600,000** over 3 years for the chair of excellence in Translational Research
- > **6 preclinical assessments** performed
- > **1 Japanese company** working in Lyon thanks to higher visibility through WSN
- > **+ 80% growth rate** for research partnerships in 2011 at CALYM (Carnot Lymphoma Institute)



**Lyon: Pilot center of the NetSarc network of clinics, the French branch of WSN on soft tissue and visceral sarcomas**

**Clermont-Ferrand, Expert Center**

## WSN WORLD SARCOMA NETWORK



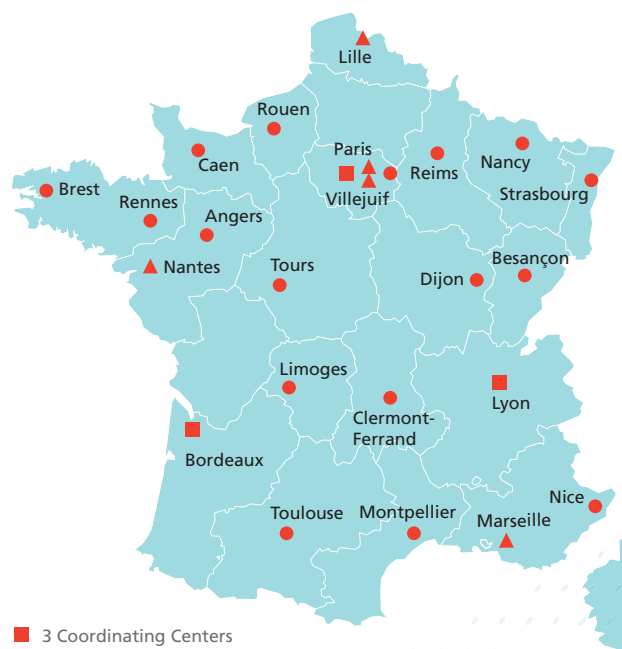
The rarity of sarcoma makes clinical Research and trials difficult to conduct.

Faced with this challenge, the objective of the World

Sarcoma Network is to combine expertise from around the world (13 members) and provide the critical mass of patients for clinical Research.

WSN is a key player in the advancement of Research and is contributing to making the Lyon area increasingly attractive to pharmaceutical companies that want to develop innovative treatments for sarcoma.

Contact: **Jean-Yves BLAY** (Léon Bérard Cancer Center)



- 3 Coordinating Centers
- ▲ 5 Expert Centers Mandated
- 18 Expert Centers (including one DOM TOM)



## Supporting Research Projects

# FUNDING OF PROJECTS WITHIN CLARA'S PERIMETER: MEASURABLE IMPACT ON THE STRENGTH OF ONCOLOGY RESEARCH

N° 2 area in France in Oncology Research, the Rhône-Alpes Auvergne inter-region is receiving strong support from all funding sources, from non-profit organizations to public institutions. The projects are detailed in the appendix.



## THE LEAGUE AGAINST CANCER



**€2,3M** granted to CLARA research teams:

- > Accredited research teams (**7 teams, €736,000**)
- > Regional clinical research platform (**1 platform, €120,000**)
- > Clinical research project (**1 project, €100,000**)
- > Projects in Human and Social Sciences (**3 projects, €124,000**)
- > Adolescents and Cancer program (**2 recipients, €48,000**)
- > Research allocations (**34 recipients, €1.2M**)

*Note that these figures do not include funding from French county committees because data was unavailable at the time of publication of this document.*

## KEY FIGURES 2012

- > **€18M** obtained by research teams\*
- > **130 projects\***
- > **1500 active scientists**

\* Not including OSEO and Investments for the Future

## ARC FOUNDATION FOR RESEARCH ON CANCER



**€3,2M** granted to CLARA research teams:

- > Individual stipends (**30 recipients** receiving a total of **€1.4M**)
- > Medium-level equipment (**€507,000**)
- > Fixed funding (**€450,000**)
- > Partnered funding of projects from calls for projects
  - NCI/CLIP<sup>2</sup> (**€452,000**)
  - PAIR Gynecology (**€250,000**)
- > Support for innovative therapeutic Research (**€166,000**)

## ITMO CANCER



**€1,69M** granted to CLARA research teams:

- > Research projects (**7 projects** receiving a total of **€1,5M**)
- > Support for Research and training (**4 recipients** receiving a total of **€190,000**)



## FRENCH NATIONAL CANCER INSTITUTE (INCa)



**€10,3M** granted to CLARA research teams:

- > Research projects (**8 projects** receiving a total of **€4,2M**)
- > Projects in the Clinical Cancer Research Hospital Program (**13 projects** receiving a total of **€5M**)
- > Support for organizations, networks and public health actions (**7 recipients** receiving a total of **€1,1M**)

## OSEO



**€40,7M** granted to two projects involving CLARA participants

*(the share received by teams within CLARA's perimeter is unavailable)*

- > **TEDAC**: As part of OSEO's Strategic Industrial Innovation program, led by Erytech Pharma, TEDAC focuses on developing innovative enzyme therapies that target the metabolic environment of tumors and on using screening and monitoring tests to provide personalized care to patients with cancers resistant to radiation therapy and chemotherapy.
- > **C4C**: Selected as part of the 2nd call for projects "Structuring R&D Projects" to create the first French technology platform for the industrialization of cell therapies, in partnership with the regional company CellforCure and Lyon Civil Hospitals.

## FRENCH NATIONAL RESEARCH AGENCY (ANR)



**Two CLARA PROJECTS** selected in 2012 as part of the call for projects "Research Partnerships and Biomedical Innovation"

- > **OREGA-17** is developing new interleukin-17 antagonists for use in Oncology. Regional partner and coordinator: OREGA Biotech (amount allocated not available)
- > **MULTIMAGE** is developing nanometer structures for early detection using multimodality imaging. Regional partner and coordinator: Pascal PÉRIAT (amount allocated not available)

## INVESTMENTS FOR THE FUTURE



**€89M** granted to eight projects involving CLARA participants:

- > **CAMI** (Labex – University of Grenoble): New approaches to Computer-Assisted Medical Interventions (Cancer and others)
- > **PRIMES** (Labex – University of Lyon): Program in Physics, Radiobiology, Medical Imaging and Simulation aimed at developing innovative methods and devices in medical imaging for localizing tumors and fine-tuning treatment
- > **PHENOCAN** (Equipex – University of Lyon): Technology platform project for developing mouse models of cancer
- > **FRANCE LIFE IMAGING (FLI)** (Infrastructures (CEA)): National infrastructure coordinated by the French Alternative Energies and Atomic Energy Commission (CEA) that brings together six large-scale imaging platforms for Research on preclinical and clinical imaging, including archiving and image processing

*Non exhaustive list; the share received by teams within CLARA's perimeter is not available.*

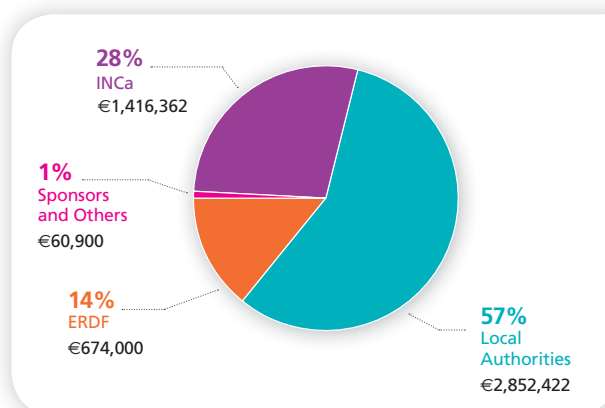
## Financial Results

# FINANCIAL RESULTS 2012\*

## INCOME

In 2012, the CLARA budget was €5,003,684 received as follows:

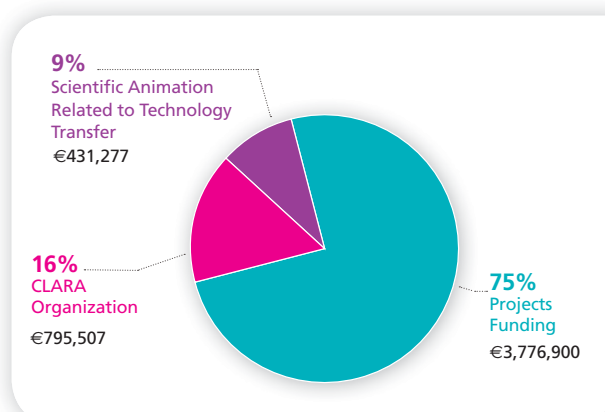
- > **€2,852,422:** Local authorities
- > **€1,416,362:** INCa
- > **€674,000:** ERDF
- > **€60,900:** Sponsors and others



## EXPENSES

Project funding amounts to €3,776,900 (75% of annual budget), broken down as follows:

- > **€2,496,000:** Support for Proof of Concept projects
- > **€430,614:** Project emergence (Mobility, OncoStarter)
- > **€329,300:** Support for large-scale interregional projects (ELI, WSN, Hyg e)
- > **€318,186:** Related costs (consultancy fees and project coaching, salaries)
- > **€202,800:** Support for other research projects and PARCC-ARA



Organizational funding amounted to €795,507 (16% of annual budget), broken down as follows:

- > **€361,866:** Overhead (including local)
- > **€292,305:** Administrative and financial management
- > **€118,044:** Communications (including website redesign, press relations for projects and the promotion of interregional Research)
- > **€23,293:** Network coordination (business travel)

Funding of scientific animation related to technology transfer amounted to €431,277 (9% of annual budget), broken down as follows:

- > **€395,124:** Scientific animation (Scientific Forum, thematic workshops, event organization support and axes animation)
- > **€36,153:** Events related to technology transfer (including the 5<sup>th</sup> Industrial/Academic Encounters)

\*Subject to approval of the 2012 budget by the Board of Directors of the L a et Napol on Bullukian Foundation. Payroll is integrated into the various expenditure items based on staff posting.



## APPENDIX

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## Appendix 1

# FINANCING ATTRIBUTED IN 2012 TO RESEARCH TEAMS FROM REGIONS COVERED BY THE CANCÉROPOLE LYON AUVERGNE RHÔNE-ALPES

## CLARA



### MOBILITY GRANTS

- Étude des instabilités génétiques des dysplasies pré-cancéreuses tubo-ovariennes chez les patientes à risque génétique (mutations BRCA); Coordination: Frédérique PENNAULT-LORCA; Applicant: Gautier CHENE (Jean Perrin Cancer Center, Clermont-Ferrand); Host Organization: Montreal University Hospital Center, Canada; €2,500
- Étude du caractère "Cell Penetrating Peptide" d'un fragment de protéine ayant montré une activité anti-angiogénique chez la souris; Coordination: Florence RUGGIERO; Applicant: Rachel MANUEL (Lyon Functional Genomics Institute); Host Organization: Albert Bonniot Institute; €2,500
- Étude des molécules d'adhérence cellulaire et les cascades de signalisation associées; rôle dans la progression tumorale/ Identification de cibles moléculaires dirigées contre une laminine; Coordination: Patricia ROUSSELLE/Bénéficiaire: Fanny WALTZ (Institute of Biology and Chemistry of Proteins, Lyon); Host Organization: Curie Institute/Pharmacochimistry, Biorganic Chemistry, Vectorization; €2,500
- Étude de la Caséine Kinase 2 (CK2) et de ses inhibiteurs/Études de cytotoxicité vis-à-vis de cellules tumorales pancréatiques; Coordination: Thierry LOMBERGET/Applicant: Benoît BESTGEN (Claude Bernard Lyon 1 University); Host Organization: CEA Grenoble/Biology of Cancer and Infection Team, iRTSV; €2,500
- Impact des expositions environnementales prénatales sur l'incidence du cancer du testicule/Influence de l'activité professionnelle des parents pendant la grossesse et avant conception sur l'incidence du cancer du testicule chez leurs enfants; Coordination: Beatrice FERVERS - Joachim SCHÜZ; Applicant: Charlotte LE CORNET (International Agency for Research on Cancer (IARC)); Host Organization: Danish Cancer Society, Karolinska Institute (Sweden) and Kreftregisteret (Norway Cancer Registry); €2,500
- Acquisition de techniques pour l'étude de mécanismes de régulations transcriptionnelles en lien avec LSD1; Coordination: Jean-Marc VANACKER; Applicant: Julie CARNESECCHI (Lyon Functional Genomics Institute, CNRS UMR5242, ENS Lyon); Host Organization: CNRS UMR6293, Clermont University, INSERM U1103 Cézeaux University Complex; €2,500
- Une nouvelle approche dans le traitement du carcinome hépatocellulaire: les inhibiteurs de Poly (ADP-ribose) polymerases (PARP); Coordination: Alain PUISIEUX; Applicant: Clément GUILLOT (CRCL/INSERM U1052/CNRS 5286; Host Organization: Curie Institute; €2,500
- Étude de la variabilité génomique conduisant au développement et à la progression du cancer du sein; Coordination: David G. COX; Applicant: Sophie BLEIN (Cancer Research Center of Lyon - Léon Bérard Cancer Center); Host Organization: Imperial College of London; €2,500

### ONCOSTARTER - EMERGING THEMATICS

- Expo-Nano Minéralopathologie nanoparticulaire: vers un indicateur d'exposition aux nanoparticules; Coordination: Jean-Michel VERGNON (CHU Saint-Étienne); €50,000; 13 months
- CASTA Cancer du sein en situation d'obésité: interactions potentielles *in vitro* entre sécrétions adipocytaires et thérapies anticancéreuses; Coordination: Florence CALDEFIE-CHÉZET (Faculty of Pharmacy - Clermont-Ferrand); €39,000; 13 months
- DEDEPRO Adaptation, implantation et évaluation d'outils d'information et d'aide à la décision dans le dépistage du cancer de la prostate par PSA/APS en France, Suisse et au Canada; Coordination: Nora MOUMJID FERDJAOUI (University of Lyon); €39,000; 13 months
- GEO3N Expositions environnementales aux dioxines et risque de cancer du sein: étude de faisabilité en région Rhône-Alpes, préalable d'une étude nationale au sein de la cohorte E3N; Coordination: Béatrice FERVERS (Léon Bérard Cancer Center); €49,874; 13 months
- InegO Facteurs d'inégalités de la prise en charge initiale des cancers épithéliaux ovariens en France entre 2011 et 2014; Coordination: Isabelle RAY-COQUARD (Léon Bérard Cancer Center); €19,850; 13 months
- REPA-ENVI Identification de signatures phénotypiques de réparation de l'ADN suite à l'exposition cellulaire à des carcinogènes environnementaux; Coordination: Sylvie SAUVAIGO (CEA); €15,600; 13 months
- RI scolaire Recherche-interventionnelle Représentations et Prévention des cancers en milieu scolaire; Coordination: Véronique REGNIER (Lucien Neuwirth Cancerology Institute); €41,300; 13 months

### ONCOSTARTER - TRANSLATIONAL RESEARCH

- ZIRA ZNF217, nouveau marqueur pronostic et prédictif du cancer du sein ER+; Coordination: Pascale COHEN (Cancer Research Center of Lyon); €50,000; 13 months
- PanLOX Potentialisation des traitements des cancers du pancréas par inhibition de l'activité Lysyl Oxydase; Coordination: David BERNARD (Cancer Research Center of Lyon); €50,000; 13 months
- NANO-CÔLON Développement de nanoparticules fluorescentes fonctionnalisées pour la détection des lésions tumorales colorectales; Coordination: Jean-Marc PHELIP (University of Saint-Etienne); €50,000; 13 months

## Appendix 1

### PROOF OF CONCEPT (ONGOING)

Amount (k€)	Institute	Coordinator / Bénéficiaire	Industrial Partner	Geographical Area	Name of Project	Call for Projects	Length (Months)	Financing Source
633	Grenoble Institute of Neurosciences	François BERGER	Ecrins Therapeutics	Grenoble	CancerDrug	PdC 2009	39	Isère General Council, Grenoble Alpes Métropole, City of Grenoble,
627	Lyon Civil Hospitals	Marc COLOMBEL	ADEPT	Lyon	Doc_Calipso	PdC 2010	36	Rhône-Alpes Regional Council
140	Lyon Civil Hospitals	Thierry PONCHON	NESTIS	Lyon	Enki_HEH	PdC 2011	15	Rhône General Council, Greater Lyon
70	Albert Gonniot Institute	Joël PLUMAS	French Blood Agency	Grenoble	GeniusVac_Mel4	PdC 2011	48	ERDF, Grenoble Alpes Métropole, City of Grenoble
498	Léon Bérard Cancer Center	Patrice PEYRAT	Fluoptics	Lyon	Hepatofluo	PdC 2011	30	Rhône General Council, Rhône-Alpes Regional Council
535	INSERM	David MELODELIMA	EDAP TMS	Lyon	HIFU	PdC 2006	79	Greater Lyon
50	Cancer Research Center of Lyon	Charles DUMONTET	HLA-G Technologies	Lyon	HLA-G	PdC 2011	22	Greater Lyon, Rhône General Council
228	CNRS	Jean-Luc LENORMAND	Synthélis	Grenoble	Lipobak	PdC 2009	36	Isère General Council, Grenoble Alpes Métropole, City of Grenoble, ERDF
481	Cancer Research Center of Lyon	Christophe CAUX	ImmunID	Lyon, Grenoble	Lymphos1	PdC 2008	56	Rhône General Council
426	Atomic Energy Commission, LETI	Isabelle TEXIER-NOGUES	Advanced Accelerated Application	Grenoble	Nano_Eno	PdC 2010	36	ERDF, Rhône-Alpes Regional Council
400	Léon Bérard Cancer Center	Servane TAUSZIG-DELAMASURE	Netris-Pharma	Lyon	NT3_Target	PdC 2009	40	ERDF, Rhône General Council
751	Léon Bérard Cancer Center	Jean-Yves BLAY	OncoTherapy Science	Lyon	Synfrizz	PdC 2010	48	ERDF, Greater Lyon, Rhône General Council
354	Centre de Recherche en Cancérologie de Lyon, INSERM, CNRS	Jean-Jacques DIAZ	iDD-Biotech	Lyon	Thera8	PdC 2011	36	Rhône General Council, Greater Lyon
416	Cancer Research Center of Lyon, INSERM, CNRS	Elisabeth MIOT-NOIRAULT	Cyclopharma	Clermont-Ferrand	TRT_PETMEL	PdC 2008	48	ERDF, Auvergne Regional Council, Puy de Dôme General Council, Clermont Community
278	VetAgroSup, EPSP	Claude CARROZO	A-Surgical	Lyon	UroLink	PdC 2011	24	Greater Lyon, Rhône General Council



## Appendix 1

### ITMO CANCER 2012



#### Systems Biology

- Functional annotation of the transcriptome at the exon level; Coordination: Didier AUBOEUF (U1052 Léon Bérard Cancer Center, Lyon); €295,319,58; 36 months

#### Models of Animal Spontaneous Tumors for Translational Cancer Research

- *Lepidic pulmonary adenocarcinomas: from sheep to human*; Coordination: Caroline LEROUX (UMR754 INRA-UCBL1, Lyon); €392,400; 36 months

#### Research Projects in Physics, Mathematics or Engineering Sciences applied to Cancer

- Impact of physical constraints on cancer stem cell resistance; Coordination: Françoise ARGOUL (UMR 5672 Laboratory of Physics, ENS, Lyon); €230,260
- Développement d'une matrice de chambres d'ionisation pour la mesure en 2D des faisceaux en radiothérapie à modulation d'intensité, pendant le traitement et en amont du patient; Coordination: Yannick ARNOUD (UMR5821 Laboratory of Subatomic Physics and Cosmology, Grenoble); €223,077; 24 months
- Design and test of a verification method of the 3D dose distribution delivered by radiotherapy beams using a new 3D chemical dosimeter, Dosi3D; Coordination: Véronique DEDIEU (EA 3846 Clermont-Ferrand); €240,237; 24 months
- Modélisation mathématique de la réponse des gliomes de bas-grade aux chimiothérapies et radiothérapie; Coordination: Benjamin RIBBA (INRIA, Saint-Ismier); €110,897; 24 months

#### Support for Training in Translational Cancer Research

- Traitement par anticorps monoclonaux des leucémies à cellules dendritiques plasmocytoides; Coordination: Amélie BOESPFLUG (UMR 5286, Cancer Research Center of Lyon); €33,732; 12 months
- Rôle du microARN miR-9 et de son réseau génique dans le développement tumoral des glioblastomes; Coordination: Amandine BRUYAS (U1028 UMR 5292, Neurosciences Research Center, Lyon); €32,000; 12 months
- Study of genomic instability and telomere status in triple-negative breast cancer; Coordination: Mathilde GAY-BELLILE (Laboratory of Medical Cytogenetics, Clermont-Ferrand); €123,000; 36 months

#### Research Projects in Effects of Exposure to Environmental Risks

- Genotoxicity of diesel engines emission: an in vivo study under controlled conditions; Coordination: Thierry DOUKI (LCIB UMR E3 CEA/UJF, Grenoble); €44,281; 24 months

#### Support for Mathematical and Statistical Sciences applied to Cancer Research

- Analysis of social and GEographical disparities in net survival using FLEXible frailty survival models; Coordination: Nadine BOSSARD (Lyon Civil Hospitals)

### INCa 2012



#### CLIPP: Certificated Centers of early Clinical Studies

- Cancer de la tête et du cou; Coordination: Jérôme FAYETTE (Léon Bérard Cancer Center, Lyon); €766,000; 30 months

#### Translational Cancer Research

- Marquage isotopique chez les patients atteints de gliomes à l'aide d'acides aminés marqués au carbone 13; Coordination: François BERGER (CHU Grenoble); €557,919; 24 months
- Radiothérapie interne vectorisée pour le traitement du mélanome; Coordination: Jean-Michel CHEZAL (CHU Clermont-Ferrand); €461,549; 36 months

#### Interventional Research aiming at Reducing the Social Inequalities in Cancer

- ColoNav. Navigateur de patients pour le dépistage du cancer colorectal. Étude d'intervention dans des zones défavorisées; Coordination: Franck CHAUVIN (Loire Cancer Institute, Saint-Étienne); €664,400; 36 months

#### PAIR Gynaecological Cancers

- Les récepteurs à dépendance, une nouvelle cible pour les cancers gynécologiques; Coordination: Agnès BERNET (Léon Bérard Cancer Center, Lyon); €750,000; 48 months

#### Free Research Projects on Health and Safety, Epidemiology and Public Health

- Biomarqueurs en vitamines B, Épigénome, polymorphismes génétiques et risque de cancer du sein dans la cohorte EPIC (European Prospective Investigation into Cancer and Nutrition); Coordination: Isabelle ROMIEU (IARC, Lyon); €650,000; 24 months
- Surdiagnostic lié au dépistage du cancer du sein par mammographie dans le département de l'Isère au cours de la période 2007 – 2010; Coordination: Arnaud SEIGNEURIN (Joseph Fourier University, Grenoble); €150,000; 24 months
- Rôle des inégalités sociales et territoriales dans la prise en charge des patients atteints de sarcomes éligibles à un traitement en hadronthérapie en région Rhône-Alpes: étude des facteurs épidémiologiques, accès et filières de soins et impact sur la survie à partir d'une cohorte exhaustive initiée en 2005; Coordination: Stéphanie PATIN (GCS ETOILE, Lyon); €122,011; 24 months

#### Public Health: Support for Studies and Actions to improve Prevention and Screening for Cancers

- Amélioration de l'accès au dépistage des cancers du col utérin des populations fragilisées en Isère; Coordination: Ouarda BEZAZ (Office of the Fight against Cancer, Meylan); €68,350; 24 months
- Dépistage des cancers et inégalités, mutualisation régionale; Coordination: Marie-Ange GRONDIN (Interdepartmental Bourbonnaise organization for Cancer detection, Moulins); €94,272; 24 months

#### Associations and Quality of Life

- Gym'Après Cancer; Coordination: Dominique TOUATI (Auvergne exercise and volunteer gymnastics regional committees, Clermont-Ferrand); €55,000; 24 months



### Support for Innovative and Costly Techniques (STIC)

- Comparaison lymphadénectomie pelvienne versus prélèvement isolé du ganglion sentinelle dans les cancers précoces du col utérin: étude multicentrique randomisée avec évaluation des impacts médico-économiques; Coordination: Patrice MATHEVET (Woman-Mother-Child Hospital, Lyon); €78,000; 24 months

### Clinical Research Hospital Program (PHRC)

- NEPHA: Étude prospective, randomisée, multicentrique, comparant la Nutrition Entérale et la nutrition Parentérale comme support nutritionnel chez les malades atteints d'Hémopathie maligne traités par Allogreffe de cellules souches hématopoïétiques; Coordination: Corinne BOUTELOUP (CHU Clermont-Ferrand); €335,000; 48 months
- Randomized, open label, multicentric phase III trial evaluating the safety and benefit of adding everolimus to adjuvant hormone therapy in women with poor prognosis, ER+ and HER2- primary breast cancer who remain free of disease after receiving 2 to 3 years of adjuvant hormone therapy; Coordination: Thomas BACHELOT (Léon Bérard Cancer Center, Lyon); €902,000; 48 months
- A phase III, randomized, multicenter trial comparing interruption or maintenance of imatinib after 3 years of treatment as adjuvant therapy in the treatment of Gastrointestinal Stromal Tumor (GIST); Coordination: Jean-Yves BLAY (Léon Bérard Cancer Center, Lyon); €400,000; 48 months
- Étude de phase II randomisée évaluant l'efficacité et la tolérance du cetuximab dans le cancer de la verge métastatique; Coordination: Hélène BOYLE (Léon Bérard Cancer Center, Lyon); €293,000; 48 months
- Stereotactic radiotherapy for paediatric recurrent intracranial ependymomas after previous radiation therapy; Coordination: Christian CARRIE (Léon Bérard Cancer Center, Lyon); €390,000; 48 months
- Identification of GENetic markers of aggressiveness by comparative genomic analysis (CGH); Coordination: Gérald RAVEROT (Lyon Civil Hospitals, Lyon); €359,000; 36 months
- Étude GASTRICHIP. Étude randomisée évaluant la Chimio Hyperthermie Intra-Péritonéale (CHIP) adjuvante à l'oxaliplatine dans le traitement curatif des cancers gastriques avancés; Coordination: Olivier GLEHEN (CHU Lyon-Sud, Lyon); €855,000; 48 months
- Étude de phase III internationale randomisée comparant une chimiothérapie conventionnelle (CDCT) par l'association de Paclitaxel, Ifosfamide et Cisplatine (TIP) à une chimiothérapie intensive (HDCT) séquentielle par Carboplatine et Etoposide précédée par une chimiothérapie mobilisatrice par Paclitaxel et Ifosfamide (TI-CE) dans le traitement des tumeurs germinales (GCT) réfractaires ou non, en premier ligne de rattrapage; Coordination: Aude FLECHON (Léon Bérard Cancer Center, Lyon); €213,000; 48 months

- Étude prospective internationale de comparant 3 schémas d'administration de carboplatine +/- paclitaxel chez la patiente âgée vulnérable atteinte de cancer de l'ovaire avancé stades IIB-IV. Une collaboration entre le GINECO (Groupe d'Investigateurs Nationaux pour l'Étude des Cancers de l'Ovaire et du sein) et le GCIG (Gynecologic Cancer Intergroup); Coordination: Claire FALANDRY (CHU Lyon-Sud, Lyon); €403,000; 36 months
- Prospective trial for the diagnosis and treatment of children, adolescents and young adults with intracranial ependymoma Coordination: Didier FRAPPAZ (Léon Bérard Cancer Center, Lyon); €342,000; 48 months
- Étude multicentrique de phase II évaluant le conditionnement BeEAM (Bendamustine, Etoposide, Cytarabine, Melphalan) suivi d'une autogreffe de cellules souches périphériques en traitement de consolidation des premières et secondes rechutes chimiosensibles pour des patients porteurs de lymphomes folliculaires; Coordination: Hervé GUESQUIERE (Léon Bérard Cancer Center, Lyon); €303,000; 48 months
- Étude de phase III évaluant chez des patients atteints de cancer bronchique non a petites cellules métastatiques contrôlées après chimiothérapie d'induction par ciplatine + gemcitabine le maintien du contrôle de la maladie par la poursuite de la gemcitabine en maintenance ou par l'introduction séquentielle de l'erlotinib (Tarceva); Coordination: Maurice PEROL (Croix-Rousse Hospital, Lyon); €73,000; 48 months
- High-Intensity Focused Ultrasound (HIFU)-Assisted Hepatic Resection; Coordination: Michel RIVOIRE (Léon Bérard Cancer Center, Lyon); €146,000; 48 months

### Development of Housing close to Medical Care Centers

- Création d'un parc d'appartements thérapeutiques; Coordination: Jean-Robert GRESLIN (Léon Bérard Cancer Center, Lyon); €205,000; 36 months

### Certification of French Intergrups of International Dimensions Collaborators in Cancer

- Intergroupes LYSA-LYSARC; Coordination: Gilles SALLES (LYSA - The Lymphoma Study Association, Lyon); €100,000; 24 months

### Multidisciplinary Care of People hereditarily predisposed to Cancer

- Oncogénauvergne; Coordination: Yves-Jean BIGNON (Jean PERRIN Cancer Center, Clermont-Ferrand); €200,000; 12 months
- Organisation de la prise en charge multidisciplinaire des personnes prédisposées héréditairement aux cancers fréquents (sein, côlon) dans la Région Rhône-Alpes; Coordination: Valérie BONADONA (Léon Bérard Cancer Center, Lyon); €360,000; 12 months

## Appendix 1



### THE LEAGUE AGAINST CANCER

#### TEAM ACCREDITED 2012

Name	Year of Accreditation	Name of Project	Institution	Institution cont'd.	City	Amount €
Corinne ALBIGES-RIZO	3 <sup>rd</sup> year	Promotion of invasion by a switch or coordination between focal adhesions and invadopodia	INSERM U 823	Albert Bonniot Institute	Grenoble	120,000
Claude COCHET	3 <sup>rd</sup> year	Protéine-kinase CK2 et cancers. Optimisation et évaluation pré-clinique de l'activité anti-cancéreuse de nouveaux inhibiteurs chimiques	INSERM U 873 - CEA Grenoble, iRSTV, TS	Technology Research Institute	Grenoble	95,000
Attilio DI PIETRO	1 <sup>st</sup> year	Caractérisation pluridisciplinaire des transporteurs ABC de cellules cancéreuses chimiorésistantes : mécanisme moléculaire et cellulaire, et nouvelles stratégies de modulation <i>in vivo</i> , <i>in vitro</i> et <i>in silico</i>	CNRS UMR 5086	Protein Biology and Chemistry Institute	Lyon	95,000
Stefan DIMITROV	2 <sup>nd</sup> year	Histone variants, epigenetics and cancer	INSERM U 823	Albert Bonniot Institute	Grenoble	60,000
Patrick MEHLEN	1 <sup>st</sup> year	La notion des récepteurs à dépendance : du concept de biologie cellulaire au développement de nouvelles thérapies ciblées anti-cancéreuses	INSERM U 1052	Léon Bérard Cancer Center	Lyon	150,000
François MORLE	3 <sup>rd</sup> year	Décryptage des réseaux de régulation géniques impliqués dans le contrôle de la prolifération et de la différenciation de la lignée érythrocytaire normale ou leucémique	CNRS UMR 5534	Claude Bernard - Lyon I University	Villeurbanne	66,000
Alain PUISIEUX	2 <sup>nd</sup> year	Étude du rôle joué par la réactivation de programmes embryonnaires dans la transformation néoplasique	INSERM U 590	Léon Bérard Cancer Center	Lyon	150,000

#### CLINICAL RESEARCH REGIONAL PLATFORM 2012

Name	Type of Grant	Name of Project	Institution	Institution Cont'd.	City	Amount €
David PEROL	Clinical Research platform	Plate-forme d'Aide à la Recherche Clinique en Cancérologie Auvergne et Rhône-Alpes	Biostatistics and therapeutics evaluation unit	Léon Bérard Cancer Center	Lyon	120,000

#### PROJET DE RECHERCHE CLINIQUE 2012

Name	Year of Financing	Name of Project	Institution	Institution Cont'd.	City	Amount €
Franck CHAUVIN	1 <sup>st</sup> year	ColoNav Étude interventionnelle de Navigation pour augmenter la participation au dépistage organisé du cancer colo-rectal dans les zones défavorisées. Évaluation du dispositif dans 5 départements français	CIC-EC 3 - Équipe PREDOCAN	Loire Cancer Institute	Saint-Priest-en-Jarez	100,000



## RESEARCH PROJECTS IN HUMAN AND SOCIAL SCIENCES 2012

Name	Year of Financing	Name of Project	Institution	Institution cont'd.	City	Amount €
Claire FALANDRY	1 <sup>st</sup> year	Essai PROACTIVE (PROgramme Observance ACTivité Vitamines Équilibre) : étude de l'impact d'une intervention gériatrique associant activité physique régulière et suivi médical et nutritionnel sur l'observance du traitement hormonal adjuvant du cancer du sein après 70 ans	CNRS UMR 5239	South Lyon Faculty of Medicine	Oullins	50,000
Anne LEFRANC	3 <sup>rd</sup> year	Étude contrôlée randomisée évaluant chez des femmes atteintes d'un cancer du sein métastatique l'impact d'une concertation systématisée « oncologues - équipe de soins de support » sur le recours à une ligne de chimiothérapie supplémentaire	Centre Léon Bérard		Lyon	19,000
Nora MOUMJID	2 <sup>nd</sup> year	Structures de proximité versus plateaux techniques en Cancérologie : analyse organisationnelle et des préférences des patients	CNRS UMR 5824	Léon Bérard Cancer Center	Lyon	55,000

## RESEARCH ALLOCATIONS 2012 (DETAILS AVAILABLE ON REQUEST)

- 27 thesis allocations in the amount of €801,162
- 5 post-doctoral allocations in the amount of €261,523
- 2 ATIP/AVENIR programs in the amount of €120,000



## ARC FOUNDATION FOR RESEARCH ON CANCER

### FINANCING IN PARTNERSHIP

- Dependence receptors as new therapeutic targets for gynecological cancers; Coordination: Agnès BERNET (Cancer Research Center of Lyon); €250,000; 48 months
- Fonctionnement CLIP<sup>2</sup>; Léon Bérard Cancer Center; €34,285,71; 12 months
- Fonctionnement CLIP<sup>2</sup>; Jean Perrin Cancer Center; €22,857,14; 12 months
- Fonctionnement CLIP<sup>2</sup>; South Lyon Hospital Center; €11,428,57; 12 months
- Essai clinique (BKM) (Léon Bérard Cancer Center); €383,773,50; 42 months

### THEMATIC CALL FOR PROJECTS

- NEOZOL – Comparative Study of Neoadjuvant Chemotherapy with and without Zometa® for Management of Locally Advanced Breast Cancers; Coordination: Patrice MATHEVET/ Philippe CLEZARDIN (Woman-Mother-Child Hospital, Lyon); €166,488; 24 months

### ARC CLASSIC FINANCING (DETAILS AVAILABLE ON REQUEST)

- 30 allocations to young researchers in the amount of €1,377,846
- 9 ARC projects in the amount of €450,000
- 2 semi-heavy equipments in the amount of €507,000

## ANR



Type	Coordinator (Institution)	Geographical Area	Name of Project	Amount	Length
RPIB	Jérémy BASTID (OregaBiotech)	Lyon	Orega-17 (développement de nouveaux antagonistes d'IL-17 en Oncologie)	n.c.	n.c.
RPIB	Pascal PERRIAT (INSA)	Lyon	Multimage (structures nanométriques pour détection précoce en imagerie multimodale)	n.c.	n.c.

## Appendix 1



### INVESTMENTS OF THE FUTURE

Type	Coordinator	CLARA Actor Involved	Geographical Area	Name of Project	Amount €M	Program Description
LABEX	PRES Université de Grenoble	PRES University of Grenoble	Strasbourg, Brest, Rennes, Paris, Montpellier, Grenoble	CAMI	7,5	New approaches for medical interventions assisted by computer (cancer and others)
LABEX	University of Lyon	CREATIS, IPNL, LIRIS, LHC, LPC, CRNL, CEA LETI, LPCML, INAC, LIP, LRCM, LPSC, Neurodis Foundation	Clermont-Ferrand, Saint-Étienne, Grenoble, Lyon	PRIMES	8	Development of methods and innovative products in medical imaging for the localization of tumors and to improve treatment
Equipex	University of Lyon	GIE CERMEP, CREATIS, CRNL, CarMeN, Neurodis Foundation, Siemens Healthcare, Lyon Civil Hospitals	Bron (Lyon), Saint-Étienne	LILI	4	Innovative imaging platform constituted of a tomography hybrid system and magnetic resonance imaging for structural and functional exploration
Equipex	University of Lyon	CRCL, CRNL, CarMeN, SFR Biosciences Gerland-Lyon Sud, SFR Health East Lyon, Netris Pharma, Functional Genomics Institute of Lyon, Nutrition and Brain	Lyon, Saint-Étienne	PhenoCan	2,7	Development of cancer models in mice platform
Nanobiotechnologies 2	CEA-LETI	CEA-LETI	Grenoble	FACSBIO-MARKER	1,1	Exploration of nanotechnologies potential for the development of new and less invasive high resolution diagnostics methods in Oncology
National Infrastructures of biology and health research	CEA	Lyon and Grenoble Medical Imaging platforms	Grenoble, Lyon et territoire national	FLI	37,6	National infrastructure regrouping six major imaging platforms for preclinical and clinical imaging research including the archival storage and treatment of images
National Infrastructures of biology and health research	ESTEAM PARIS SUD, INSERM	N/A	Lyon, Evry, Villejuif, Strasbourg, Montpellier	INGESTEM	14	Setting-up of a unique stem cell biobank with a therapeutic vocation and to structure this network around an industrial cluster
Carnot Institute International	Carnot CALYM Institute	GELARC, GELA, ENS Lyon, Lyon Civil Hospitals	Lyon and national territory	CALYM	14	Consortium for the acceleration of innovation and is transfer in the field of lymphoma

Type	Institut	Coordinator / Beneficiary	Geographical Area	Name of Project	Amount €M	Length
ISI	INSERM, Université Paris-Diderot University (Bichat-Beaujon Biomedical Research Center)	Erytech Pharma	Lyon, Ile-de-France	TEDAC	10,7	8 years
PSPC	Lyon Civil Hospitals	CellforCure	Lyon, Bordeaux, Toulouse, Nantes, Lille, Ile de France	C4C	30	n.c.



## EUROPEAN COMMISSION (ONGOING IN 2012)

### PROJECTS COORDINATED BY THE CANCÉROPÔLE CLARA

Acronym	Thematic	Title of Project	Project Leader	Institution
BIBA	Nanotechnologies/ Nanomédecine	Delivering Nanopharmaceuticals through Biological Barriers	Patrick BOISSEAU	Atomic Energy Commission (CEA), Grenoble
			Patrice MARCHE	IAB
Bone-Net	PhD Training Network/Postdocs	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	Biomarqueurs/Diagnostic/ Pronostic	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/ Nanomédecine	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 Lyons
TARGET-PDT	Nanotechnologies/ Nanomédecine	PhotoDynamic Therapy using photosensitizer-doped targeted organic nanoparticles	Patrick BOISSEAU	Atomic Energy Commission (CEA), Grenoble



## Appendix 1

### PROJECTS INVOLVING THE CANCERPOLE CLARA

Acronym	Thématique	Thematic	Project Leader	Institution
APO-SYS	Basic Research	Apoptosis systems biology applied to cancer and AIDS. An integrated approach of experimental biology, data mining, mathematical modeling, biostatistics, systems engineering and molecular medicine	Patrick MELHEN	Cancer Research Center of Lyon
ChinaAccess4EU	International Collaborations	Supporting the EU access to Chinese Research and Innovation Programmes	Jean-Luc COLL	Joseph Fourier Grenoble 1 University
COGS	Cancer Environnement	Collaborative Oncological Gene-environment Study	Olga SINILNIKOVA	Cancer Research Center of Lyon
CURELUNG	Biomarqueurs/Diagnostic/Pronostic	Determining (epi)genetic therapeutic signatures for improving lung cancer prognosis	Elisabeth BRAMBILLA	Joseph Fourier Grenoble 1 University
ENCCA	Access to therapy/treatment	European Network for cancer Research in Children and Adolescents	Olaf KELM Liliana VEIRA	International Agency for Research on Cancer, Lyon Léon Bérard Cancer
ENVISION	Hadronthérapie	European NoVel Imaging Systems for ION therapy	Alain BALDIT Daniel BABOT	CNRS, Clermont-Ferrand INSA, Lyon
Ethentec	Human and Social Sciences/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/Nanomédecine	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 Fabien ZOULIM	International Agency for Research on Cancer, Lyon Cancer Research Center of Lyon
SPIDIA	Biomarqueurs/Diagnostic/Pronostic	Standardisation and improvement of genetic pre-analytical tools and procedures for <i>in vitro</i> diagnostics	Pierre HAINAUT	International Agency for Research on Cancer, Lyon
ULICE	Hadronthérapie	Union of Light-Ion Centres in Europe	Jacques BALOSSO	CGS ÉTOILE, Lyon

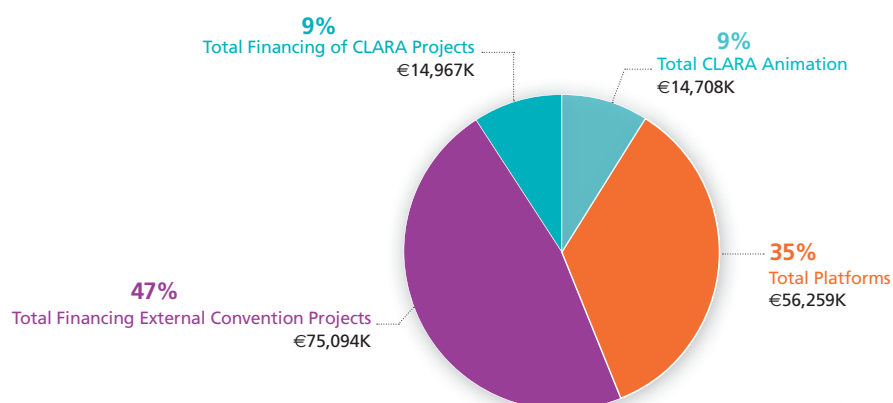
## Appendix 2

# SUMMARY OF CLARA'S MULTI-YEAR SCHEDULING 2003-2012

### Breakdown of key funding by program and by source

			2012 Budget (€K)				2003-2011 Budget (€K)				Total(€K)	
			Investment		Operations		Investment		Operations			
			Approved	Paid	Approved	Paid	Approved	Paid	Approved	Paid	Approved	Paid
External Conventions	Platforms	Auvergne Platform					1,653	1,653	2,180	2,180	3,833	3,833
		CIRC Platform							1,100	1,100	1,100	1,100
		Grenoble Platform					4,171	4,171			4,171	4,171
		East Lyon CLB Platform	3,000	1,492			9,459	9,459			12,459	10,951
		South and East Lyon Platform					8,500	8,500			8,500	8,500
		RMN Hight Fields Platform					19,850	19,850			19,850	19,850
		Saint-Étienne Platform	114	114			6,232	4,723			6,346	4,837
	Total Platforms		3,114	1,606			49,865	48,356	3,280	3,280	56,259	53,242
	Project Financing	INCa Calls for Projects			5,736	2,859			67,491	56,536	75,784	59,395
		Proof of Concept			44	44			688	463	732	507
		Structuring Projects							1,135	1,135	1,135	1,135
Total Financing of projects				5,780	2,902			69,314	58,134	75,094	61,036	
Total Conventions externes			3,114	1,606	5,780	2,902	49,865	48,356	72,594	61,414	131,353	114,278
CancéroPôle CLARA	Financing of projects	ProCan I Axes							2,650	2,650	2,650	2,650
		ProCan II Axes			633	633			543	543	1,176	1,176
		Proof of Concept			1,330	523			9,261	8,371	10,591	8,894
		Structuring Projects			150	100			400	400	550	500
		Total Financing of projects				2,113	1,256			12,854	11,964	14,967
	Animation	Application Framework							2,608	2,700	2,608	2,700
		Application Framework			870	563					870	563
		Funding Convention			62	-			8,812	8,316	8,874	8,316
		ProCan 2007-2010							1,225	1,225	1,225	1,225
		ProCan 2011-2013			609	609			522	522	1,131	1,131
		Total Animation				1,541	1,172			13,167	12,763	14,708
Total CancéroPôle CLARA					3,654	2,428			26,021	24,727	29,675	27,155
Total			3,114	1,606	9,434	5,330	49,865	48,356	98,615	86,141	161,028	141,433

### Global orientation of financing approved in 2003-2012





Updated December 31, 2012

## Appendix 2


### Summary of key funding by territory

	2012 Budget(€K)				2003-2011 Budget (€K)				Total (€K)	
	Investment		Operations		Investment		Operations			
	Approved	Paid	Approved	Paid	Approved	Paid	Approved	Paid	Approved	Paid
National Level	14	14	6,978	4,101	9,136	9,013	74,445	63,490	90,573	76,618
Rhône-Alpes	3,100	1,592	2,287	1,061	39,076	37,690	21,076	19,699	66,139	60,042
Auvergne			169	169	1,653	1,653	3,093	2,952	4,915	4,773
Total	3,114	1,606	9,434	5,331	49,865	48,356	98,614	86,141	161,627	141,433

### Summary of key funding by source

		2012 Budget (€K)				2003-2011 Budget (€K)				Total (€K)	
		Investment		Operations		Investment		Operations			
		Approved	Paid	Approved	Paid	Approved	Paid	Approved	Paid		
External Conventions	Platforms	14	14			9,136	9,013			9,150	9,027
	INCa Calls for Projects			5,736	2,859			67,491	56,536	73,227	59,395
	Structuring Projects							1,027	1,027	1,027	1,027
Total External Conventions		14	14	5,736	2,859	9,136	9,013	68,518	57,563	83,404	69,449
Cancéropôle CLARA	ProCan Axes							2,550	2,550	2,550	2,550
	ProCan II Axes			633	633			543	543	1,176	1,176
	Animation			609	609			2,834	2,834	3,443	3,443
Total Cancéropôle CLARA				1,242	1,242			5,927	5,927	7,169	7,169
Total		14	14	6,978	4,101	9,136	9,013	74,445	63,490	91,130	76,618



		2012 Budget (€K)				2003-2011 Budget (€K)				Total (€K)	
		Investment		Operations		Investment		Operations			
		Approved	Paid	Approved	Paid	Approved	Paid	Approved	Paid		
External Conventions											
Total External Conventions											
Cancéropôle CLARA	Proof of Concept			350	143			1,644	852	1,994	995
	Animation			62	-			498	498	560	498
Total Cancéropôle CLARA				412	143			2,142	1,350	2,554	1,493
Total				412	143			2,142	1,350	2,554	1,493

Updated December 31, 2012



		2012 Budget (€K)				2003-2011 Budget (€K)				Total (€K)	
		Investment		Operations		Investment		Operations			
		Approved	Paid	Approved	Paid	Approved	Paid	Approved	Paid	Approved	Paid
External Conventions	Structuring Projects							108	108	108	108
<b>Total External Conventions</b>								108	108	108	108
Cancéropôle CLARA	Proof of Concept							37	37	37	37
	Animation							216	216	216	216
<b>Total Cancéropôle CLARA</b>								253	253	253	253
<b>Total</b>								361	361	361	361

		2012 Budget (€K)				2003-2011 Budget (€K)				Total (€K)	
		Investment		Operations		Investment		Operations			
		Approved	Paid	Approved	Paid	Approved	Paid	Approved	Paid	Approved	Paid
External Conventions	Platforms	3,100	1,592			17,910	17,910			21,010	19,502
<b>Total External Convention</b>		<b>3,100</b>	<b>1,592</b>			<b>17,910</b>	<b>17,910</b>			<b>21,010</b>	<b>19,502</b>
Cancéropôle CLARA	Proof of Concept			200	200			1,135	1,135	1,335	1,335
	Animation			300	270			3,969	3,518	4,269	3,788
<b>Total Cancéropôle CLARA</b>				<b>500</b>	<b>470</b>			<b>5,104</b>	<b>4,653</b>	<b>5,604</b>	<b>5,123</b>
<b>Total</b>		<b>3,100</b>	<b>1,592</b>	<b>500</b>	<b>470</b>	<b>17,910</b>	<b>17,910</b>	<b>5,104</b>	<b>4,653</b>	<b>26,614</b>	<b>24,625</b>


		2012 Budget (€K)				2003-2011 Budget (€K)				Total (€K)	
		Investment		Operations		Investment		Operations			
		Approved	Paid	Approved	Paid	Approved	Paid	Approved	Paid	Approved	Paid
External Conventions	Platforms					7,500	7,500	600	600	8,100	8,100
<b>Total External Conventions</b>						<b>7,500</b>	<b>7,500</b>	<b>600</b>	<b>600</b>	<b>8,100</b>	<b>8,100</b>
Cancéropôle CLARA	Proof of Concept			315	-			2,245	2,245	2,560	2,245
	Animation			185	-			2,706	2,706	2,891	2,706
<b>Total Cancéropôle CLARA</b>				<b>500</b>	<b>-</b>			<b>4,951</b>	<b>4,951</b>	<b>5,451</b>	<b>4,951</b>
<b>Total</b>				<b>500</b>	<b>-</b>	<b>7,500</b>	<b>7,500</b>	<b>5,551</b>	<b>5,551</b>	<b>13,551</b>	<b>13,051</b>

		2012 Budget (€K)				2003-2011 Budget (€K)				Total (€K)	
		Investment		Operations		Investment		Operations			
		Approved	Paid	Approved	Paid	Approved	Paid	Approved	Paid	Approved	Paid
External Conventions	Platforms					10,850	10,850	500	500	11,350	11,350
<b>Total External Conventions</b>						<b>10,850</b>	<b>10,850</b>	<b>500</b>	<b>500</b>	<b>11,350</b>	<b>11,350</b>
Cancéropôle CLARA	Proof of Concept			315	158			3,428	3,585	3,743	3,743
	Animation			185	93			2,073	2,121	2,258	2,214
<b>Total Cancéropôle CLARA</b>				<b>500</b>	<b>251</b>			<b>5,501</b>	<b>5,707</b>	<b>6,000</b>	<b>5,956</b>
<b>Total</b>				<b>500</b>	<b>251</b>	<b>10,850</b>	<b>10,850</b>	<b>6,001</b>	<b>6,207</b>	<b>17,350</b>	<b>17,306</b>

Updated December 31, 2012


## Appendix 2






		2012 Budget (€K)				2003-2011 Budget (€K)				Total (€K)	
		Investment		Operations		Investment		Operations			
		Approved	Paid	Approved	Paid	Approved	Paid	Approved	Paid	Approved	Paid
External Conventions	Platforms					1,100	1,000			1,100	1,000
Total External Conventions						1,100	1,000			1,100	1,000
Cancéropôle CLARA	Animation			25	25			75	75	100	100
Total Cancéropôle CLARA				25	25			75	75	100	100
Total Cancéropôle CLARA				25	25	1,100	1,000	75	75	1,200	1,100




 SAINT-ETIENNE métropole communauté d'agglomération		2012 Budget (€K)				2003-2011 Budget (€K)				Total (€K)	
		Investment		Operations		Investment		Operations			
		Approved	Paid	Approved	Paid	Approved	Paid	Approved	Paid	Approved	Paid
External Conventions	Platforms					1,716	530			1,716	530
Total External Conventions						1,716	530			1,716	530
Cancéropôle CLARA	Structuring Projects			100	100			400	400	500	500
	Animation			25	25			100	100	125	125
Total Cancéropôle CLARA				125	125			500	500	625	625
Total				125	125	1,716	530	500	500	2,341	1,155





		2012 Budget (€K)				2003-2011 Budget (€K)				Total (€K)	
		Investment		Operations		Investment		Operations			
		Approved	Paid	Approved	Paid	Approved	Paid	Approved	Paid	Approved	Paid
External Convention	Proof of Concept							150	106	150	106
Total External Conventions								150	106	150	106
Cancéropôle CLARA	Proof of Concept							200	155	200	155
	Structuring Projects			50	-					50	-
	Animation							45	45	45	45
Total Cancéropôle CLARA				50	-			245	200	295	200
Total				50	-			395	306	445	306



		2012 Budget (€K)				2003-2011 Budget (€K)				Total (€K)	
		Investment		Operations		Investment		Operations			
		Approved	Paid	Approved	Paid	Approved	Paid	Approved	Paid	Approved	Paid
External Conventions	Proof of Concept							100	80	100	80
Total External Conventions								100	80	100	80
Cancéropôle CLARA	Proof of Concept			75	23			286	162	361	185
	Animation			15	15			45	45	60	60
Total Cancéropôle CLARA				90	38			331	207	421	244
Total				90	38			431	287	521	324

Updated December 31, 2012



		2012 Budget (€K)				2003-2011 Budget (€K)				Total (€K)	
		Investment		Operations		Investment		Operations			
		Approved	Paid	Approved	Paid	Approved	Paid	Approved	Paid	Approved	Paid
External Conventions	Proof of Concept							100	80	100	80
<b>Total External Conventions</b>								100	80	100	80
Cancéropôle CLARA	Proof of Concept			75	23			286	229	361	252
	Animation			10	10			30	30	40	40
<b>Total Cancéropôle CLARA</b>				85	33			316	259	401	292
<b>Total</b>				85	33			416	339	501	372



		2012 Budget (€K)				2003-2011 Budget (€K)				Total (€K)	
		Investment		Operations		Investment		Operations			
		Approved	Paid	Approved	Paid	Approved	Paid	Approved	Paid	Approved	Paid
Cancéropôle CLARA	ProCan I Axes							50	50	50	50
<b>Total Cancéropôle CLARA</b>								50	50	50	50
<b>Total</b>								50	50	50	50



Hôpitaux de Lyon

		2012 Budget (€K)				2003-2011 Budget (€K)				Total (€K)	
		Investment		Operations		Investment		Operations			
		Approved	Paid	Approved	Paid	Approved	Paid	Approved	Paid	Approved	Paid
Cancéropôle CLARA	ProCan I Axes							50	50	50	50
<b>Total Cancéropôle CLARA</b>								50	50	50	50
<b>Total</b>								50	50	50	50



UNION EUROPÉENNE  
en AUVERGNE

		2012 Budget (€K)				2003-2011 Budget (€K)				Total (€K)	
		Investment		Operations		Investment		Operations			
		Approved	Paid	Approved	Paid	Approved	Paid	Approved	Paid	Approved	Paid
External Conventions	Platforms					998	998	667	667	1,665	1,665
	Proof of Concept							182	41	182	41
<b>Total</b>						998	998	849	708	1,847	1,706



		2012 Budget (€K)				2003-2011 Budget (€K)				Total (€K)	
		Investment		Operations		Investment		Operations			
		Approved	Paid	Approved	Paid	Approved	Paid	Approved	Paid	Approved	Paid
External Conventions	Platforms					205	205	300	300	505	505
<b>Total</b>						205	205	300	300	505	505

Updated December 31, 2012

## Appendix 2



		2012 Budget (€K)				2003-2011 Budget (€K)				Total (€K)	
		Investment		Operations		Investment		Operations			
		Approved	Paid	Approved	Paid	Approved	Paid	Approved	Paid	Approved	Paid
External Conventions	Platforms					235	235	948	948	1,183	1,183
	Proof of Concept							50	50	50	50
Total External Conventions						235	235	998	998	1,233	1,233
	Animation			80	80			365	365	445	445
Total Cancéropôle CLARA				80	80			365	365	445	445
Total				80	80	235	235	1,363	1,363	1,678	1,678



		2012 Budget (€K)				2003-2011 Budget (€K)				Total (€K)	
		Investment		Operations		Investment		Operations			
		Approved	Paid	Approved	Paid	Approved	Paid	Approved	Paid	Approved	Paid
External Conventions	Platforms					25	25	75	75	100	100
	Proof of Concept			18	18			26	26	44	44
Total External Conventions				18	18	25	25	101	101	144	144
	Animation			15	15			70	70	85	85
Total Cancéropôle CLARA				15	15			70	70	85	85
Total				33	33	25	25	171	171	229	229



		2012 Budget (€K)				2003-2011 Budget (€K)				Total (€K)	
		Investment		Operations		Investment		Operations			
		Approved	Paid	Approved	Paid	Approved	Paid	Approved	Paid	Approved	Paid
External Conventions	Platforms					160	160	90	90	250	250
	Proof of Concept			26	26			80	80	106	106
Total External Conventions				26	26	160	160	170	170	356	356
Cancéropôle CLARA	Animation			30	30			140	140	170	170
Total Cancéropôle CLARA				30	30			140	140	170	170
Total				56	56	160	160	310	310	526	526



		2012 Budget (€K)				2003-2011 Budget (€K)				Total (€K)	
		Investment		Operations		Investment		Operations			
		Approved	Paid	Approved	Paid	Approved	Paid	Approved	Paid	Approved	Paid
External Conventions	Platforms					30	30	100	100	130	130
Total External Conventions						30	30	100	100	130	130
Cancéropôle CLARA											
Total Cancéropôle CLARA											
Total						30	30	100	100	130	130

Updated December 31, 2012



# THE CANCÉROPÔLE LYON AUVERGNE RHÔNE-ALPES COORDINATION TEAM



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\* The Léa & Napoléon Bullukian Foundation, recognized as a public interest foundation, is CLARA's parent organization and its coordination team's employer.

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